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Some Notes Relating to the Modern Misnaming of a Medieval Islamic Design

Ortaçağ İslam Dünyasına Ait Bir Motifin Modern Dönemde Yanlış Adlandırılmasına İlişkin Notlar

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Abstract

The aim of this article through a series of notes is to draw attention to some of the problems in understanding consequent upon the on-going re-naming/misnaming of designs and design types, for a proper understanding of the content conveyed by works of Islamic art at the time they were made and displayed. Primarily to show the recent naming of the so-called "8 pointed star and cross design," as representing "*The Breath of the Compassionate*," has no support in the historical sources, attention is given to the use of this type of design in Seljuk art, and it is suggested that the use of this design in its vertical form is often to be associated with the ruler, as the Second Sulaymān, that is to indicate through the use of this design that the ruler was to be understood as being The Just Ruler of the Time. It also indicates the importance of the set of designs, of which this forms but one example, that were termed in the 13th c. *mushabak-shabaka* - meaning a lattice, net, or a grid design, thereby, from the etymological root of the term, conveying a rather different meaning and set of associations from the modern term "geometric design". The repeated recent association of this *mushabak-shabaka* design type with, "the infinite pattern," "infinity," or the "illusion of infinity" is without any foundation in the contemporary historical and religious sources and context. Some reasons for the importance of this group of *mushabak-shabaka* designs in works of Islamic art and culture in both two and three dimensions from the 3rd/9th c. A.D. down to the present day are suggested; together with both etymological and religious reasons for the increased prominence and use of "knotting-inter-lace" designs in the 5th-8th/11th to 14th centuries - that can perhaps more accurately be termed, "*al-i'tiqād"* designs.

Keywords: *mushabak, shabaka,* lattice design, "Breath of the Compassionate," Seal of Suleyman, "the infinite pattern," knotting interlace -*'aqīdah, al-i'tiqād*

Özet

Birtakım notlar aracılığıyla, bu makale, yapıldıkları ve sergilendikleri dönemde İslam sanat çalışmaları tarafından iletilen içeriklerin doğru bir şekilde anlaşılabilmesi için, tasarım ve tasarım türlerinin devam eden bir şekilde yeniden adlandırılması / yanlış bir şekilde adlandırılmasından kaynaklı ortaya çıkan bazı anlayış sorunlarına dikkat çekmektir. Özellikle de, son zamanlarda sözde "8-uçlu yıldız ve haç tasarımının", *"Merhametlinin Nefesini"* temsil ettiği şeklinde aksettirilmesi için tarihi kaynaklarda herhangi bir destek olmadığını göstermek adına, Selçuklu sanatında bu tür tasarımların nasıl kullanıldığına dikkat çekilmektedir ve bu tasarımın dikey formunda kullanılmasının çoğu zaman hükümdar (İkinci Süleyman) ile ilgili olduğu öne sürülmektedir. Başka bir deyişle, bu motifin kullanılma nedeni, zamanın hükümdarının, Zamanın Adil Hükümdarı olarak anlaşılması gerektiğine işaret etmek içindir. Ayrıca, bunun sadece bir örneği olduğu ve 13. Yüzyılda *mushabak-shabaka* (kafes, file ya da ağ motifi) olarak adlandırılan motif grubunun önemine işaret etmekte, ve böylece, bu ifadenin etimolojik kökeninden yola çıkılarak, modern "geometrik motif" teriminden oldukça farklı bir takım çağrışımlar aksettirmektedir. Son zamanlarda bu *mushabak-shabaka* motif türünün, "sonsuz şekil", "sonsuzluk" ya da "sonsuzluk illüzyonu" ile tekrar tekrar ilişkilendirilmesinin çağdaş tarihi ve dini kaynaklar ve bağlamalarda herhangi bir dayanağı bulunmamaktadır. 3./9. Yüzyıldan bugüne hem iki hem de üç boyutlu olarak bu *mushabak-shabaka* grubu tasarımların İslam sanat çalışmaları ve kültüründeki öneminin bazı sebepleri olarak, etimolojik ve dini sebeplerle birlikte, 5.-8. / 11.-14. Yüzyıllar arasında, belki de daha doğru bir şekilde *al-i'tiqad"* motifleri olarak tanımlanabilecek "düğümleme – birbirine geçirme" şeklindeki motiflerin artan önemi öne sürülebilir.

Anahtar kelimeler: *mushabak, shabaka,* kafes motifi, "Merhametlinin Nefesi," Süleyman'ın Mührü, "sonsuz şekil," düğümleme – birbirine geçirme -*'aqīdah, al-i'tiqād*

Perhaps unsurprisingly the eight pointed sun-*shemsīya*-star, a form of the *Khātam Sulaymān* – Seal of Sulaymān device, also termed, *Khātam-an-Nabiyyīn*, "The Seal of the Prophets," meaning the Prophet Muhammad[1], who had his own seal, *muhr-i nubuvvat*, but not of a star form, first seems to occur in an Islamic structure in a border pattern on some of the arches in the mosaic work of the 691 A.D. octagonal *Qubbat al-Ṣakhrah*, the Dome of the Rock, on the haram at al-Quds, Jerusalem[2]. On a dark blue mosaic field, each gold mosaic 8 pointed sun-star form, with a green alternating with turquoise, mosaic filled circle inside, has within the circle a gold mosaic square (Fig. 1 Left). There are also for example two 8 pointed stars, an inner and an outer, carved within the square panels in the door lintels of the 8th c. Umayyad, *Qasr al-Tuba*, in modern Jordan (Fig. 1 Right). If this design was employed in the 7th and 8th centuries as being a clear reminder of the Prophet Sulaymān, or of the Prophet Muhammad as Seal of the Prophets, seems doubtful, and, at this time was probably simply regarded as the continuation in use of this widespread design employed in both Christian and Sassanian art,[3] perhaps with some association with ruler-ship.

[1] On the basis of Qur'ān Al-Azhab, 33:40 "*Muhammad is not the father of any man among you, but he is the Messenger of Allah and the Seal of the Prophets; and Allah is aware of all things*".

[2] It is a design found from before 2,000 B.C. and, in the form of an 8-pointed star defined by an interlace, (Interlace= Fr. entrelacer; It. intralciare; Sp. entrelazar.) is found repeatedly in Roman floor mosaics. The eight-pointed sun-star and six-pointed sun-star also appears on Sasanian seals (Sheila E. Hoey Middleton, *Intaglios, Cameos, Rings and Related Objects from Burma and Java: The White Collection and a Further Small Private Collection* (Oxford: Archaeopress, 2005), 86-87). It was employed from at least as early as the second century A.D. in Christian art. It was employed for example in the 512 Miaphysite (Monophysite) mosaic work in the church of Mar Gabriel by Kartmin in the Tur 'Abdin area, E. J. W. Hawkins, M. C. Mundell and C. Mango, "The Mosaics of the monastery of Mâr Samuel, Mâr Simeon and Mâr Gabriel near Kartmin with a note on the Greek Inscription", *DOP* 27, 1973: 279-296., 287-288; figs. 28-30; James 2017 for clear photographs of the cleaned 8-pointed star and cross mosaic, Fig. 82, https://doi.org/10.1017/9780511997693.011. It was employed in the original mosaic-work of Hagia Sophia, Constantinople; on the mid-6th c. mosaic lunette at San Vitale Basilica, in the mosaic of Empress Theodora, and on the altar cloth of the mosaics depicting the sacrifices of Abel and "*Melchisedec*" in both San Vitale and St. Apollinare in Classe, Ravenna, Italy. It is of note in the later use of this form that Mathias Roricer, Master-Mason of Regensburg Cathedral 1492 wrote on construction employing geometric forms, including the construction principle of two super-imposed squares set at right angles used by master-masons in the construction of the pinnacles of Gothic buildings, see *A Documentary History of Art*, Ed. Elizabeth Gilmore Holt, Vol. 1 (New York: Doubleday Anchor, 1957), 95-101.

[3] Although the c. 715 window lattices in "compass work" of the Umayyad Mosque in Damascus have been described as "8 pointed stars," (eg. Jay, Bonner, *Islamic Geometric Patterns: Their Historical Development and Traditional Methods of Construction* (New York: Springer, 2017), 14, Photograph 5) this seems to somewhat stretch the definition, as only 4 touch the inner circle.

Fig. 1. Left, An example of an 8 pointed sun-star pattern in mosaic on the border of an arch in the interior of the octagonal *Qubbat al-Ṣakhrah*, c. 690-91[4]. Right, two 8 pointed suns-stars, inner and outer, carved within the square panels in the limestone door lintels of the 2nd/8th c. Umayyad Qasr al-Tuba, Modern Jordan. Drawn in "compass" technique, the rays are curved rather straight in the centre and the outer sun-star is formed of angled pairs of foliate leaves.

The eight pointed *shemsīya*-star, given the association of the haram at al-Quds with both the Prophet Muhammad and the Prophet Sulaymān, as temporal as well as spiritual rulers, and the octagonal plan of the *qubbat al-sakhrah*, gave to this design associations with the ruler; and this design was developed through the repeat of an 8 pointed sun-star that is bordered by pointed cross shapes, the suns-stars touching each other, "*fourfold patterns with 8-pointed stars set upon a rhombic grid*"[5]. This design has been repeatedly employed in works of Islamic art across a wide

[4] http://islamicart.museumwnf.org/database_item.php?id=monument;isl;pa;mon01;4;en. Erş. Tar. 11.10.2019.

[5] Bonner, *Islamic Geometric Patterns*, 22.

variety of media, in brick-work, and on metal-ware, tile-work to stucco-work, in carpet and textile design, stamped into the leather of manuscript bindings etc., from the 9th c. Sāmarrāʾ stuccowork revetment examples[6] onwards (Fig. 2 Left). These include, also in stucco work, the design in the single sun-star wide border bands around the 10th c. *mihrab* of the Friday mosque at Nā'īn, Iran, two border bands on either side, with the innermost continuing over the top of the mihrab (Fig. 2 Right). It seems probable that by this time in the 10th – 11th c., this design in this context was to be associated with the representation of the names of the Prophets through the idea that this 8 pointed sun-star form represented the Seal of the Prophets, Muhammad, *khātam an-nabīyīn*, Qur'ān Al-Azhab, 33:40, and, was possibly associated with the Light of Muhammad, *nūr Muhammad*[7]. While the seal of the saints *Khatm al-wilāya*, is also known from an early Sufi treatise by Muhammad ibn 'Ali al-Hakim at-Tirmidhī (d. c. 910)[8], and it seems possible that reason for the later combination of various sun-star forms within a single design was to remind of the *nūr illahī* and of this Divine Light *an-nūr,* reflected in the world though the Prophets and "Saints"[9].

This same design is employed in a single sun-star band framing the portal of the 1078-79 Ribat-ı Malik (Bukhara-Samarkand) constructed by the Karakhanid ruler Sultan Nasr, son-in-law of the Great Sultan Alp Arslan (1068-1080); in a brickwork panel of four sun-stars on the 11th c. Damavant Şeyh Şebil kümbet; in a single sun-star band around the shaft of the 1127 Kalyan Minaret, in Bukhara (Fig. 3. Right), and on the underside of the arch of the portal of the Karakhanid 1152,

[6] This design occurs in the form of a stucco window grill in the Mosque of Al-Hakim, Cairo, of 1001-2. There are a group of 8-pointed *shemsīyas*-star forms in stucco, two carved with kufi script and one with pattern and painted, from Iraq or Iran, 11th-12th c. LACMA, The Madina Collection of Islamic Art, M. 2002. 1. 672a-c. https://commons.wikimedia.org/wiki/File:Three_Tiles_LACMA_M.2002.1.672a-c.jpg Erş Tar. 23.07.2019. The 1140 ceiling of the Cappella Palatina, Palermo, consists of 8-pointed *shemsīyas*-stars and *muqarnas*, designed, made and painted by Muslims. The blue field of the 13th c. Seljuk carpet from the Alaed-din Mosque, Konya, (TIEM, Istanbul. Inv. no: 685) carries a series of red 8 pointed *shemsīyas*-stars and there are the same *shemsīyas*-stars forms in the centre of the main border design.

[7] For Sahl ibn `Abd Allah ibn Yunus, Abu Muhammad al-Tustari (d. 283/896 A.D.) and the doctrine of the Light of Muhammad, *nūr Muhammad,* "*the light of the prophets is from his* [Muḥammad's] *light, the light of the heavenly dominions is from his light and the light of this world and the Hereafter is from his light*.", Gerald T. Elmore, *Islamic Sainthood in the Fullness of Time: Ibn Al-'Arabī's Book of the Fabulous Gryphon* (Leiden: Brill, 1999),134, and references, fn. 19.

[8] Elizabeth Sirriyeh, *Sufi Visionary of Ottoman Damascus: 'Abd Al-Ghani Al-Nabulusi 1641-1731* (London-New York: Psychology Press, Routledge Curzon, 2005). Preface ix. For 12th c. reference to the *khatm awliyā' Allāh al-Haqq,* and the *liwā' taqaddumi-hi manshūr, and his two Seals* (material and spiritual) *khātamā-hu were "Light upon Light,"* see Elmore, *Islamic Sainthood in the Fullness*, 283-284.

[9] For *shams al-maghrib*, *al-nūr al-azhar* and *al-shams al-akbar*, Elmore, *Islamic Sainthood in the Fullness*, 54. The Spirit being regarded as pure light, *an-nūr*.

Jālāl ad-Dīn Hūseyin Turbé, Özkent, (Kırgızistan), combined with an "interlace" design (Fig. 4).

The earliest known example of this combination in tile-work are the cross tiles glazed in white with lustre, combined with the star tiles glazed in green or in turquoise, and the same design in carved stucco panels, from the Dar al-Bahr palace, of the c. 1050 Qal'at Bani Hammâd, in modern Algeria[10] (Fig. 3 Left).

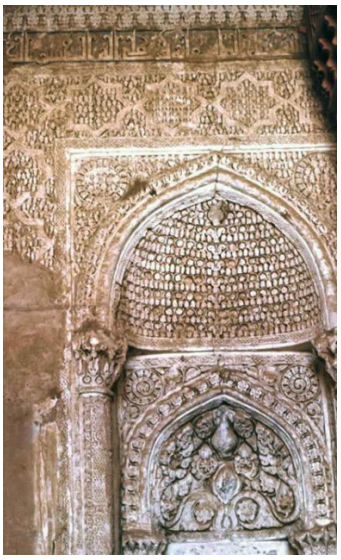

Fig 2. Left, the vertical 8 pointed sun-star and pointed cross pattern bordered by an "interlace," on a stucco wall panel in the so-called Style 'C,' or so called "bevelled" style, from 3rd/9th c. Sāmarrāʾ, today in the Qatar Museum of Islamic Art[11]. Right, The inner, of the two broad stucco border bands carrying the vertical 8 pointed sun-star and pointed cross design, of the border framing the 4th/10th c. mihrab of the Friday mosque at Nā'īn, Iran.

[10] https://www.qantara-med.org/public/show_diaporama.php?do_id=1177. Erş. Tar. 07.03.2019.

[11] @ Tile Collection of Qatar's Museum of Islamic Art; https://www.you-are-here.com/qatar/tile.html.

