Pearls of Wisdom
The Arts of Islam at the University of Michigan

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Pearls of Wisdom
Cover Images
Details of *tiraz* textile, Yemen or Egypt, 10th–12th centuries, cotton with resist-dyed warp (*ikat*), ink, and gold paint. Kelsey Museum of Archaeology, 22621 (cat. no. 3).

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Handwriting is the necklace of wisdom. It serves to sort the pearls of wisdom, to bring its dispersed pieces into good order, to put its stray bits together.¹
—Abu Hayyan al-Tawhidi (d. after 1009–1010)

In his treatise on penmanship, the medieval calligrapher Abu Hayyan al-Tawhidi equates the calligrapher’s art of beautiful writing to a jeweler stringing pearls. To his mind, both practitioners order the universe in a wise and harmonious fashion according to their respective crafts. While the jeweler chisels precious stones into glowing facets, the calligrapher’s training begins with learning the proper proportions of beautiful writing. In the Arabic script, this proportional system of writing is based on the rhombus—that is, the shape the ink-soaked tip of the reed pen makes when impressed on a writing surface. Each letter of the alphabet is then formed proportionately by measuring its height and width with strands of diamonds or circles (fig. 1, cat. no. 2). These calligraphic measuring marks often appear like strung pearls, thus revealing a continuously dynamic and creative engagement across art forms within Islamic traditions.

Beyond the system of proportionality that the rhombus catalyzes, the dot can possess several symbolic meanings. For example, if executed in red pigment, this calligraphic mark may allude to the blood clot, itself generative of creation. Like the rhombus that initiates the formation of all letters, words, and thus human knowledge, the blood clot represents the primordial unit from which all sentient beings originate. In other words, like the first clot of life, the inked rhombus creates something from nothing. Moreover, in some mystical circles, letters and words carry special significance because they are equated to parts of the body or else form spiritually charged equations.²

In more recent years, many artists have further explored the metaphorical qualities of letterforms by building upon and expanding Arabic calligraphic traditions.³ For example, Syrian-born contemporary painter Khaled al-Saa’i (born 1970) produces calligraphic paintings in which letters appear to dance, glide, and even swim—rather than connect to form recognizable words. In many of his paintings, including Winter in Ann Arbor (fig. 2, cat. no. 1), al-Saa’i purposefully transcends legibility to focus instead on the dynamic shapes of letters and the oral effects they generate. With the silhouette of a rhombus hovering over the horizon, the repeated soft letter ha produces the sound of sighing or exhaling. Suggestive of a beating heart

Fig. 1 (opposite). Examples of the letter kaf with pearl-shaped measures in red ink, Tacbeyzade Mehmet bin Tacettin (d. 1587), Calligraphy Treatise (Risale-yi hat), penned by the calligrapher Kebecezade Mehmet Vasfi Efendi (d. 1831), Ottoman lands, ca. 1772, ink on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 401 (cat. no. 2).

1. Rosenthal 1948, 12.
and breathing through mist, the *ha* shape and sound are appropriate for this painting, which al-Saa’i made during his 2002 stay in Ann Arbor. Through such letterforms, their respective sound effects, and crisp hues, the artist attempts to convey his memorable experience of a chilly yet soft Michigan winter. Calligraphy’s metaphorical potential once again yields unexpected results, moving the viewer from a strict reading experience to an emotional plane of varying temperatures.

Al-Tawhidi’s metaphorical thinking, the use of calligraphic pearls, and contemporary letter-paintings suggest that other art forms produced in Islamic lands were made and perceived in similarly allegorical ways as well. In some instances, ceramic objects may have been thought of as metalwares encrusted with jewels or inlaid with gold and silver, while a number of medieval buildings clad in brickwork patterns may have been intended to appear as if draped in woven textiles. These cross-media metaphors can be detected across numerous art forms in Islamic traditions, including the objects in the exhibition “Pearls of Wisdom: The Arts of Islam at the University of Michigan.” Inspired by al-Tawhidi’s allegorical thinking and his invitation to bring together some “pearls,” the exhibition aims to showcase a selection of art works held in university collections, among them the Kelsey Museum of Archaeology, the Special Collections of the Hatcher Graduate Library, the U-M Museum of Art, and the U-M Museum of Anthropological Archaeology. Rather than arranged chronologically, geographically, or by media, the objects in the exhibition are organized by theme. Such themes include the intersections between function and decoration, the aesthetic power of everyday objects, visual play, wit, and magic, connections and interrelationships across art forms, and light symbolism and illumination. This exhibition not only highlights the strengths of the collections at the University of Michigan but also explores various themes integral to the conception and production of art in the Islamic world from the medieval period until the present day.

**Everyday Beauty**

While calligraphy takes pride of place in Islamic artistic traditions, beautiful writing is not the only art form that fulfills both utilitarian and aesthetic functions. Many objects produced in various media illustrate the harmony between utility and beauty in the arts of the Islamic world. Some objects

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4. On “jeweled” ceramics, see Baer 1989, and on the “thousand weave” (*hazarbaf*) brick motif, see Golombek 1988, 34.

5. For a 1978 exhibition of Islamic art held at the Kelsey Museum, see Soucek 1978 (the catalogue is arranged geographically and by media). Also see the selection of objects included in Fisher and Fisher 1982.

6. For a general discussion of beauty and aesthetics in Islamic art, see Behrens-Abouseif 1999; Leaman 2004; and Gonzalez 2001.
are made to fulfill very specific functions; they are tools or utensils of one kind or another. In other words, their *raison d’être* is, in essence, utilitarian. For example, spindle whorls are sculpted from bone, wood, and other materials into shallow hemispheres. They are made not for the beauty of their form but in order to produce the proper weight and centripetal force to spin fibers into yarn or thread.7 However, spindle whorls are often delicately decorated as well (fig. 3, cat. no. 7). The incised patterns on whorls serve no other function than to ornament an object otherwise used for practical purposes. Moreover, the patterns often recall the spinning motion of the whorl, thus allowing the decoration to be seen both while the object is idle and when it is in rotational use.

Charm and creativity can be found in other items that are intended primarily for practical use, among them the many water filters found in Fustat (medieval Cairo).8 Situated on the inside of the neck of a ceramic vessel, a pierced water filter serves as a barrier to keep various impurities and insects out of the water contained within (fig. 4, cat. no. 10).9 Rather than merely puncturing the filter with small holes, the craftsman who designed this filter incised a running lion within a decorative roundel pierced with diamond-shaped holes. Like other designs depicting lively quadrupeds, this zoomorphic pattern cleverly performs the utilitarian function of filtering


8. The Kelsey Museum holds a large collection of objects excavated at Fustat by George Scanlon and his team based at the American Research Center in Egypt (ARCE). The division of the registered objects at the close of the 1972 season legally ceded the major share to ARCE, which, in turn, transferred all items to the Kelsey Museum since it had provided financial support for the 1972 season. Although some Fustat glass objects are included in the holdings of the Kelsey Museum, all glass items from the 1972 season were given to the Corning Museum of Glass in exchange for its contribution to the excavations (personal e-mail communication between Christiane Gruber, Jere Bacharach, and George Scanlon, September 18, 2013).

the water while also providing a representation of an animal playfully galloping within a vessel’s neck. Thus, the design is not purely ornamental since ornament is by definition superfluous or added. Instead, the zoomorphic and geometric designs that comprise these types of ceramic water filters are delightfully functional, demonstrating that utility and ornament are often mutually constitutive.

Like ceramic water filters, other vessels also display ornamental flourishes that are quite practical. For example, ewers and flasks made of glass and