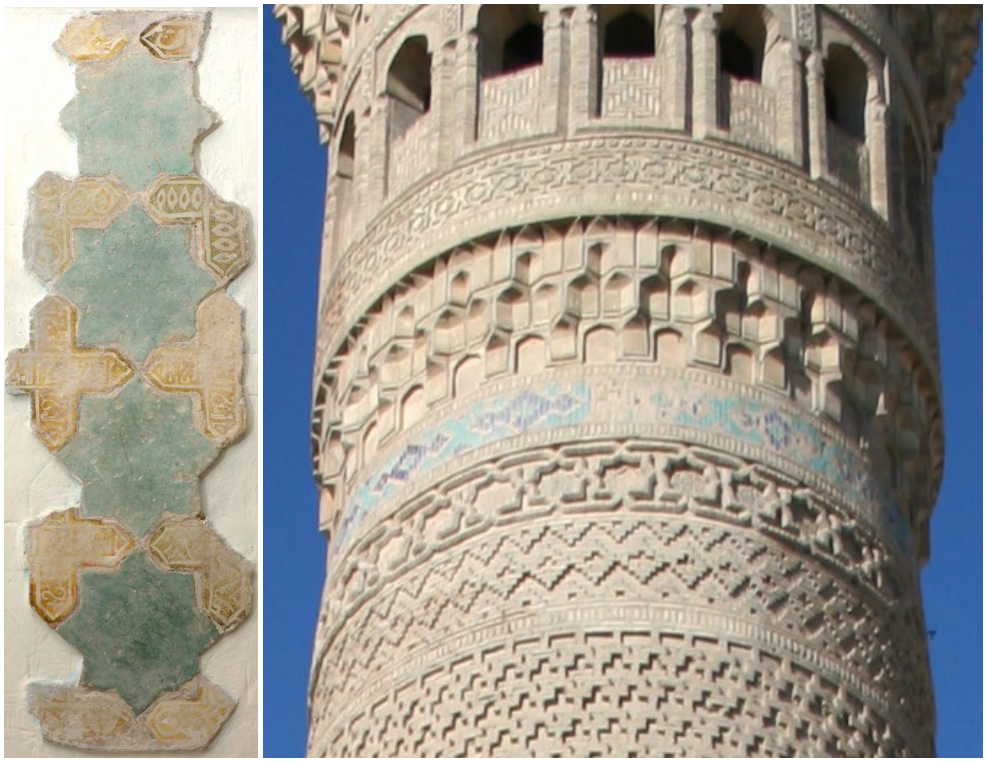

Fig. 3. Left, the vertical 8 pointed turquoise-green glazed sun-star and lustre-painted pointed cross pattern tile-work, from the tile revetments of the *Dar al-Bahr* palace, c. 1050 of the Qal'at Bani Hammâd, in modern Algeria[12]. Right, the vertical 8 pointed sun-star and pointed cross pattern band in brick-work around the shaft of the 1127 Kalyan Minaret, in Bukhara.

[12] http://islamicart.museumwnf.org/database_item.php?id=object;ISL;dz;Mus01;42;en.

Fig. 4. This same design, bound together by a layer of "inter-lace," on the underside of the arch of the portal of the 1152 Karakhanid Jālāl ad-Dīn Hūseyin Turbé, Özkent, (modern Kırgızistan)[13].

The Design today termed "*The Breath of the Compassionate*," *Nafas al-Rahmān*

This repeat design, formed of an 8 pointed sun-star bordered by pointed cross shapes has over the last half century been associated by name with being the representation of "The Breath of the Compassionate," *Nafas al-Rahmān*. This has been related to a tradition attributed by some to the Prophet, in which he is reported to have said, "*God created the universe through the Breath of the Compassionate*"[14], which has its analogy with what is recorded in the Qurʾān Sad, 38:71-72 *"[So mention] when your Lord said to the angels, Indeed, I am going to create a human being from clay. So when I have proportioned him and breathed into him of My spirit, then fall down to him in prostration."* And it was recorded early in the 13th century by Muhyīd-Dīn ibn Arabī (1165-1240) that it is the "*Breath of the Compassionate that brings all of the potentialities, both the unknown and known, the seen and the unseen, into being, when The Compassionate shows compassion to the Divine*

[13] https://okuryazarim.com/ozkent-turbeleri/.

[14] Keith Critchlow, essay in, *Handasah: unity in pattern, Shisha, the International Agency for Contemporary South Asian Crafts and Visual Arts*, Eds. Z. Hussain, F. Khan and A. Mitha, (Manchester: 2004), 37; Samer Akkach, *Cosmology and Architecture in Premodern Islam: An Architectural Reading of Mystical Ideas* (New York: Suny Press, 2012), 223, fn. 142.

Names and responds to their demand that the forms of the worlds be brought into existence"[15].

The initial published indication of this association seems to have been in both New York and London in 1976[16] by Keith Critchlow, in his book, *Islamic Pattern, An Analytical and Cosmological Approach:* "*The second diagram (B) demonstrates the square; here the crossing over of the diacritical point halfway along the edges of the square sets up a right angle. In this particular case we have taken the point of symmetry (or point of change) to be such that a change in direction to form a right angle within the square, and back again to cross the next edge of the square, set up the characteristic pointed cross which pairs with the star octagon as one of those constantly used repetitive patterns and, in this sense, 'classical' Islamic geometric designs. It is as if the pointed cross was a contraction of a sixteen-sided polygon, i.e. sixteen changes in direction which are moving outwards. The cross can thus be considered the passive aspect or exhaling of the sixteen-sided polygon whereas the star octagon can be considered to be the expansive and inhaled aspect of the sixteen sides*"[17]. Also in 1976, Laleh Bakhtiyar, made this connection between design and name explicit through a series of 4 figures in a section in the chapter entitled, *The 'How' of Creation: The World of Archetypes*, entitled, *The Breath of the Compassionate*, in her volume entitled, *Sufi, Expressions of the Mystic Quest*. This series of figures show the transition from a square, to the square rotated through 45 degrees to provide an 8 pointed star,

[15] See for example: Akkach, *Cosmology and Architecture in Premodern Islam*, 223, fn. 142, citing Titus Burckhardt; Samer Akkach, "The world of Imagination in Ibn 'Arabi's Ontology", *British Journal of Middle Eastern Studies* 24(1), 1997: 116-117. Titus Burckhardt, *Introduction to Sufi Doctrine, World Wisdom* (Indiana: Bloomington, 2008), 57-58: "*As for the "breaths" or "exhalations" (anfās) referred to in this text, they are modalities of the "Exhalation of the Merciful" (Nafas ar-Raḥmān or an-Nafas ar-Raḥmānī), this term being understood in the sense of the divine principle which "dilates" (nafassa) (fn. 5. The same verb also includes the meaning of "consolation", in contrast to the "constriction" (karb) induced by distress. "Consolation" clearly comes from the Divine Mercy (Raḥmah), or deploys relative possibilities starting from the archetypes. This "dilation" only appears as such from a relative point of view in which the state of "inwardness" (buṭūn) of the possibilities appears as a "contraction" (karb). The Divine "Exhalation" is connected with the total Mercy (ar-Raḥmah) because it is through this Mercy that the superabundance of Being "overflows" (afāḍa) into limitless essences.*

At the same time the idea of "exhalation" or "breath" relates to the symbolism of the Divine Word, for, just as the different sounds or "letters" (hurūf) which make up the sayings of the revealed Book are analogous to the archetypes which are reflected in the cosmos, so, the breath which is the support or "carrier" of articulated sounds is analogous to the Divine Principal which deploys and supports the possibilities of manifestation. The Divine "Exhalation" is the "dynamic" and "feminine" complement of the Divine Command (al-Amr), the pure act expressed by the Word "Be" (kun) and corresponds, in the symbolism mentioned above, in some sense of the emitting of simple sound. In his Futūhat al-Makkiyah Muhyīd-Dīn ibn Arabī identifies the Divine "Exhalation" with universal Nature (at-Tabi'ah) and attributes to the latter a cosmogonic function,…".

[16] Schocken Books, New York, January 1976; Thames and Hudson, London, 1976; Reprinted, Inner Traditions, 1999.

[17] Critchlow, *Handasah: unity in pattern*, 170, and Fig. B, 171.

which is termed, "*expansion*," to the reduction of the area of the square, to produce from the corners of the square an angled cross form, which is termed "*contraction*" and, fourthly, the combination of these forms entitled expansion and contraction, to form a design that the author termed the "*Breath of the Compassionate*"[18].

From these publications, both with the involvement of Seyyed Hossein Nasr amongst others, this association has been repeated by: Michael S. Schneider in 1994[19], as by Daud Sutton in (2007) 2018, who remarks the name given to this design is recent[20]. By F. A. Raffa, who writes, in respect to the 8-pointed star-sun: "*Across the Islamic world this is the "Seal of the Prophet's" or "8 world angels" high in energy this Geometric form is the basis of the decorative patterns commonly found in Islamic buildings and mosques, in honor of the creation of heaven and earth by "The Breath of the Compassionate.*"[21] By Paul Marchant and Johnathan Horning in 2013, the caption to Diagram 4, records, it "*shows the classical eight-pointed star and cross pattern, referred to as 'The Breath of the Compassionate' design*"[22]. By Cheryll Ann O'Callaghan in 2016, in respect to the 8 pointed star described as: *The Breath of the Compassionate, Inhale, Exhale, "This design is found throughout Islamic art and architecture. To the Islamic culture it is a symbol of "The Compassionate" which is the highest pronounceable name for Allah*"[23]. There was also a course entitled, *Geometry: Breath of the Compassionate and Eight-fold Designs*, at the VM Centre for Traditional Arts, Karachi City, Pakistan in 2017[24], and the association over the past more than 40 years of this eight-pointed star and cross design with the term 'The Breath of the Compassionate' seems to have become established in some of the literature[25]. This

[18] Laleh Bakhtiyar, *Sufi, Expressions of the Mystic Quest* (London: Thames and Hudson, 1991), 16.

[19] Michael S. Schneider, *A Beginner's Guide to Constructing the Universe: the Mathematical Archetypes of Nature, art, and Science* (London: HarperCollins, 1994), 274, in a section entitled "*The Breath of the Compassionate*". "*The pattern known as the "Breath of the Compassionate" appears throughout Islamic art and architecture,*"

[20] Daud Sutton, *Islamic Design: A Genius for Geometry* (London: Wooden books, 2018), 8. "*This pattern can also be seen as a tiling of smaller diagonal squares, half of which expand and the other half of which contract. For this reason it has, in recent times, been referred to as The Breath of The Compassionate, a name referring to the teachings of the Great Master Ibn 'Arabi which expound the Divine Breath as the basis of creation, liberating the possibilities of the four Elements; Fire, Air, Water and Earth.*"

[21] F. A. Raffa, *Quantamplation: Something for Everyone from the "All That Is"* (London: Authorhouse, 2012), 44.

[22] Paul Marchant and Jonathan Horning, "Shapes, Grids and Patterns," *Arts and Crafts of the Islamic Lands, Principles, Materials, Practice,* Ed. Khaled Azzam, (London: Thames and Hudson, 2013), 60, citing K. Critchlow, and, idem. Diagram 4, 61.

[23] Cheryll Ann O'Callaghan, *The Tapestry of Me: Through Sacred Geometry* (Indiana: Balboa Press, 2016).

[24] https://vmcta.com.pk/geometry-breath-of-the-compassionate-and-eight-fold-designs/.

[25] "*The Breath of the Compassionate is both a pattern and a concept in Islamic sacred geometry. Composed of interlocking eight pointed stars and crosses that alternately expand and contract, the pattern visually conveys a sense of inhalation and exhalation and represents the process by which God creatively "breathes" out and manifests form. As Keith Crichton* (sic.)*, a master of Islamic sacred geometry, observes "Through the polar cycle of*

association, made between the representation of the Divine Breath and the combination of these two geometric shapes published from the 1970's onwards, is also in circulation on the internet, e.g. Wikipedia: *"The tiles are in the shapes of the Sufi symbols for the divine breath, the octagon for breathing out, the cross for breathing in; the two fit together as a tessellation, an example of an Islamic geometric pattern. Each tile is unique, the design surrounded by quotations from the Qur'an"*[26]. It can be noted that there are in fact no "*octagonal*" tiles *per se* employed in this design. Further, it may also be observed that the surface area of the 8-pointed tile associated with the "*expansion*" of the Divine Breath, in fact, is a little more than the total area of a single so-called cross-tile, which is said to represent the "*contraction*" of the Divine Breath, which itself may seem to some to be a somewhat odd visual representation of the expansion and contraction of the Divine Breath. But there is, however, a further and fundamental point concerning the supposed association of this Name, *the Breath of the Compassionate*, with this particular design. This because The Name, *The Compassionate,* is repeatedly recorded in the Qur'ān 2:32, "*In the Name of God, the Merciful, the Compassionate I have no success but through God. Glory be to Thee! We know not save what Thou hast taught us. Surely Thou art the Knowing, the Wise*.", and the point being, that if this design was understood in the past, in the same way as is stated by some today, and because "The Compassionate" is a phrase employed repeatedly in the Qur'ān, and which precedes almost every action undertaken by a Muslim, *Bismillahirrahmanirrahim*, *In the Name of God, the Merciful, the Compassionate*, and occurs twice in *Al-Fatihah*, there should certainly be far more use made of this particular design, if it was in fact understood throughout the centuries to carry this particular meaning, to serve as a specific reminder of the "Breath of the Compassionate," than has in fact, from the surviving evidence, been the case.

It seems probable that it was the numerous examples of lustre tiles of this design (Fig. 5) removed in the 19th c. from the walls of the Imām zādeh Yahyā, containing the tomb of this descendent of the Prophet Muhammed in Varāmin, Iran, some of which are today exhibited at the Victoria and Albert Museum[27], others in the British Museum[28], London, Ashmolean, Oxford[29], Fitzwilliam,

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the divine breath the universe is periodically created, maintained, dissolved, and renewed…More than just an ornamental motif, the Breath of the Compassionate is a cosmological model symbolizing the interplay of polarities that manifest form." https://paddle8.com/work/erin-sledd/139059-breath-of-the-compassionate-i

[26] https://commons.wikimedia.org/wiki/File:Lustre_tiles_Iran_Sufi_divine_breath_shapes.JPG.

[27] V. & A. Museum, London, Museum Nos. 1837&A, C, E, F-1876, 1487-1876, 1489-1876, 1838&C, E-1876, 1077-1892, 1099&A-1892, 1100&A-1892.

[28] B.M. No. OA+.1121 G.480
.https://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=215375&partId=1&images=truehttps://www.britishmuseum.org/research/collection_online/collection_object_details/collection_image_gallery.aspx?assetId=279834001&objectId=221589&partId=1.

[29] Acc. No. EAX.289.a, http://www.jameelcentre.ashmolean.org/collection/6/653/663/12975.

Cambridge[30], 5 in the Burrell Collection, Glasgow, in the Louvre, Paris, in the Museum of Islamic Art, Berlin[31], in the Metropolitan Museum of Art, New York, and the Art Institute of Chicago[32], and the Hermitage, St. Petersburg (where there are over 1,000 whole and fragments thereof[33], as well as the lustre painted *mihrab* from the shrine), dated from 1261 to 1262-1263, and examples of which have been repeatedly published over the past century[34], that, in part, laid the foundations for this association being made between this design and this Name. Given the importance of the tile-work from the shrine of Imāmzādeh Yahyā, and because the border around many, but not all, of the tiles forming this design employed on this tomb carry *ayet* from the Qurʾān painted in lustre in *naskh* script.

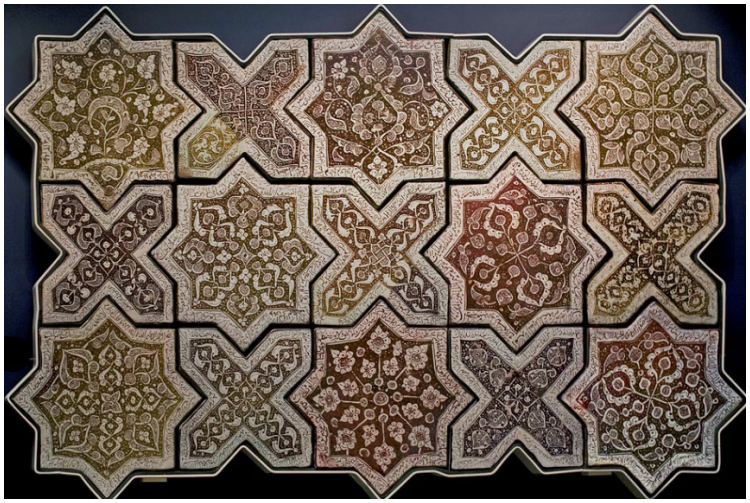

Fig. 5. Examples of lustre tiles of this 8 pointed star and cross pattern, angled at 45°, from Kashan, Iran, dated 1262, today in the V. & A. Museum, London. These tiles, decorated by Ali ibn Muhammad ibn Abi Tahir, were taken from the walls of Imāmzādeh Yahyā, around the tomb of Yahyā a descendant of the Prophet, at Varāmin near Tehran[35].

However, it was noted in an important 1989 article by Wasma'a Khalid Chorbachi, who wrote in respect to this design, "*I wonder if the artisans who made*[36] *this design thought of it as form, expansion, contraction and the Breath of the*

[30] Object Number: C.23-1934, http://webapps.fitzmuseum.cam.ac.uk/explorer/index.php?oid=17489.

[31] Inv. Nr. I.3864, numerous examples.

[32] No. 1915.243, https://www.artic.edu/artworks/71231/star-shaped-tile.

[33] Vladimir Lukonin, *Anatoli Ivanov, Persian Art, The Lost Treasures* (New York: Parkstone Press, 2012), 157, Cat. No. 103.

[34] E.g., Donald N. Wilber, *The Architecture of Islamic Iran: the Il Khānid period* (New York: Greenwood Press, 1969); Oliver Watson, *Persian Lustre Ware* (London and Boston: Faber and Faber, 1985).

[35] https://commons.wikimedia.org/wiki/File:Lustre_tiles_Iran_Sufi_divine_breath_shapes.JPG.

[36] It seems reasonable to suggest "artisans" copied, and repeatedly employed this design in their work, rather than, as is suggested, "made," they remade, repeated this design.

Compassionate God?"[37]. And this problem was subsequently mentioned by Robert Irwin in 1997, in respect to the same term applied to the eight-pointed star, "*One should certainly be cautious in assigning a fixed symbolic meaning to, say, the eight-pointed star as the "Breath of the Compassionate"*[38]. And this, not least, because this 8 pointed sun-star device has been long associated with being the representation of a form of the *Khātam Sulaymān* - Seal of Sulaymān. It is the case that there is simply no known evidence of the pre-modern association of this eight-pointed star and cross pattern with the name 'The Breath of the Compassionate.' Nor, it seems, was this suggestion even made prior to the 1970's, more than a millennium after this design was first employed, and, although there is the teaching of Muhyīd-Dīn ibn Arabī (1165-1240) in the 13th c. on the Breath of the Compassionate - *Nafas al-Rahmān*[39], there is simply no evidence to show he had this design in mind as the design representing the Breath of the Compassionate, nor is there evidence of this hadith mentioning the "Breath of the Compassionate" in the canonical hadith compilations. Further, the fact that most of the lustre tiles of 1261-1263 from Imāmzādeh Yahyā carry a border of *ayet* from the Qurʾān, it should not blind us to the fact that tiles in lustre technique of the same 8 pointed form that were produced in the first quarter of the 13th c. have borders that carry Persian quatrains, poetry concerning love[40], at times verses from the *Shahname* and by Nizami, as is the case for other lustre tiles produced at the same time[41], some were re-used, (applied to the facade of this building), and this is also the case for later 14th c. examples[42]. While this design was employed in tile-work and in other media without borders carrying the *ayet* of the Qurʾān. There is therefore no necessary connection to be made between this term and tile-work of this design with borders carrying *ayet* of the Qurʾān painted in lustre.

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[37] Wasma'a Khalid Chorbachi, "In the Tower of Babel: Beyond Symmetry in Islamic Design", *Computers & Mathematics with Applications*, 17/4-6, 1989: 760. See also Wasma'a Khalid Chorbaci, "In the Tower of Babel: Beyond Symmetry in Islamic Design", *Symmetry 2: Unifying Human Understanding*, Ed. Istvan Hargittai (Oxford: Pergamon Press, 2016), 760. Cited in Akkach, *Cosmology and Architecture in Premodern Islam*, 15.

[38] Robert Irwin, *Islamic Art* (London: Laurence King, 1997), 200.

[39] Muhyiddin Ibn 'Arabi, *Fusus al-Hıkam (Ismail Hakkı Bursevı's translation and commentary on Fusus al-Hıkam by Muhyıddın Ibn 'Arabi)*. Rendered into English by Bulent Rauf with the help of R. Brass and H. Tollemache III. (Oxford, Istanbul, San Francisco: Muhyiddin Ibn 'Arabi Society, 1991), 732-736, and as cited above, fn. 8.

[40] Met, 1993, 12, Cat. No. 7.

[41] As for example the lustre painted 8 pointed tiles with Persian verses, the cross tiles carry no inscribed border, forming part of a palace revetment from Domgan (N. Iran), dated 665 A.H./1266-67, today in the Museum of Islamic Art, Berlin, Inv. Nr. I.3865-3870.

[42] E.g. the Kashan lustre painted 8-pointed star tile with Persian verses, dated, Safar 739/Aug-Sept. 1338, Museum of Islamic Art, Berlin, Inv. Nr. I.1009.

There is simply no evidence to associate this term with this geometric design before this name was given to this design in the second half of the 20th c. by Keith Critchlow, who in fact stated in 2004 this was the case:
"*If we take one of the most loved, most used, and most revered of the Islamic geometric patterns, one that presented itself to me on my visit to Iran in the 1970s and caused me to be reminded of the 'Breath of the Compassionate' – a name, which has stuck in western literature since. This pattern is based on the simplicity of the square – itself a symbol of material creation and stability*"[43]. This design "*caused*" Keith Critchlow in the 1970's "*to be reminded of the 'Breath of the Compassionate,"* and Keith Critchlow gave this design, employed for more than a millennia in Islamic art, a new modern name.

Although it may be the case that "*the square,*" rather than the equilateral triangle, was understood as "*a symbol of material creation and stability*", and it is the case that "material creation" and, "stability," in a sense, could be said to characterise the *'Breath of the Compassionate,' nafas al-Rahmān,* at least from the 5th/11th c. onwards, and the spread of al-Ashʿarī' Sunni occasionalism, where the causation of one event by another independent of the Almighty is denied, with the understanding that the Almighty recreates the world at every instant through the *'Breath of the Compassionate,'* building upon the insubstantiality of this temporal world in relation to the Absolute, the Almighty, as is repeatedly stated in the Qurʾān[44]. However, this understanding of the insubstantiality of this temporal world applies to the application, use and the function of Islamic design in general, as Ernst J. Grube wrote in 1966, "*The ornamentation of surfaces of any kind in any medium with the infinite pattern* (sic. see below concerning the so-called "infinite pattern") *serves the same purpose – to disguise and 'dissolve' the matter, whether it be monumental architecture or a small metal box*"[45], and there is no record of the association being made between this particular type of this form of design and the name, the '*Breath of the Compassionate,*' until the 1970's. It seems rather more reasonable to suggest that the collection of designs that were recorded in southern European sources from the 14th c. onwards as, *Rabb-esco*, *Ar-Rabb-esco*, or *Orabb-esco*, that is, of the design type termed Arabesque, meaning, fashioned in the

[43] Critchlow, *Handasah: unity in pattern*, 36.

[44] Occasionalism is the understanding that the Almighty recreates the world at every instant, that the act of Creation is ongoing within time, which served to focus attention on the act of creation, that is, on the Divine Breath itself and the articulation of the word *Kun* (Be!) the Almighty's first uttered word, and *kawn* (the universe and world) was the immediate outcome of this utterance, Qur'ān, *An-Nahl*, 16:40, "*We say unto it: Be! And it is." kun fayakūn*, or Allah's speech. The ongoing creation begins with the Divine Breath forming the Divine Command. Qur'ān, *al-Baqarah* 2:117, "*God said, "Be and* (instantaneously) *there was*" (*Kun fi Yakun*).

[45] Ernst J. Grube, *The World of Islam* (London: Paul Hamlyn, 1966), 11.

Manner of The Lord, *ar-Rabb*, work made in the manner of the Lord[46], were understood in the Islamic world to represent, to indicate through the particular and various variations of this design type, the *nafas al-Rahmān*, the Breath of the Compassionate, given this design type's interlacing, regular, measured, usually foliate, repeat forms, with the semblance of movement representing The Alive, forming a veil over a surface, which can be understood as representing creation through every breath of the Almighty, recreation at every moment but which appears as one continuous impression, representing the course of on-going creation, as was understood by al-Ash'arī et al.

The fact that this name, the '*Breath of the Compassionate*' was given to this particular design in the 1970's by Keith Critchlow, that it was newly coined in the 15th/20th c. is both symptomatic of the problem and is important. It is but one of the numerous examples of new names given to old designs, forms and depictions, for political, religious, orientalist, spiritual, and other reasons largely during the course of the 19th and 20th centuries. This modern re-naming of designs, forms and depictions, today forms the major impediment to the understanding of the meaning conveyed by designs[47] (and representations-depictions[48]) at the time they were designed, employed, or were re-used in the past[49]. Although it is said that

[46] Terrance M. P. Duggan, "Critical Review: Shelia S. Blair & Johnathan M. Bloom, 'The Mirage of Islamic Art: Reflections on the Study of an Unwieldy Field", *Libri* V, 2019: 238-246, regarding the term *ar-Rabb-esco*, hence Arabesque/Rabbesco.

[47] Terrance M. P. Duggan, "On Reading The Meanings Carried By The Zigzag Design In Islamic Art", *Uluslararası XXI. Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu*, *Antalya, 25-27 October 2017*, Antalya, 2019: 781-799., re the so called "zigzag" in Islamic art.

[48] See for some examples in Islamic art, Terrance M. P. Duggan, "The O'Grady Factor and False Resemblance – Blinding Oriental-isms and Misapprehensions of the 13th Century in the Absence of Due Contextualisation and a Little Common Sense", *Akdeniz Üniversitesi, Edebiyat Fakültesi, İngiliz Dili ve Edebiyatı Bölümü, I. Dil, Talat S. Halman Kültür ve Edebiyat Çalıştayı, Haziran 2015, Talât Sait Halman'a Armağan Kitabı*, Ed. A. Arıkan, Antalya, 2015: 178-198; Terrance M. P. Duggan, "The Just Ruler of the Age-Exhibiting Legitimacy for Rule through Visual Representation, as in the Written and Inscribed Record: On the Meanings Conveyed by the Creatures Depicted on 8-Pointed Tiles from Rūm Seljuk 13th c. Palaces, Pavilions and Bath-Houses: The Jinn", *Phaselis* IV, 2018: 389-421, re the orientalists so-called, sphinx, siren and harpy, misnaming, as likewise are the modern terms for the same, *mythical creatures*, *hybrid/hybrid figures*, and, *mythological sphinx*, these being the Islamic representations of the jinn. For a recent example, amongst many of the description of the depiction of a jinn described as a sphinx, as also, a "*mythological sphinx*", implicitly raising the matter of exactly whose mythology and whose terminology is being referenced through the use of this term in reference to Islamic works from the 12th and 13th c., see Richard P. McClary, "A New Approach To MĪNĀ'Ī Wares: Chronology And Decoration", *Persica* 25, 2016: 6, 7, 12, 13, 14, 19.

[49] For example, in works such as the anthology of sources concerning Islamic art and visual culture assembled in English translation by D. Fairchild Ruggles, there is no list of the particular terms in the languages that were employed with their varied translations into English, terms that have been translated into English as: *basic pattern, design, symmetrical arrangements, symmetrical figures, decoration, geometrically decorated, ornamentation*, *ornamentally carved*, *embellished*, etc., Dede Fairchild Ruggles,

"*art historians approach the past for (the) objective re-construction of the historical reality, seeking to satisfy an academic curiosity and a desire for knowledge*"[50], it is the case that after more than a century of scholarly work on Islamic art by orientalists, art historians and others, it remains, not simply a *desideratum*, but an unrealised *sine qua non* for the proper study of the designs that have been employed in the Islamic world, that a dictionary of the terms that have been employed, giving dated examples of the first known, and the subsequent use of the particular terms from the surviving texts, the actual word or words that were employed by particular persons in particular places at a particular time, employed to describe particular Islamic designs in their context, is compiled from the sources, both medieval and modern. This is undoubtedly a somewhat daunting and linguistically demanding task, but the presently available dictionaries of Islamic art terms are unfortunately deficient and unscientific in respect to this fundamental matter of the history,

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Islamic Art and Visual Culture, An Anthology of Sources (Oxford: Wiley-Blackwell, 2011). Nor do the various dictionaries of Islamic Art terms, e. g. Ahmad M. Issa, *Islamic Art Terms (Lexicon: Explained and Illustrated)* (İstanbul: IRCICA, 1994)., distinguish in what context and when the first use of a particular term occurred, and, between those terms that are derived from Europe, largely from Spain, Italy and France such as: Arabesco, Arabico, Arabigo Arabeschi, Arabescati, Arabesque, Arabasques, Arabe'sk, Arabesk, Arabisk, Rabesco, Moresque, Morésque, Moresche, Moresk, Moresk-work, Moresc, Morisko, Morisk, or, chevron, zigzag, zikzak, geometric, etc., that have also over the past four centuries made their way into Arabic, Persian, Ottoman Turkish, Urdu, etc., terms that have replaced the former terminology, the former names for particular designs, forms and patterns. It is the case that the terminology employed has changed over time and the etymology of words does at times provide indications as to meaning, as well as associated form, but often, the term leads back to the Western gifting of names, initially from Spanish, Italian and French in the 16th c., but largely adopted in the Islamic world in the 19th to 21st centuries, some given because of their formal resemblance to similar forms in pagan antiquity (sphinx, siren, harpy, harpie etc.) and to those with a formal resemblance to those in medieval and post-medieval Europe (chevron, zigzag, zikzak, etc.), at times this re-naming presenting a cul-de-sac in the attempt to understand the meaning within the post-pagan period conveyed by forms and the related names, employed for designs on works of Islamic art. Modern examples include the use of still more, newly devised collections of terms, which, as has long been customary, derive not from Arabic, the language of the Qurʾān, but from ancient Greek, include the so-called '*arkaik grup*' of 12th to mid-13th c. Seljuk portal designs, Semra Ögel, *Anadolu Selçuklularının Taş Tezyinatı*, (Ankara: TTK, 1965) *calliphoric, ternopoietic, chronotopic and, monoptic*, employed by Oleg Grabar, *The Mediation of Ornament* (Princeton: Princeton University Press, 1992); and the newly coined term, *cosmophilia*,-love of ornament, S. S. Blair – J. M. Bloom, *Cosmophilia: Islamic Art from the David Collection, Copenhagen*, Boston, 2006, etc. As the etymological root of these terms lies elsewhere, how is it possible by means of these terms to comprehend the meaning carried by these design at the time they were employed? Orientalist and imaginative re-naming will doubtless continue, until there is an accurate, authoritative dictionary on historical lines of the actual terms that have been employed, including both the Islamic and the Christian-and post-Enlightenment terms, to enable the terms employed in dated texts, and the related designs and patterns to be understood for what they meant, at the time the historical text employing the term was written.

[50] Samer Akkach, *Cosmology and Architecture in Premodern Islam: An Architectural Reading of Mystical Ideas* (New York: Suny Press, 2005), 16.

etymology, origin and first use of medieval and modern terms, employed in the Islamic world, as elsewhere, to describe the designs-patterns employed in Islamic art. In terms of the methodology employed by art historians, to repeatedly employ a misleading modern terminology to describe medieval Islamic designs could be understood as a decidedly odd and unscientific practice.

مشبّك *müşebbek, muşabak-mushabak, shabaka,* meaning - a lattice or net, grill or grid

There is a name employed in the medieval sources for this type of design, formed of a repeat of an 8 pointed sun-star surrounded by four cross tiles and it is not "The Breath of the Compassionate". Ibn Bibi in the 7th/13th c. in his *El Evamirü'l-Ala'iye Fi'l-Umuri'l-Ala'iye*, described this design, which was employed on the Rūm Seljuk tile-work revetments of the 1230's Kubadabad palace complex by Lake Beyşehir, which he described (Fig. 8, Right). He wrote, "*The lattice adorned walls should be so colourful, the colours of the birds in the sky should fade with envy, all laid on with turquoise and blue, so blue, the watchman of the sky* (Saturn[51]) *should be driven into jealousy*"[52]. The term ibn Bibi employed in the 7th/13th c. to describe this design type was the Arabic word, مشبّك *mushabak*, derived from *shabak* meaning: reticulated, a net, a lattice, or perforated[53], and this term, meaning a lattice, net, or a reticulated

[51] The planet Saturn was described as, "*The watchman of the sky*," as employed by Shaikh Nizami of Ganja in his Sikandernama, Canto V.:

" From his waist the watchman of the sky (Saturn) suspended

"A golden bell, for the guarding of the King." Shaikh Nizami of Ganja, *Sikandernama* Vol I. Trans. Wilberforce Clarke (New Delhi: Publishers, 1881), 44. Ibn 'Arabi in his chart of creation records in the First Heaven, Saturn, as the Abode of Ibrahim, together with the Divine Name, *Al-Rabb*, The Lord, Bakhtiyar 1976, 62; Burckhardt (1950) 2001, 32-33.

[52] Ibn Bibi El-Hüseyin b. Muhammed b. Ali El-Ca'feri Er-Rugadi, *El Evamirü'l-Ala'iye Fi'l-Umuri'l-Ala'iye, (Selçukname)*, Vol. I, Trans. Mürsel Öztürk (Ankara: TTK, 1996), 363. For the Persian text, Ibn Bibi, *El Evamirü'l-Ala'iyye Fi' Umuri'l-Alaiyye, (Tıpkı basım)*, Haz. Adnan Sadık Erzi (Ankara: TTK, 1956), 353.

[53] From the Arabic *shabaka-şebeke,* meaning: 1. net, (as in fisherman's net) 2. lattice work, reticulation, perforation, *shabaka* (= he interwove, interlaced, entangled), *shabuka* (= net), *shibāk* (= netting, network, latticework, window, wicket), etc. Interlaced-intertwined, "*Bukhārī reports that the Prophet himself once intertwined his fingers (shabbaka a ābi ah) as he said that the believers were like the bricks of a wall, reinforcing one another. And Nasāʿī reports that Ibn Masʿūd intertwined his fingers (shabbaka bayna a abī ih) and put them between his knees at the inclination in prayer (rak ah), expressly saying he had seen the Prophet do so*." (Christopher Melchert, "The Etiquette of Learning in the Early Islamic Study Circle", *Law and Education in Medieval Islam, Studies in Memory of Professor George Makdisi*, Eds. Joseph E. Lowry *et al.,* (Cambridge: E. J. W. Gibb Memorial Trust, 2004), 40). In Andalusia it was a term that seems to have been used to describe a grid-pattern of passageways, alleys (see, Evariste Lévi-Provençal, Emilio Garcia Gomez and Leopoldo Torres Balbás, *España Musulmana: Hasta la Caída del Califato de Córdoba (711-1031 de J.C.)* (Madrid: Espasa-Calpe, 1957), 529-530, "*el de ingreso al sabat o pasadizo shabakka*,). It was a term employed in the Cairo Geniza letters (largely Fatimid period, between 950-1250) and Shelomo Dov Goitein, stated *mushabbak* and *shibāk*, meaning latticework - filigree, was at that time usually used in describing gold rings and, occasionally, for silver vessels of a woman's dressing table, although *shibak* has frequently

veil, perfectly describes the lattice pattern formed by this design. Further, the stucco lattice framed windows of the palace carried glass insets in cobalt blue, manganese purple and green glass found in fragments in the excavation[54]. The root of this same term, *shabaka* was also employed by Badīʿ az-Zaman Abū l-ʿIzz ibn Ismāʿīl ibn ar-Razāz al-Jazarī in 590-591/1206 in describing the palace doors at Āmid-Diyarbakir which he designed (Fig. 8, Left), of linked 6 and 8 pointed suns-stars[55]. In the 7th/13th c. neither Al-Jazarī, nor, Ibn Bibi described this type of design as, '*The Breath of the Compassionate*.' Ibn Bibi did not, unlike the designer-engineer Al-Jazarī, separate this design into its component parts, termed "star" forms, and he did not use the Persian term *girih,* at times employed to describe interlaced vegetal elements and interlocked geometric shapes[56]. It seems clear that both al-Jazarī and Ibn Bibi understood this to be a term that could be employed for any type of reticulated veil, a lattice-like "geometric" design, designs that were employed to form a *hijab*, a veil or screen over a form like the *kiswa* over the Kaa'ba, employed to cover the surface of an object, material, building, structure or aperture-space, thereby dressing it in design.

The Arabic word, *shabak*, *shibāk,* pl. *shabaka/shebekah/shubūkā/shubbākat/shubuku*, vulg. *shabka*, passed into Persian, Hindustani, Urdū, Hindī, (into modern Turkish, *şebeke,* meaning a network or grid[57]) has been frequently translated into English from the 18th c. onwards, meaning: "*a net; lattice; trellis; grating* (as over a window); and perhaps the most

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been also employed to mean window. In Anna Martelloti's translation of, *I ricettari di Federico II: dal "Meridionale" al "Liber de coquina,"* the term *mistembec,* which is compared with *mynceleek* or *nysebek* of the English recipe books, is said to be the deformation of Arabic *mushabbak*, meaning 'crossed' (Anna Martelloti, *I ricettari di Federico II: dal "Meridionale" al "Liber de coquina*". (Roma: 2005), 139), i.e., lattice-like, and, *zalabiya mashabbak (mushab-bak),* was a Bagdad 9th c. speciality, latticed fritters (Darra Goldstein, *The Oxford Companion to Sugar and Sweets* (Oxford-New York: Oxford University Press, 2015), 483, 795-796), there is also, *'usarah mashabbak,* a grid-shaped sweet, still termed in modern Turkish, *müşebbek*. A latticed enclosure was described as *mahjar-i mushabbak*. In Persian, *mushabbak,* meaning, to interlace or tie. The word *shabaka* in Spanish, *Xaretas*. *shabakh* was the 10th c. mathematical term, employed by the Persian Muḥammad ibn Mūsā al-Khwārizmī relating likewise to a net or grid employed for multiplication, *shabakh*, while a tilted or angled net-*shabaka* for multiplication was later developed by al-Kāshī d. 1429.

[54] Zekiye Uysal, *Kubad-Abad Sarayında Selçuklu Cam Sanatı* (Ankara: TTK, 2013), 52-62, for the stucco lattice, see Ömür Bakırer, "Recently Discovered Stucco Window Lattices from the Anatolian Seljuk Period", *10th International Congress of Turkish Art 10e Congrès international d'art turc Genève, 1995*, Eds. Déroche et al., (Geneva: Fondation Max van Berchem, 1999) 127-133.

[55] Yasser Tabbaa, *The Transformation of Islamic Art during the Sunni Revival* (London: B. Tauris, 2002), 97, and, Fig 46.

[56] See for examples and references, Carol Bier, "Geometry in Islamic Art", *Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures* (Hampshire: Springer, 2015), 9.

[57] "*Any thing formed in meshes like a net, network*." James W. Redhouse, *An English and Turkish Dictionary in two parts, English and Turkish, and Turkish and English* (London: Bernard Quaritch, 1857), 754.

pertinent in a design sense, *interlaced-intertwined*, and, *a reticulated veil*[58]. *Mushabak, mushabbak*, meaning: *Latticed, grated, netted, reticulated*; and with *mushabbak*, a synonym of the Urdū *Jālī*, translated as, *reticular, retiform, reticulated, meaning: constructed, arranged, or marked like a net or network. Mushabbak-kal'a, meaning, An (openwork) censer, and also, The sky*"[59]. In Syriac, *shabbāka* means a window[60]. An early mention of the *mushabbak* was by Abū al-Qāsim b. 'Alī Ibn Ḥawqal al-Naṣībī (d. 978) in his description of *Bûkhara* in his *Sûrat-al-Ard,* he describes the mansions of the city in c. 950 as being built close together, with *mushabbak* (wooden latticework of various shapes over the windows, the Egyptian *mashrabiyya,* Osmanlija, *müşebbek*). The Hebrew variant of this word was employed in the Song of Songs 2:9, "*There he stands behind our wall, gazing through the windows, peering through the lattice.*", *shevaka* (now *shabbaka*), from a root meaning "*to twist*," (to bind together) "*to make a lattice*"[61]. As likewise, 2 Kings 1., "*Then Moab rebelled against Israel after the death of Ahab. And Ahaziah fell down through a lattice* (*sebakah*- net- or wreathed-work) *in his upper chamber that was in Samaria, and was sick:*"; the same word is used for a net in Job xviii, 8, and in, 1 Kings, vii. 17-20, vii 17, "*And nets of checker work, and wreaths of chain work*," to describe the ornamental net-work on the columns before Solomon's Temple (*sebākāh*).

The problem with the modern works cited above that describe this particular design as '*The Breath of the Compassionate*,' is that the individual parts of the design, an 8 pointed sun-star and 4 quarter crosses (within a square), are regarded as the design, but, it is the case that the individual component elements that together form the design are not the whole design. This is for example, likewise the case for the terms given to the particular types of designs of *mashrabiyya* in Cairo: *nudjūmī* "star-like", *sākiya* "like a water wheel", *muthallath* "triangular", *salībī fādī* "cross-shaped and empty", *salībī malyān* "cross-shaped and

[58] Taylor-Hunter 1808, 273, "A. *shubuku, A net, A lattice, a reticulated veil*"; John Borthwick Gilchrist, *The Hindee moral preceptor; or, Rudimental principles of Persian grammar, as the Hindoostanee scholars' shortest road to the Persian language or vice versa; rendered ... through the medium of sixty exercises in prose and verse, including the ... Pundnamu or Ethics of Shuekh Su'udee, with a Hindoostanee literal version, and an English metrical paraphrase of each poem; comprising in part II a large English and Hindee-Persic vocabulary Part I.* (London: Black, Kingsbury, Parbury and Allen, 1821), 135, "*shubuku, Net, lettice* (sic.), *reticulated veil*".

[59] Francis Johnson and John Richardson, *A Dictionary, Persian, Arabic, and English; with a Dissertation on the Languages, Literature, and Manners of the Eastern Nations* (London: Parbury, Allen and Co., 1829), 1423; Francis Johnson, *A Dictionary, Persian, Arabic, and English, Under the Patronage of the Honourable East-India Company* (London: Wm. H. Allen and Co.,1852), 1188; John Thompson Platts and H. Milford, *A Dictionary of Urdū, Classical Hindī, and English, Crosby, Lockwood and son* (London: 1884), 721.

[60] *Vocabularies: English, Arabic, Persian, Turkish, Armenian, Kurdish, Syriac, Comp. by the Geographical section of the Naval Intelligence Division, H.M.S.O.* Oxford: University Press, 1920, 501.

[61] Joseph S. Exell and Henry D. M. Spence, *The Complete Pulpit Commentary, Bk.4, Psalms to Songs (1880-1919)* (Harrington: Delmarva Publications, 2013), X.

filled in", *kanā'isī kibtī* "Coptic church type", *kanā'isī fādī*, "church type and empty", *'ayn al-katkūt* "chick's eye", *maymūnī mudawwar* "circular *maymūnī*[62]", *maymūnī nudjūmī* "star-like *maymūnī*", and, *ma'k-us* "reversed"[63]; terms that clearly largely refer to the individual forms that are employed to form the lattice, not to the meaning(s) conveyed by the whole lattice of design. The modern 1970's interpretation of the meaning carried by the combination of these two shapes, an 8 pointed sun-star and cross, is based upon breaking a repeat lattice design into its two constituent parts, reductionism, which would often have been the practice of the craftsman making an object that carried this design, employing moulds or templates, but which may be of little help in identifying the meaning carried by the lattice design as a whole, as when this design type was remarked upon in the 13th c., as noted above, it was described as, *mushabak / shabaka-shibāk*, a lattice[64]. The fact that the lattice itself was formed of a repeat of pointed crosses was not of consequence, as seen from a slight distance the joints that define the pointed ends of the arms of these crosses are not visible, it is the lattice form itself, and the 8-pointed shape of the apertures in it that is prominent. What was of importance was that there was a lattice, a *müşebbek/shabaka,* and therefore, by definition, apertures or apparent apertures in the lattice-grid, which, in the case of this type of Rūm Seljuk palace tiled revetment were in the form of 8 pointed suns-stars, themselves having the form of the *Khātam Sulaymān* –Seal of Sulaymān and can therefore be associated with Sulaymān, The Just Ruler, and, at least, employed within a Seljuk 6th-7th /12th - 13th c. context, this design served to remind of the ruler with the title, "The Second Sulaymān," "The Sulaymān of the Age," meaning, The Just Ruler of the Time, or of The Just Ruler of the Age[65].

It would seem "*Arab*"-Muslim-Islamic, *mushabak/shabaka*, lattice type designs were well known to the North German monk and master craftsman Roger of

[62] Presumably relating to, Ar. *Maymūn*, lit. 'lucky, blessed'.

[63] Doris Behrens-Abouseif and Roberto Orazi, "Mashrabiyya", *Encyclopaedia of Islam*, Second Edition. (London: Brill). Consulted online on 24 February 2018 http://dx.doi.org/10.1163/1573-3912_islam_COM_0697109-110, Māsardja-Masrah, s.v. *Mashrabiyya*, 718. Although the authors D. Behrens-Abouseif and R. Orazi, repeats the association made by E. W. Lane, of the word *shariba* with water, via the lattice over the niche for water *mashraba* (idem 717), it seems the word *mashrabiyya* (also, *meshrebija*), more probably relates in some way to *shabaka* rather than *shariba*.

[64] It seems for example probable that the design on the field of the Konya Seljuk carpet TIEM Istanbul. Inv. no: 681, and TIEM. Inv. no: 685 were described at the time as of a *shabaka-şebeke* design, rather than has been recently frequently stated, "*infinity*," as in, "*The decorative composition is dominated by the principle of 'infinity', as is typical with Turkish rugs*." Gönül Tekeli "Rug" in Discover Islamic Art, Museum With No Frontiers, 2019. http://www.discoverislamicart.org/database_item.php?id=object;ISL;tr;Mus01;11;en ; also, D. R. Dodds, Reflections of infinity: early Islamic rugs from San Francisco area collections, *Hali*, IV, 1982, 370-375, etc.

[65] Duggan, "The Just Ruler of the Age-Exhibiting", 389-421.

Helmarshausen (1100-1140) who called himself Theophilus (Lover of God), who wrote a treatise of three books (on painting, on glass-working and on metalworking) entitled *De diversis artibus-On Divers Arts*, c. 1122. In his preface he wrote: "*If you study it diligently you will find here whatever kinds of the different pigments Byzantium possesses and their mixtures; whatever Russia has learned in the working of enamels and variegation with niello; whatever Arab lands adorn with repoussé, or casting or openwork*[66]*;…*"[67]. In Roger's Latin text is the word *interrasili* [68]- which

[66] Robert Willis, *Architectural Nomenclature of the Middle Ages* (Cambridge: Cambridge University Press, 1844), 48, suggested it was the types of interlace designs themselves, that were later termed from French "Arabesque," from Spanish, "*arabesco*," as also, "*Morisco*" or *Morisk*," "*Rabesco,*" which was what was indicated by Theophilus's use of this term here, which seems probable. "*Morisk*" was defined, John Barrow, *Dictionarium polygraphicum or The whole body of arts regularly digested: containing the arts of designing, drawing, painting... adorned with proper sculptures, curiously engraven on more than fifty copper plates*, Vol. II, (London: C. Hitch and C. Davis, 1735), s.v. *Morisco "Morisk is a kind of painting, carving etc. done after the manner of the Moors* (meaning Muslims)*; consisting of several grotesque pieces and compartments, promiscuously mingled, not containing any perfect figure of a Man, or other animal; but a wild resemblance of birds, beasts, trees, etc."* The *several grotesque pieces and compartments, promiscuously mingled,* presumably thereby describing interlace and lattice geometric forms. Likewise, "*Moresca (Pittura), ovverto fatta alla foggia dei Mori, e consiste in varj grotteschi, e spartimenti, che non hanno alcuna figura perfecta d'uomo, o d'animale, (Vedi Rabesco). Moresche. Così chiamansi alcuni tronchi, o rami, da quali efcono foglie fatte a capriccio; ed ordinariamente servonsene in lavori di damaschina, e negli ornati di Pittura, di contorni. (Vedi Rabesco),* (*Moresca (Painting), made in Moorish shapes, consists of various grotesques, and divisions, which have no perfect figure of man or animal, (See Rabesco). Moresche-Moorish. So called after some trunks, or branches, from which leaves go out on a whim; and ordinarily used in damascene work, and in the adornments of Painting, of contours. (See Rabesco.*), Jacques Lacombe, *Dizionario Portatile Delle Belle Arti* (Bassano: 1768), 253; "*Moresque, Moresk, or Morisko, a kind of painting, carving, etc. done after the manner of the Moors; consisting of several grotesque pieces and compartiments* (sic.) *promiscuously intermingled, not containing any perfect figure of a man, or other animal, but a wild resemblance of birds, beasts, trees, etc. These also called Arabesques, and are particularly used in embroideries, damask-work, etc.*" Dobson, *Encyclopaedia; or, A Dictionary of Arts, Sciences, and Miscellaneous Literature; constructed on a plan, by which the different sciences and arts are digested into the form of distinct treatises of systems*. Philadelphia, 1798, 324; as was employed in the 15th c., "*Si de las ropas de lana y lino pasamos á las de seda, y tisues; veremos que todos estos texidos preciosos rambien venian en los siglos pasados de las fábricas estrangeras, segun queda demostrado mas arriba, exceptunado algunas estofas moriscas de Granada del gusto arabesco, que nunca pudieron competir con las de Luca y Florencia.*" Antonio De Capmany Suris Y De Montpalau, *Memorias Históricas sobre la marina, comercio, y Artes De La Antigua Ciudad de Barcelona*, Tome III. (Madrid: Sancha, 1792), 344 (Re 15th c. imports, *"If we pass from the cloths of wool and linen to those of silk and tissues; we will see that all these precious textiles also came in past centuries from the foreign factories, as demonstrated above, except for some Moorish stuffs from Granada of arabesque style, which could never compete with those of Lucca and Florence*.).

[67] Theophilus, *On Divers Arts* Trans. John G. Hawthorne and Cyril Stanley Smith (New York: Dover, 2012), 13. "*Quam si diligentius perscruteris, illic invenies quicquid in diversorum colorum generibus et mixturis habet Graecia, quicquid in electrorum operositate seu nigelli varietate novit Ruscia, quicquid ductili vel fusili seu interrasili opere distinguit Arabia*," This passage had been incorrectly translated as: *"Should you carefully peruse this, you will find out...whatever Arabia shows forth in work of fusion, ductility, or chasing;" A Documentary History of Art*, Ed. Elizabeth Gilmore Holt, Vol. 1 (New York: Doubleday Anchor, 1957), 2. I think the term, *interrasili* has perhaps also been mistranslated as, *engravings in relief,* by Heidi C.

has been translated as, pierced work, cut-work, or openwork, with perforated-pierced or openwork conveying an idea similar to *mushabak/shabaka*, lattice-work. He entitled chapter LXXII, in book III on metalwork, *De Opere Interrasili.* It seems most probable that the use of window tracery in Gothic architecture, as in rose windows in cathedrals, was a consequence of Crusader and trade contacts and was developed from the use of *mushabak* plaster screens in the glazed windows of the Islamic world from the Umayyad period onwards of stucco lattices and coloured glass[69], as for example in Abbasid Raqqa and Samarra, as in the Dome of the Rock recorded from 903 by Ibn al-Faqīh, "*In its walls, and high (in the drum), are fifty-six windows (bāb) glazed with glass of various hues; each measures 6 ells in height, by six spans across*"[70].

As to if the vertical form of this lattice *müşebbek*, of this design was in the Seljuk period, as earlier, largely to be associated with, and indicating the temporal ruler as being "The Second Sulaymān," meaning The Just Ruler of the Time, the Sultan, as displayed in 12th c. Great Seljuk stucco panels (Figs. 6, 7), as in the form

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Gearhart, *Theophilus' On Diverse Arts: The Persona of the Artist and the Production of Art in the Twelfth Century*, Unpublished DPhil. Thesis, University of Michigan, 2010, 87, given the surviving examples of what are said to be examples of *interrasili* technique, e.g. from c. 323-326, Cecile Giroire and Daniel Roger, *Roman Art from the Louvre* (Hudson Hills: American Federation of Arts, 2007), Cat. No. 12, 64, https://art.rmngp.fr/fr/library/artworks/element-de-collier_or-metal; a 4th c. openwork gold plaque from Asia-Minor Turkey today in the British Museum, https://www.bmimages.com/preview.asp?image=00034964001&itemw=4&itemf=0001&itemstep=1&itemx=6; and the gold pendant https://www.bmimages.com/preview.asp?image=00129292001&itemw=4&itemf=0001&itemstep=1&itemx=12He did not use the perhaps to be expected term "*opus triforiatum,*" - "*ovre trifoire,*" usually employed for perforated work of various kinds. The term "openwork"- was first used in English in 1812 to mean, "*Any kind of work with interstices in its substance, as in openwork of iron etc.; esp. such work in knitting, netting embroidery*. S.O.D.[3] s.v. *openwork*. It is of note that the term *mushabbak* was translated in Ottoman Turkish in Cafer Efendi's *Risāle* (Carol Bier, "Alloys and Architecture: Periodic and Quasiperiodic Patterns in Sinan's Selimiye in Edirne", *Overturning Certainties in Near Eastern Archaeology: A Festschrift in honor of K. Aslihan Yener*, Eds. Çiğdem Maner *et al*. Leiden: Brill, 2017), 89, citing, Crane 1987:88) as, "*lattice, grillwork, screen;*" *Ahcār-i müşebbeke*, lattice-worked stones; and it was also employed to describe an openwork embroidery stitch, the netted stitch (H. Örcün Barışta, *Türk İşleme Sanatı Tarihi* (Ankara: Gazi Kitabevi, 1984), 66).

[68] The term is used by Pliny Nat. Hist. 12.42, "*The Emperor Vespasianus Augustus was the first to dedicate in the temples of the Capitol and the goddess Peace, chaplets of cinnamon inserted in* (fn.) *embossed gold*." (fn.) "*Interrasili. Gold partly embossed, and partly left plain, was thus called*." The sense in Roger's use of this term was presumably because it embraced both the gold work and the areas that held the cinnamon set on the gold decorated surface. *Interrasili*, could also be translated as incised carving rather than openwork.

[69] Na'ama Brosh, "Glass window fragments from Khirbet al-Mafjar". *Annales du 11e Congrès de l'Association Internationale pour l'Histoire du Verre*, Bâle, 1988, Ed. A. Van Wiechen, A.I.H.V., Amsterdam 1990), 247-256.

[70] Guy Le Strange, *Palestine Under the Moslems: A Description of Syria and the Holy Land from A. D. 650 To 1500, Alexander P. Watt for The Palestine Exploration Fund* (London: 1890), 120.

of the *ablaq* carved stone reliefs applied to the entrance portal of the Seljuk palace at Ani[71], as in the design of the tile-work revetments at the Kubadabad palace complex (Fig.8), and on other Rūm Seljuk palaces, pavilions and bath-houses, as earlier at the c. 1050 at Qal'at Bani Hammâd, in modern Algeria[72] (Fig. 3 Left), and as later was the case with the use of this vertical lattice design in tile-work at Takht-i Sulaiman, Iran c. 1270–80 for the Pagan Ilkhanid ruler Abaqa[73] (r. 1265–82) in the interior of the so-called North Octagon, the 8 pointed sun-star tiles decorated with either a dragon or phoenix, this seems to be most probable. While it also seems possible that the lattice *müşebbek*, of this same design, but displayed angled at 45° from the vertical, was recognised and largely associated at that time with the deceased (Figs. 5, 9), as on the 1267 Imāmzādeh Ja'far at Damghan, at Pir-e Bakrān and on the tomb of ʿAbd-al-Ṣamad in Naṭanz, Iran, as on some other tombs.

Fig. 6. A 6th/12th c. Great Seljuk carved stucco panel with a vertical lattice, *müşebbek*, of 8 pointed sun-stars, some containing figural decoration, and the "cross-like" forms of the lattice, with script and figural decoration, defined by the lattice border

[71] It seems probable that the khachkar, a Cross (of carved) stone, carved by Pavgos-Poghos the Embroiderer, which is bordered on either side by this design, carved in 1291 at the post 1188 earthquake reconstructed Goshavank Monastery, https://en.wikipedia.org/wiki/Khachkar, like the khachkar at the 13th c. Haghartsin Monastery, also in Armenia and likewise bordered by this design, https://www.alamy.com/stock-photo-khachkar-cross-stone-haghartsin-monastery-armenia-54936122.html, derived this design from earlier 12th c. Islamic stucco panel examples, or from Islamic textiles that carried this design.

[72] A tile design employed prior to those of Abu Zayd in Kashan in the 13th c.

[73] Its use in the Buddhist Aqaba Khan's palace at Takht-i Sulaiman, given that he favoured Buddhists and Christians, being married to Despina khatun, more than Moslems, may have been due to Christian rather than Muslim influence, or this design may simply have been understood as a design associated with the ruler, regardless of confession.

of interlacing. Christies, London, sale 7871, 5-Oct. 2010, Lot 99[74]. Today, restored, Museum of Islamic Art, Doha, Qatar. The eight pointed apertures in the lattice to be associated with Sulaymān, The Just Ruler, and indicating the Seljuk ruler was to be understood as being "The Second Sulaymān," "The Sulaymān of the Age," thereby indicating, The Just Ruler of the Time/Age.

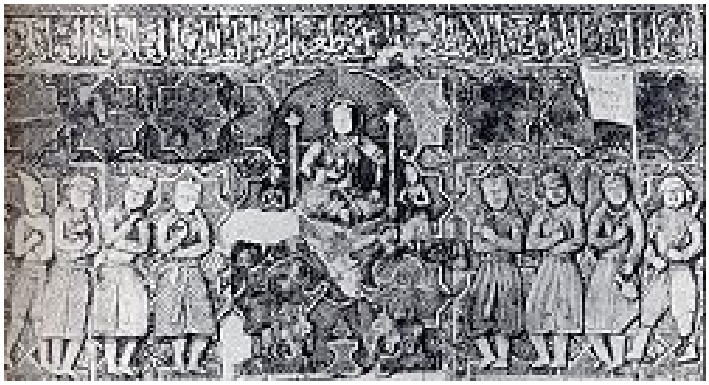

Fig. 7. A Great Seljuk carved stucco panel with a vertical lattice, *müşebbek*, of 8 pointed sun-stars with figural decoration of the enthroned Seljuk sultan Tughril II (590-591/1194) "the victorious, just king," surrounded by his officers[75]. The eight pointed apertures in the lattice on either side of the enthroned ruler to be associated with Sulaymān, The Just Ruler, and with the Seljuk Sultan Tughril II, with the throne shown in front, through the break in the lattice pattern on the wall behind, to be "The Second Sulaymān," "The Sulaymān of the Age," indicating, he was The Just Ruler of the Time. Philadelphia Museum of Art, U.S.A.

[74] https://www.christies.com/lotfinder/Lot/a-monumental-royal-seljuk-carved-stucco-panel-5358694-details.aspx

[75] Concerning the latest work concerning the Seljuk understanding of the Sultanate, see Peker 2019.

Fig. 8. Left, al-Jazarī's own design for the Diyarbakir Palace Door employing what he termed a *shabaka* – lattice-grid design for the central field, in part formed of 6 and 8 pointed suns-stars of 1206[76]. Right, A vertical lattice, described by Ibn Bibi as, *mushabak-müşebbek*, a lattice formed of 8 pointed sun-star glazed tiles from the Rūm Seljuk Palace of Kubadabad by Lake Beyşehir, Turkey, of c. 1226, The eight pointed apertures in the lattice to be associated with the Prophet Sulaymān, The Just Ruler, and reminding that the Rūm Seljuk Sultan was to be understood as being, "The Second Sulaymān," "The Sulaymān of the Age," thereby reminding that the ruler on whose palace walls this design is found was to be understood as being The Just Ruler of the Time. The turquoise lattice form often has within the square centre of the tile, an underglaze depiction of another cross set at an angle, thereby displaying the same 8 points as the 8-pointed tiles to either side.

[76] Tabbaa, *The Transformation of Islamic*, Fig 46, from İstanbul, T.S.M. Kütüp. Ms. 3472.

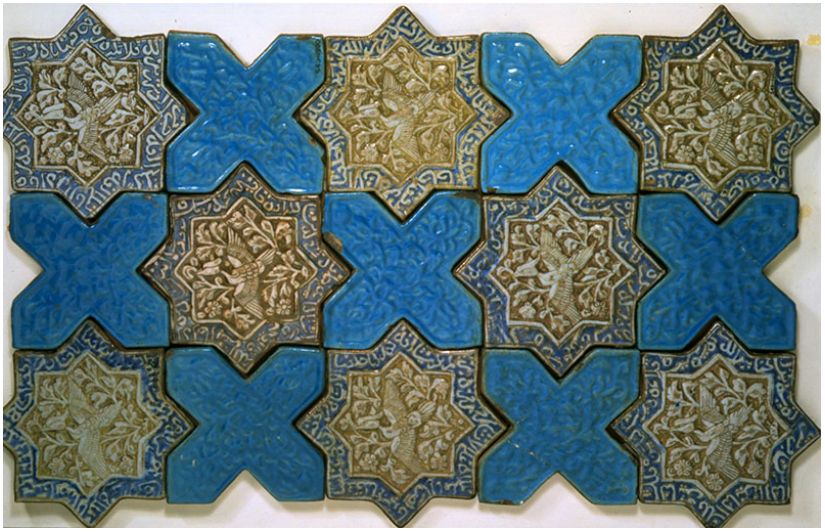

Fig. 9. An early 7th/14th c. Ilkhanid tile-work revetment, with a lattice, *müşebbek*, design angled at 45°, formed of 8 pointed sun-star glazed tiles. Although Ilkhanid non-figural tiles generally have Koranic inscriptions and figural tiles poetical inscriptions, these un-provenanced 8 pointed sun-star tiles with identical birds in flight, have borders with Koranic inscriptions, and probably come from the tomb of a shaikh, like those from Pir-e Bakrān and the tomb of ʿAbd-al-Ṣamad in Naṭanz, Iran[77].

"Geometric" – "Geometrik" Design?

One finds today both this, and the related *shabaka-mushabak* group of designs, repeatedly described in the modern literature by terms such as: geometric[78], *geometrik*[79], *geometrik örgüler*[80], etc. The problem that has emerged with the modern 13th/19th c. and later use of the term "geometric" employed to describe this type of design is quite simple, it does not convey the associations carried by the words *shabaka* or *mushabak*, that is, the sense of a lattice or net, but rather,

[77] http://www.iranicaonline.org/articles/il-khanids-iv-ceramics

[78] For some examples: Grabar, *The Mediation of Ornament*, 141,142,145, "geometrical patterns"; Gülrü Necipoğlu, *The Topkapi Scroll-Geometry and Ornament in Islamic Architecture* (Santa Monica: The Getty Center, 1995), 109, "*the new geometric mode*;" Tabbaa, *The Transformation of Islamic*, Carol Bier, "Art and Mithāl: Reading Geometry as Visual Commentary", *International Journal of Iranian Studies*, 41/ 4, 2008: 491-509; Nazlan Ölçer, "The Anatolian Seljuks", *Turks, A Journey of a Thousand Years, 600-1600*, Ed. D. J. Roxburgh (London: Royal Academy of Arts, 2005), 111; Carol Bier, "Geometry in Islamic Art", "*Geometric patterns*" passim; Bonner, *Islamic Geometric Patterns*, passim, etc.

[79] Selçuk Mülayim, *Anadolu Türk Mimarisinde Geometrik Süslemeler, Selçuklu Çağı* (Ankara: Kültür ve Turizm Bakanlığı Yayınları, 1982) Y. Demiriz, *İslam sanatında geometrik süsleme: bir envanter denemesi*, Yorum Sanat, 2004.

[80] Ömür Bakırer, *Onüç ve Ondördüncü Yüzyıllarda Anadolu Mihrapları*, (Ankara: Kültür ve Turizm Bakanlığı Yayınları, (1976) Reprinted 2000), 89.

indicates a shape. This is likewise the case for the term "star systems," etc. Yet, a net, grid or a lattice, has within it both the idea of a regular repeat geometric design, and, the repeat of the spaces between them, which raises the possibility of seeing something different through the spaces in the lattice, different from the form of the lattice itself, of passage through the spaces-surfaces indicated in the net, grid or lattice, and enriching, at least in a visual and mental sense, if not necessarily, or always, read in a spiritual sense, as one in effect sees what appears to be on the other side of the lattice, or looks through the apertures of the window covered by this lattice-work design. This distinction, between a filled and an empty space within a lattice design is for example recorded in the terminology of Cairene *mashrabiyya*, *salībī fādī* "cross-shaped and empty", *salībī malyān* "cross-shaped and filled in." as noted above[81]. In other words, the surface of the wall, ceiling, or the object covered by this design, visually ceases itself to be a solid flat surface, there are the spaces that are indicated, or actual, between the forms of the lattice itself. The concept of perforation-permeability, of a multitude of windows, of openings, of various shapes repeated[82], is present in the term *mushabak* and, in the context of open or closed apertures in the lattice there is a relevant later inscription regarding the windows in the Alhambra, "*My windows admit light, and exclude the view of external objects, lest the beauties of nature should divert your attention from the beauties of my work*"[83]. But this is not a concept which is present with the use of the modern term most frequently employed to describe the design of a *mushabak-mashabbak-shabak-shabakah-mashrabiyya* in the literature today, "geometric"[84].

A modern illusion: *the infinite pattern,* the idea *of infinity inherent in geometric designs*

Ernst J. Grube wrote, "*The most fundamental pattern [in Islamic art] is the creation of the infinite pattern that appears in a fully developed form very early on and is a*

[81] Doris Behrens-Abouseif and Roberto Orazi, "Mashrabiyya", *Encyclopaedia of Islam*, 718.

[82] See on this, Bier, "Art and Mithāl", 498-501, regarding algorithms of repetition.

[83] Joseph Gwilt, *An Encyclopædia of architecture: historical, theoretical, and practical, illustrated with more than one thousand engravings on wood by R. Branston, from drawings by John Sebastian Gwilt*. (London: Longmans, Brown, Green and Longmans, 1842), 53-54.

[84] Bonner, *Islamic Geometric Patterns*, 150-155. By 2019 the core content of the Islamic art of design has been reduced by some to being defined as "*symmetry and geometry*," as though the content of Islamic art is a series of mathematical formulae, algorithm and tessellation, without meaningful content, which is simply the repetition of the orientalists' denial of meaning, the so-called "horror vacui," expressed in a different fashion, as scientific, technique and method, no content, no mention of the *mushabak*-lattice, "*Dating from the late-13th century AD, the combination of star and cross tiles exemplifies the symmetry and geometry that has come to define Islamic art.*" https://www.middleeasteye.net/news/british-museums-new-gallery-history-islam-over-thousand-objects Rather like describing a world famous Italian 15th c. painting as consisting simply of *pentimenti* and *sfumato,* rather than describing the Mona Lisa, it is undoubtedly easier, but meaningless.

major element of Islamic Art in all periods. The infinite continuation of a given pattern, whether abstract, semi-abstract or even partly figurative, is on the one hand the expression of a profound belief in the eternity of all true being and on the other a disregard for temporary existence (sic.). *In making visible only part* (sic.) *of a pattern that exists in its complete form only in infinity, the Islamic artist relates the static, limited, seemingly definite object to infinity itself*"[85]. Firstly, on a point of detail, even if were possible for the pattern to be extended to infinity, it still would not exist in its complete form, it would still remain incomplete, this being a consequence of this design type. And there are numerous problems with this description given by E. Grube and which has been frequently cited[86], concerning "*a major element of Islamic Art,*" not the least of which is the fact that although there are motifs, patterns – designs, that are repeated – these are not "*the infinite pattern,*" nor is "*The infinite continuation of a given pattern,*" present in Islamic Art as, neither pattern, nor Islamic art, are of themselves infinite. Nor was "*The infinite continuation of a given pattern,*" either practical or possible in the Medieval and Early Modern Periods, nor is it today. In Islam it is known that the Almighty Alone is Infinite, the universe itself is finite, has limits (expanding or contracting in this context is of no matter, both being limited, not infinite), as is everything, down to a grain of sand and a mustard seed, all is finite, in the visible-sensible world, *'ālam al-shahādah*, and all of which is measured, and therefore in some sense measurable, all from mustard seed to universe, all that is, except for the Almighty, as such is repeatedly stated in the Qur'ān, As-Saffat, 37:182, "*And praise be to Allah, Lord of the Worlds!*"

Further, there is no necessary reason why, "*In making visible only part* (sic.) *of a pattern,*" there should be the stated as inevitable association made with infinity. The part displayed of the repeat design, itself comprised a number of repeat units and itself filled the required area, and so the particular reason why the craftsman, patron, or viewer should have automatically mentally extend the edges of this Islamic, or, for that matter, any other patterned area, beyond the given edge or border to anywhere else, even as far as infinity, is not given, nor does this seem to be any reasonable expectation or assumption to have been made at the time. This is in part because the measure for all things is established, as is repeatedly stated in the Qur'ān, At-Talaq, 65:3, "*Allah hath set a measure for all things*." And, Qur'ān, Ar-Rad, 13:8, "*And everything with Him is measured*."; Al-Furqan, 25:2, "*He hath created everything and hath meted out for it a measure.*"; Al-Qamar, 54:49 "*Lo! We have created*

[85] Grube, *The World of Islam*, 11.

[86] R. Sandler, "Islamic Art: variations on the themes of arabesque", *Introduction to Islamic Civilisation,* Ed. Roger M. Savory, (Cambridge: Cambridge University Press, 1994), 89; Thomas Ballantyne Irving, *Islam Resurgent: The Islamic World Today* (Lahore: Suhail Academy, 1983), 266; Leonard R. Rogers, *Relief Sculpture* (Oxford: Oxford University Press, 1974), 211.

everything by measure."; Al-An'am, 6:96, "*and He made the sun and the moon to a precise measure. That is the design of the Almighty, the All Knowing*." Yunus, 10:5, "*He it is Who appointed the sun a splendour and the moon a light, and measured for her stages, that ye might know the number of years and the count* (of time)." The particular *mushabak* design employed filled the defined area or space; while the alleged infinity of the universe, the suggested reason for the form and use of these designs in Islamic art, was itself quite unknown to Muslim designers in the 6th/12th and 7th/13th centuries.

Like Ernst J. Grube, Robin Headlam Wells wrote in 1994, "*By repeating an infinitely extendible geometric motif the artist gives us, in effect, an incomplete picture of a pattern that exists in its entirety only in infinity* (sic. This is illogical, as the pattern-design cannot be entire even if it were coterminous with infinity, as the edge would still remain "incomplete"). *In this way he is able to suggest the idea, fundamental to Islam, that man is a transient being whose earthly existence must be seen as part of a unified eternal order*"[87]. However, a repeatable "*geometric motif*" that is repeated, is not of course incomplete. While one may well wonder quite how, "*an incomplete picture of a*(n Islamic) *pattern*" "*is able to suggest the idea, fundamental to Islam, that man is a transient being whose earthly existence must be seen as part of a unified eternal order*", not least, how an repeat pattern can, of itself, and apparently quite naturally and inevitably suggest to the viewer, not only "*infinity*," but also, "*a unified eternal order.*"? Further, an "*eternal*" order seems in direct contradiction with the promise of what is stated in Al-Anbya 21:104, "*The Day when We shall roll up the heavens as a recorder rolleth up a written scroll. As We began the first creation, We shall repeat it.* (It is) *a promise* (binding) *upon Us. Lo! We are to perform it*."

One finds this same "infinity" idea repeated in 2004, in Sylvia Auld's, *Renaissance Venice, Islam and Mahmud the Kurd: A Metalworking Enigma*: "*In Islamic design, a repeat pattern traditionally ends at a border with a quarter- or half- motif, depending on its position. This allows a viewer to envisage endless repeats continuing into infinity*"[88]. The supposition that "*a border with a quarter- or half- motif*" "*allows a viewer to envisage endless repeats continuing into infinity*.", might, perhaps, for some people be the case, who have a penchant for studying edges and borders of designs rather the area of design itself; and perhaps, subconsciously some few people may have attempted for unknown reasons to have carried the design to "infinity," but there seems to be no contemporary record of this; nor was this connection with "infinity" any recorded aim of the designers.

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[87] Robin Headlam Wells, *Elizabethan Mythologies: Studies in Poetry, Drama and Music* (Cambridge: Cambridge University Press, 1994), 117.

[88] Sylvia Auld, *Renaissance Venice, Islam and Mahmud the Kurd: A Metalworking Enigma*, (London: Altajir World of Islam Trust, 2004), 67.

The part, quarter and half motifs at the border of a particular area of a design were understood to be an inevitable and necessary part of the design covering the particular area, up to the measured edge, border or frame. On this matter of the completion of repeated design elements within a field of decoration, Badīʿ az-Zaman Abū l-ʿIzz ibn Ismāʿīl ibn ar-Razāz al-Jazarī in 602-603/1206, recorded in respect to the pride he took in his design for the palace doors at Āmid-Diyarbakir (Fig. 7 Left), "*in this shabaka there are no half or quarter stars nor any incomplete pieces, except for two half stars*" [89]. In other words, the designer-craftsman's intention, as recorded by al-Jazarī at the start of the 13th c., was to present as complete and as contained a design as was possible within the particular area. Al-Jazarī made no remark indicating that an incomplete motif related the design, through endless implicit invisible repeats, to "infinity." The design was complete within the limits of the area it was applied to. There seems to be no contemporary record indicating that this type of *mushabak* design was related to infinity through the incomplete edges of the design, rather, the intention, as indicated by Al-Jazarī, was to present the design in as complete a form as was possible for the proportions of the area, and, in this, mastery was exhibited. Consequently in a design employed, the more incomplete the elements there were was rather to be regarded as an indication of a designer-craftsman lacking in skill, not that the incomplete elements were to be read as a sign indicating infinity.

Likewise, concerning these types of *mushabak* design employed during Rūm Seljuk rule, Nazlan Ölçer in 2005 has written that these "geometric" designs symbolise "*the infinity of the universe*": "*Geometric motifs were used across the entire range of decorative arts, where intricate, infinitely repeating* (sic.) *designs symbolising the infinity of the universe echo mystical concepts of the spiritual world*" [90]. It is however the case that these are by definition, not "*intricate, infinitely repeating designs*," that is, self-replicating designs that repeat themselves to infinity; while there is certainly no evidence from the 6th-7th/12th-13th c. to suggest the idea that the *mushabak*-lattice designs employed in 7th/13th c. Rūm Seljuk, as elsewhere in Islamic territory, were at that time understood to represent, or to symbolise, "*the infinity of the universe*." This is because it was the case that to such influential figures as Plato, it was The First Cause, the demi-urge that created the world (out of pre-existent matter), unlike Aristotle who alleged the eternity of the world[91]; and to Abū Muhammad Ali bin Ahmed bin Saīd ibn Hazm (994-1064) and to Abū al-Walīd Muḥammad ibn Aḥmad ibn Muḥammad ibn Rushd/Averroes (1126-1198), like all medieval Jewish,

[89] Tabbaa, *The Transformation of Islamic*, 97.

[90] Ölçer, "The Anatolian Seljuks", 111.

[91] Majid Fakhry, *Philosophy, Dogma, and the Impact of Greek Thought in Islam* (Aldershot: Variorum, 1994), 46.

Christian or Muslim monotheistic thinkers, the universe was pictured as being the result of *Creatio Ex Nihilo,* of creation from no-thing, it had a beginning and it has an end, it was finite, it was not infinite in space: "*Ibn Hazm's first proof of the temporality of the universe rests on the premise that the accidents and substances (sing, shakhs) composing the universe are finite and that time, which he conceives as consisting of transient moments, is finite also*"[92]. The universe at the time these designs were made was itself considered to be finite, it was not described as infinite, and therefore when these designs were employed they most certainly did not symbolise "*the infinity of the universe.*" What was understood at that time to be both infinite (as noted above) and The Eternal, was known to be the Almighty, Qur'ān, Al-'Imran 3:2, "*Allah! There is no god save Him, the Alive, the Eternal.*"; Al-Baqarah 2:255, "*Allah! There is no deity save Him, the Alive, the Eternal. Neither slumber nor sleep overtaketh Him.*"

Likewise, in *Islamic Art in Detail*, of 2005, Sheila R. Canby, in describing Islamic "*Geometric ornament,*" writes, "*Moreover the implication of infinity found in the interlace of polygons extending out from a central star echoes debates concerning infinite numbers. Even when the intellectual climate changed in the 12th and 13th centuries, artists continued to decorate their work with geometric motifs, so embedded was the idea of its appropriateness in Islamic art.*"[93] Quite why in particular, an *"interlace of polygons extending out from a central star,"* should carry "*the implication of infinity,*" is to this reader rather less than obvious, and, quite why this particular "interlace design" (or any other) should also to be related to debates concerning infinite numbers, is likewise somewhat unclear, if not opaque. As likewise, concerning these types of *mushabak* design, The Metropolitan Museum of Art's Resource for Educators concerning, *Art of the Islamic World,* of 2012, relates: "*The themes of repetition and infinity in particular are embodied in the complex repeating star motifs of the tiled wall panels*"[94]. And, concerning a pierced screen, "*The intricately carved design would have created a subtle play of shadow and light in the interior, emphasising the characteristics of symmetry and the illusion of infinity inherent in geometric* (sic.) *designs*"[95]. Yet there is of course no "theme" of infinity expressed by covering an area in a repeat design of any kind, Islamic or otherwise, and, although there are many 20th and 21st century statements made by eminent and other authors, on infinity supposedly expressed

[92] Fakhry, *Philosophy, Dogma, and the Impact*, 156.

[93] Shelia R. Canby, *Islamic Art in Detail* (Cambridge: Harvard University Press, 2005), 21.

[94] Maryam D. Ekhtiar-Claire Moore, "Unit 3: Geometric Design in Islamic Art", *Art of the Islamic World: A Resource for Educators, Metropolitan Museum of Art*, New York, 2012: 80, idem., 77, "*Recognise ways in which the featured works of art exhibit repetition, symmetry, two-dimensionality, and an illusion of infinity.*"

[95] Moore, "Unit 3: Geometric Design in Islamic Art", 86.

through the use of Islamic design[96], there are no explicit contemporary historical sources stating this reference to infinity was in fact the intent in employing so-called *geometric*, or rather, *mushabak* design in Islamic art. The connection made between so-called "*geometric*" design in Islamic art and infinity is simply a misinformed modern speculation masquerading through academic and other repetition as fact, employed, like the term "horror vacui" used for more than a century by orientalists and others to describe the reason for the use of Islamic design, and likewise a figment of the orientalist imagination. There is no "*illusion of infinity inherent in geometric designs.*", as the repetition of "geometric" designs over a limited surface area is not "*the illusion of infinity*.", rather, it is simply the repetition of a so-called "geometric" design over a limited surface. The so-called "*illusion of infinity*" seems to be yet another modern speculation as to the meaning conveyed by the *mushabak* type of Islamic design. It was understood that the universe was finite not infinite, while it was and is understood that the Almighty is eternal and infinite, as are the Almighty's attributes, such as power, Qur'ān Ash-Shu'ara, 26:9; as is the bounty of the Almighty, e.g. Al-Baqarah 2:105; Ali'Imran 3:174; Al-Anfal 8:29; Al-Hadid 57:21; 57:29; Al-Jumu'ah 62:4, "*Allah is of Infinite Bounty;*" and that the Almighty is Lord of the Worlds, meaning of the universe, e.g. Al-A'raf 7:104; Ash-Shu'ara 26:192; As-Saffat, 37:182, "*And praise be to Allah, Lord of the Worlds!*"; Al-Waqi'ah 56:80.

Some Suggested Reasons for the use of *mushabak* Designs

1. As a particular design type, employed to serve as a marker-indicator of rulership

It seems reasonable to suggest from the association of the 8 pointed sun-star with the *Khātam Sulaymān* – Seal of Sulaymān device from the start of Islamic art in the 1st/7th c., as noted above, that this design was initially associated with the temporal ruler, the Caliph, as indicating the ruler was to be understood as "the Second Sulaymān," that is, a Just Ruler "*endowed with all good things*"[97], and "*rightly guided*"[98]. The association of the *mushabak* lattice design, in its vertical form, carrying a simple repeat of 8 pointed sun-star shapes-apertures, from the evidence provided by the surviving material remains, can be associated with the temporal ruler, be it the caliph, emir, sultan or Ilkhan, from perhaps the 2nd/9th c. onwards well beyond the 9th/14th century, and would have indicated that the ruler was to be seen as the Second Sulaymān, meaning, The Just Ruler of the Time/Age.

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[96] Critchlow *Islamic Patterns: An Analytical*, 170; Sutton, *Islamic Design*, 1, "*infinity and the omnipresent center.*"

[97] Qur'ān, Al-Naml, 27:16.

[98] Qur'ān, Al-An'am, 6: 84.

2. As a particular design type, employed to serve as a reminder of the Divine Light reflected through the Light of the Prophets

Al-Jazarī in 1206 employs the term stars to describe some elements of the *shabaka* design he devised[99], but the design itself he terms *shabaka,* a lattice. The modern terms, star systems, star patterns[100], or star designs (*yıldız sistemi, yıldız örgüsü*[101]), in formal terms describe in part the physical appearance of many *mushabak* designs. However, as a term employed to describe some elements of a design, rather than the design itself, it is perhaps unhelpful in terms of understanding the meaning of the whole design, as is noted above in respect to the so-called *Breath of the Compassionate* design, not least, if what are described as stars, are in fact, rather to be understood as representing sun-bursts-*shamsa* of Light, rather than stars. It seems reasonable to suggest the use of these sun-star forms employed within a lattice, having for example, 5, 6, 8 or 12 points, may formerly have been understood to represent aspects of the Divine Light, as reflected by the Light of the Prophets, of Muhammad, *khātam an-nabīyīn*, and, the Light of Muhammad, *nūr Muhammad*. It seems probable, if currently unprovable, that the sun-star forms in the lattice often found in *mushabak* designs, were designed and made to be understood to remind of the Divine Light reflected through the Prophets.

3) A *mushabak* Design with an *al-i'tiqād* - "Inter-Lace" Border

The *mushabak* design consisting of a lattice "cross" design and 8 pointed sun-stars that are bordered by "inter-lacing" at the junction of the two forms (e.g. Figs. 4, 6[102]), can, I think, be related, although it should be noted that there is no certain recorded proof of this association with this design, through the use of the "inter-lace" joining the forms, as being joined by the creed of the religion, by *al-i'tiqād*[103],

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[99] Tabbaa, *The Transformation of Islamic*, 97, "*in this shabaka there are no half or quarter stars nor any incomplete pieces, except for two half stars*".

[100] See for examples of a formalist typological rather than a content driven approach, Mülayim, *Anadolu Türk Mimarisinde Geometrik Süslemeler*, A. J. Lee, "Islamic Star Patterns", *Muqarnas, An Annual on Islamic Art and Architecture* Vol. 4, 1987: 181-197, where these are confidently identified as star patterns in the title given to these designs.

[101] Semra Ögel, *Anadolu'nun Selçuklu Çehresi* (İstanbul: Akbank, 1994), 97, 102.

[102] Although Fig. 2 Left has this *mushabak* design and an "interlace," it seems probable in the use of the "interlace" at 3rd/9th c. Sāmarrāʾ, that the association with *al-i'tiqād* was not drawn at that time.

[103] The knot form has been repeated related to the Persian word *girih,* (for example: Necipoğlu, *The Topkapi Scroll-Geometry* ; Tabbaa *The Transformation of Islamic,*, etc.) as also to the Arabic *'uqda*, e. g. *"Among the terms used in Arabic is the word 'uqda, from 'aqada, 'to knot, tie or complicate'. It also has the meaning of planetary node, in precisely the way that in Latin the word nodus has the same dual sense."* (Auld, *Renaissance Venice*, 71). These words that mean knot are in the formal sense, accurate, but not a conveyer of substantial contextual meaning. That is, without drawing the association that is drawn here to *al-i'tiqād* via the root *'aqīdah*, in giving contextually relevant meaning to the use of this design. In Middle Turkish, "*ba- to bind, tie, strengthen (Ar. 'aqada, P. girih bastan, to tie a knot), anlar kim badī andlarīngīz, bering olarqa uluslarīnīn* (Qurʾān, 4:33) *those with whom you have sworn compact, give them their share.*"

"which is literally akin to the verb, to knot/put together ('aqada) and is derived from the same root as 'aqīdah, which refers to the dogmatic tenets of the faith."[104] In consequence of the etymological association made in Arabic between knotting, signifying tying-binding fast, *'aqada 'iqdan* (that is to make a covenant), putting together-to gather together, and, to enter into an obligation, the bond that commits the believer to Allah, *i'tiqād,* the dogma of the faith, it seems that the reason for the use of "interlace/knots" employed in Islamic design can, in their rapid development from the 10th c. onwards, from earlier examples based upon the less complex Late Antique examples[105], be understood to have been a result of this association, the reciprocal binding begween the believer and the Almighty; and this same meaning was most probably also reflected in the Persian expression, "making knot" *gereh-sāzī*[106]. That

(János Eckmann, *Middle Turkic Glosses of the Rylands Interlinear Koran Translation* (Budapest: Bibliotheca orientalis Hungarica, 1976), 85). And from *uqdā* via Persian into Hindustani, meaning: knot, band, as also a secret; mystery; enigma.

[104] Patrick Laude, *Shimmering Mirrors: Reality and Appearance in Contemplative Metaphysics East and West* (New York: Suny, 2017), 168. Arabic root '-q-d. As in, *tahdhib al-i'tiqād*, meaning, *"the basic foundation of orthodox belief"* (Richard M. Frank, *Al-Ghazālī and the Ash'arite School* (London: Duke University Press, 1994), 46, also translated as, right belief, article of faith, and, knowledge of the faith, creed, and, as "*conviction,*" as employed by al-Ghazālī (Louay Safi, *The Foundation of Knowledge: A Comparative Study in Islamic and Western Methods of Inquiry, International Institute of Islamic Thought (IIIT)* (Herndon: VA, 2014), 73-74); but also translated as, "*maintaining a certain view or opinion on a given subject*," as was also employed by al-Ghazālī (Alexander Treiger, *Inspired Knowledge in Islamic Thought: Al-Ghazali's Theory of Mystical Cognition and Its Avicennian Foundation* (London-New York: Routledge, 2011), notes 67 and 68), as distinct from *īmān*, translated as belief. It was employed by al-Juwayni (d.1085) to mean belief. In 13th c. Anatolia, it seems it was understood as meaning belief by Muḥammad ibn Abī Bakr Rāzī, author of the 1261 "*al-Hidāya min al-i'tiqād*," a commentary on 'Alī ibn 'Uthmān Ūshī's 12th c. "*Qaṣīdat al-amālī*," which was written at the request of some of the '*ahl al-tawḥīd*', to explain Sunni beliefs (*an ashraḥa lahum i'tiqādan 'alā ṭarīq al-sunna wa-l-jamā'a*). https://arts.st-andrews.ac.uk/anatolia/data/documents/TK_Kastamonu_585.

[105] The use of the interlace employed in Late Christian art, as for example in the floor mosaic of the 5th c. Church of al-Khadir Madaba, Jordan, in all probability carried a similar content-meaning, given the etymological relationship between religion, Latin root, *religio*, derived from *ligare* to *bind or connect*, *obligation*, to re-establish the bond between man and God, via the prefix *re-ligare*, i.e. *re* (again) + *ligare*, to rebind, to re-tie, to reconnect. In respect to the concept of binding: Matthew 16:19, "*I will give you the keys of the kingdom of Heaven: whatever you bind* (*ligaveris*) *on earth will be bound* (*ligatum*) *in heaven; whatever you loose on earth will be loosed in heaven."* Jesus speaking to Simon Peter; 18:18 "*Verily I say unto you, Whatsoever ye shall bind on earth shall be bound in heaven: and whatsoever ye shall loose on earth shall be loosed in heaven."* Jesus speaking to the Apostles in respect to binding and loosing. That is, to pronounce or declare to be binding or obligatory, or, to declare to be prohibited and unlawful; Acts 20:22 "*And now, behold, I go bound in the spirit unto Jerusalem, not knowing the things that shall befall me there*:" Jerome Lat. Vul. "*et nunc ecce alligatus ego Spiritu vado in Hierusalem quae in ea eventura sint mihi ignorans*," Paul "*bound in the Spirit.*" The word, "bound" in NT Gk., δεδεμένος dedemenos, being of the same sense as the Arabic '*aqada.*

[106] "*Gereh-sāzī refers to two related techniques of woodworking: either a lattice frame, which could be left plain or filled with wooden insets, colored glass, or other materials and was used for balustrades and window screens; or a*

is, to serve as a reminder through design, displayed on object or structure, of the binding dogma of the religion and of the promise that binds: Qurʾān, At-Tawbah 9:111, "*It is a promise which is binding on Him in the Torah and the Gospel, Who fulfilleth His covenant better than Allah? Rejoice then in your bargain* (pledge) *that ye have made, for that is the supreme triumph.*"; Al-Anbya 21:104 "*We shall repeat it.* (It is) *a promise* (binding) *upon Us. Lo! We are to perform it.*"; Fatir 35:42 "*And they swore by Allah, their most binding oath, that if a warner came unto them they would be more*" (*guided than any of the nations* (before them), and, Al-Fajr 89:26, "*None bindeth as He then will bind*". Such would seem to be the primary significance, serving as a vital visual reminder of the binding of *al-i'tiqād* of the believer and the promise, conveyed through the display of the "interlace-knot" on works of Islamic art.

The term *al-i'tiqād* was repeatedly employed in the titles of numerous influential works, largely Sunni, not least on Ash'ari theology from the 10th to the 15th c., which may initially have been in part a clarification of dogma, Abū al-Qāsim al-Ḥakīm al-Samarqandī, (d.953-954) *'Aqā'idat'ul Imam*, and a response to 10th c. Imāmī Shī'ī works such as Muḥammad b. 'Alī Ibn Bābawayhi, (d.991), *Risālat al-i'tiqādāt.* These include: by Al-Lalaka'i Abū al-Qāsim Hibat Allāh b. al-Hasan b. Mansūr al-Tabarī (d.1027-1028), *Sharh usūl i'tiqad ahl al-sunna wa al-jamā'a*; by qadi, Abu Ya'la Muhammad b. al-Husayn Ibn al- Farra' (d.1066) *Kitab al-I'tiqād* ; by Abū Bakr Aḥmad ibn Ḥusayn Ibn 'Alī ibn Mūsa al-Khosrojerdi al-Bayhaqi (d.1066) *al-i'tiqād wa-al-hidāyah ilá sabīl al-rashād* ('Abd al-Wahhab al-Sha'rani (d.1565) summarised al-Bayhaqi's *al-i'tiqād* in, *Mukhtasar al-i'tiqad lil Imam al-Bayhaqi.*); by Abu al-Ma'ali 'Abd al-Malik ibn 'Abd Allāh Imām al-Ḥaramayn al-Juwayni (d.1085) who had been appointed by the Seljuk vizier Nizam al-Mulk (1017-1092) to teach at the Nishapur Nizamiyya, and who was the teacher of Abi Hamid Muhammad al-Ghazzālī, *Kitab al-irshad ila qawati' al-adilla fi usul al-i'tiqād* (*Al-Irshad*); by Imam Abi Hamid Muhammad al-Ghazzālī (d.1111) *al-iqtiṣād fī al-i'tiqād*[107] (his *Iḥyā' 'ulūm al-dīn*, also contains the *ar-Risala al-Qudsiya fi Qawa'id al-'Aqā'id);* Najm al-Dīn Abū Ḥafṣ 'Umar Nasafī, (d.1142), *Al-'Aqā'id* (*al-'Umda fī al-'aqā'id li ahl al-sunna*, The Beliefs)(a commentary on it al-Taftāzānī (d.1390) below);

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mosaic panel, composed of hexagons, stars, and other geometric shapes and used to decorate the sides of menbars and ceilings in mosques, palaces, and private houses." Sheila S. Blair; in Architecture, www.iranicaonline.org › articles › gereh-sazi; "*Gereh-sāzī takes the form of symmetrical geometric shapes, particularly six-, eight-, ten- or twelve-pointed star polygons combined with a range of convex polygons, and separated from one another by straps which often are given the appearance of "weaving" under and over one another. Gereh-sāzī is usually composed entirely with straight lines and angles although curvilinear elements are sometimes encountered.*" Marcus Milwright, *Encyclopaedia Iranica*, Vol. X, Fasc. 5, pp. 500-504 at, http://www.iranicaonline.org/articles/gereh-sazi.

[107] Translated as: *The Middle Path in Theology*, *The Golden Mean in Belief*, *Moderation in Belief*, *A Fair Approach To Creedal Matters*, etc.

by ‘Abd al-Ghanī ibn ‘Abd al-Wāḥid al-Jammā’īlī al-Maqdisi (d.1203) *al-iqtisad fi al-i’tiqad*; the Tayyibī dā’ī mutlaq in Yaman, ‘Alī ibn Muḥammad ibn al-Walīd, (d.1215) *Kitāb tāj al-‘aqā’id wa-ma’din al-fawā’id*; Mouwaffaq al-Dīn Abū Muḥammad ʿAbd Allāh b. Aḥmad b. Muḥammad Ibn Qadamah al-Maqdisi (d.1223) (cousin of the aforementioned ‘Abd al-Ghanī), *Sharh Lum’at al-i’tiqād*; by Muḥammad ibn Abī Bakr Rāzī, *al-Hidāya min al-i‘tiqād,* in 1261 in Rūm Seljuk Anatolia, and, by the Shī‘ī scholar Naṣīr al-Dīn al-Ṭūsi (d.1274) *Tajrīd al-i’tiqād*; by Taqi ud-Dīn Abu-l-‘Abbas Ahmad ibn ‘Abd al-Halim ibn ‘Abd as-Salam ibn Taymiyyah (d.1328), *Kitab Mufassal al-i’tiqād (Majmu’ al-Fatawa)*, Sa’d al-Din Mas’ud ibn ‘Umar ibn ‘Abdallah al-Taftāzānī (d.1390), *Sharh al-‘aqidā al-nasafiyya*; Zaidi Imam al-Mahdi li-Din Allah Ahmad ibn Yahya Ibn al-Murtada (d.1436) *Kitāb al-qalā’id fī taṣḥīḥ al-‘aqā’id*; the great emphasis in the display of knotting-interlace over this period would seem to have its root in the visual expression of this association, of the tie, the bond, the putting together, the binding knot-of right belief, *al-i’tiqād*[108].

Its use in palace decoration could therefore have been seen to serve not simply as decoration, but to remind of the ruler’s duty to uphold the dogmatic tenets of the faith. In the context of the “Sunni-Revival,” and 6th/12th c. Syria, Yasser Tabbaa notes the sudden and remarkable use of stone interlaced spandrels[109], that later spread into Rūm Seljuk, Mamlūke and Beylik territory[110]. It maybe that the use of this stereotomic device was not simply due to its suggested “*wondrous effect and emblematic quality*”[111]; but was because the “interlace-knot” design was itself understood and recognised at this time as signifying attachment to “*the dogmatic tenets of the* (Sunni) *faith.*”, in effect, the “interlace-knot” at this time, in these forms, “put together,” *‘aqada*, was employed to serve as an prominent exhibition of resurgent Sunni belief, as likewise, for example, with the marked use of the “interlace-knot, in the carved “inter-laced” bands of designs around Rūm Seljuk portals and as employed in the carving and tile-work around many *mirhab*/*mirhap*.

Within the context of reading this stucco panel (Fig. 6) with a *mushabak* design, the “inter-lace” design forming the border can be read as indicating, *al-i’tiqād*, the binding dogma of the religion, which binds the 8 pointed star-*Khātam*

[108] As to if there are specific recognisable differences between the interlace-knot designs employed in respect to the patrons and the different schools in the 11th -14th c., would seem to be a profitable area of research.

[109] Tabbaa *The Transformation of Islamic*, 155-160, figs. 78, 81-85.

[110] As on the portal of the Ala al-din mosque, finished in 617/1220-21, signed by Muhammad ibn Khawlan al-Dimashqi, the Jālāl ad-Dīn Karatay Medrese, (1251) Konya, Al Madrassa Al Qartawiyat, (1316-1326) Tripoli, and Isa Bey Mosque, (1375) Selcuk, Aydin, Turkey.

[111] Tabbaa *The Transformation of Islamic*, 162.

Sulaymān repeat, with its figures, to the lattice form with its figures and script[112]. It is noteworthy that "interlacing-knot-work" was employed at times around the Seljuk Sultan's *tawqī*, in the case of the 7th/13th c. Rūm Seljuk Sultan 'Ala' al-Din Keykubat I., around the phrase, *al-minna lillah*, *Benevolence is God's*, as is exhibited in some carved inscriptions[113], and it can be understood that the "interlace-knot" border design, termed in Ar. *turra*, meaning border[114], around the Sultan's *tawqī*, or around the edge of a document carrying in red ink the word, *Sultan-Sultani*, served to remind, through the use of this design, as with stone "inter-laced" spandrels, and the repeated use of "inter-laced" borders on Seljuk portals, turbé, as on other works carrying this design, of the bond that ties, of that bond, the binding commitment of the heart of the Muslim believer to Allah, *al-i'tiqād* [115].

4) **As a design type, a reminder of the Lattice of the World, and, of The Lover Looking Through The Lattice**

At a basic level, any *shabaka-mushabak*, *müşebbek,* any lattice design, (hence Ar. *mushrabiyya*, Tr. *Kafes,* to describe the lattice screen over a window), the group of

[112] A non-figural example of this design, but itself set within an inter-lace, rather than bordered by it, on the 1152 Karakhanid Jelal-ad-Din Huseyin Turbé, Mülayim, *Anadolu Türk Mimarisinde Geometrik Süslemeler*, Fig. 278 (Fig. 3 Right, above).

[113] For examples see, Scott Redford, "A Newly Read Inscription on the Walls of Antalya, Turkey", *Muqarnas, Frontiers of Islamic Art and Architecture: Essays in Celebration of Oleg Grabar's Eightieth Birthday; the Aga Khan Program for Islamic Architecture Thirtieth Anniversary Special Volume*, 2008: 182.

[114] Redford, "A Newly Read Inscription", 182.

[115] This is of course contra to Grabar's statements, "*What was being projected is an aesthetic proposition for aesthetic appreciation, not a specific iconographic message.*" (Grabar, *The Mediation of Ornament*, 145), prioritising so-called aesthetics-beauty over the meanings carried by Islamic design, retrospectively applying the Enlightenment view of art, as describe by Gotthold Ephraim Lessing in 1766, where pleasure-beauty replaces religion-religious symbolism in art (Gotthold Ephraim Lessing, *Laocoon: An Essay upon the Limits of Painting and Poetry*, Trans. Ellen Frothingham (New York: Courier Corporation, 2013)., Ch. IX, 63). In societies that defined themselves through religious confession, the idea that design did not convey religious content, what Grabar terms "*iconographic message*"(s), but conveyed aesthetic associations, itself, would seem to be a somewhat odd modern notion. Likewise, Carol Bier writes, "*Each* (pattern) *is not, then, a representation with a specific meaning, but rather pointing to something else.*" (Bier, "Art and Mithāl", 504) It seems however to be the case, with the so-called "zigzag," as of the *mushabak* of this 8 pointed star form, as also in the use of the "inter-lace" design and stone "interlaced" spandrels, that different and quite specific sets of meanings were associated with these forms of design employed in the Islamic world. While it is of course the case that the same design employed within a different religious-cultural context, carried different sets of meanings and associations, as with the interlace knot designs which first appear in Italy in the 1460's on gold-tooled bindings commissioned by Paduan humanists for their manuscripts, (Dora Thornton and Timothy Wilson, *Italian Renaissance Ceramics: A Catalogue of the British Museum Collection*, Vol. 1, (London: British Museum Press, 2009), 114) and these designs which were reproduced in 15th and 16th c. Venice and which drew the attention of Leonardo da Vinci from 1490 to 1495, who developed knot designs as mathematical exercises and intellectual puzzles, with engravings of six of these by Albrecht Durer c. 1506-7, amongst many others, and where this design type had lost its former association with *i'tiqād*.

the so-called "*Geometric designs*," themselves, in any form and either vertical, or angled at 45°, when employed to cover a surface, in however many layers of design, break up an otherwise flat surface area into ordered regular repeated pieces, or, in the case of an aperture, an open space, covered by the "geometric" *mushabak* design in the form of a screen or lattice of design, divides up the space, and so visually denies the coherence and solidity of the area, the surface, material or space that is covered by the design, as was noted by Ernst J. Grube in 1966, "*The ornamentation of surfaces of any kind in any medium with the infinite pattern* (sic. see above concerning the misnomer) *serves the same purpose – to disguise and 'dissolve' the matter, whether it be monumental architecture or a small metal box*"[116]. It certainly seems to be the case that the group of *mushabak* designs of a great variety of types, may at times have been understood to reflect the insubstantiality of this contingent, temporal and finite world, of physical matter, of the veil of creation, in relation to the Absolute, the Almighty, as is repeatedly stated in the Qurʾān, e.g. Ash-Shuraa 42:51 "*And it was not* (vouchsafed) *to any mortal that Allah should speak to him unless* (it be) *by revelation or from behind a veil, or* (that) *He sendeth a messenger to reveal what He will by His leave. Lo! He is Exalted, Wise.*" And, through the use of this *hijab* or veil, formed of an ordered grid, net, or lattice, thereby not only reminding of the veil-screen, the *hijab*, of existence, but also reminding of the Divine Order and the permeability of this temporal world to the Divine Spirit, through the spaces in the net or lattice of the created world[117]. The "form" (*sūra*) of the design ennobling "matter" (*mādda*), through reminding of the nature of reality and Reality. There is evidence to suggest this interpretation was current in the 6th-7th /12th-13th c. and of the permeability of the world, as of the human heart, to the Almighty, which is the bedrock of the religion. The use of *mushabak* designs served to remind and indicate both the illusion (*Khayāl*) of this world and to simultaneously to remind of that Light.

"To make a window, O Servant of God, is the foundation of the true religion"

Evidence of the need to open apertures through the world of confining material substance and forms, as in the closed, worldly, human heart, is, for example, described in the *Mesnevi* of Jālāl ad-Dīn Rumī, which records a passage which seems to have originated with Muhyīd-Dīn ibn Arabī: "*The house that is without a window is Hell; to make a window, O Servant of God, is the foundation of the true religion. Do not ply the axe in every thicket, Oh, come and ply the axe in excavating a window*"[118]. The "*axe*" employed in this context being the remembrance of God, and "*the house*" being this temporal world and, at the same time, this particular human

[116] Grube, *The World of Islam*, 11.

[117] Terrance M. P. Duggan, "Veil of Lights", *MJH* IV/1, 2014: 129-157.

[118] Rumi 1982, III, lines 2404-2405.

heart of vain, distracted and forgetful fancy. And the window? The window when excavated, allows access in this imprisoning, finite temporal-material world, through having pierced the veil of appearances, and through which aperture can come that light which is greater than the sun, "*Light upon light; God guides to His light whom He will*"[119]. Recognised and read in this fashion, it is unsurprising that *mushabak*-lattice designs find repeated expression in both two and three dimensions within the Islamic world and, as was noted by Ernst Grube, these designs form *a major element of Islamic Art in all periods*[120]. In consequence of its form, any type of *mushabak* lattice design, as occurs in nature, as when looking up through the canopy of the branches and leaves of a tree to the sky, or between the stems and leaves of plants and the trunks and branches of trees; or any man-made *shabaka, mushabak,* any *mushrabiyya-mushabbak,* quite regardless of the shape of the apertures in it, three, four, five, six, or twenty-four sided, or other, employed as a design, and quite regardless of if the apertures are open or closed, can, within an Islamic context, be understood as implicitly indicating and reminding of the permeability of the apparent solidity and reality of this temporal-physical world, and which can remind of the fundamental matter of one's orientation towards The Reality. Reminded to be in the world but a stranger to the world, as, "*Indeed, Islam began as something strange, and it will return to being strange just as it began, so glad tidings of paradise be for the strangers*"[121]. That is, to be reminded of the distractions and illusions of this temporal reality[122], a veil recreated at every instant[123], as, "*the visible world is a similitude of the world of dominion*"[124] and, in consequence, to look

[119] Qur'ān An-Nur, 24: 35.

[120] Grube, *The World of Islam*, 11.

[121] Narrated on the authority of Abu Huraira, Sahih Muslim, 1: 272.

[122] "*When the Prophet said 'People are asleep and when they die they awake", he wanted to point out that anything that mankind sees in this world is in fact like in a state of dream for a person who is asleep, and is an illusion (Khayāl). In other words, he pointed at the fact that everything that Man saw in this world is like the illusion one sees in the state of dreaming, and without a doubt it is necessary to interpret what he sees… In short, it is necessary to interpret this dream, so that he reaches for the man not to remain in the degree of illusion, to reach awareness of the reality to interpret this dream, so that he reaches the degree of true awakening at the level of death through total annihilation and complete fanā, so that he observes and does not remain veiled from observing God who is manifest in the totality of images and what is aimed at through those images.*" From The Wisdom of Compassion (*al-hikmat ar-rahmaniyyah*) in the Word of Solomon, Muhyiddin Ibn 'Arabi, *Fusus al-Hıkam*, 797-798.

[123] As in Qur'ān Ar-Rahman 55:29, "*All who dwell in heaven and earth entreat Him. Each day some mighty task engages Him. Which of your Lord's blessings would you deny?*"; Qaf 50:15, "*Were We worn out by the First Creation? Yet they are in doubt about a new creation.*"

[124] Al-Ghazali, *The Niche of Lights*, Trans. David Buchman (Utah: Brigham Young University Press, 1998), 12.

towards that which has no similitude, The Real, towards "*His Face*"[125], towards the Almighty, as, "*God is neither present nor absent, For God is the Creator of both*"[126].

[125] As in Qur'ān Al-Qasas, 28:88, "*And do not invoke with Allah another deity. There is no deity except Him. Everything will be destroyed except His Face. His is the judgement, and to Him you will be returned.*"; as likewise, Qaf, 55.27, "*All that lives on earth is doomed to die. But the face of your Lord will abide for ever, in all its majesty and glory.*"

[126] Arberry, Arthur John, *Discourses of Rumi (or Fihi Man Fihi)*, Trans. A. J. Arberry and Samuel Weisner (New York: 1977), 357.

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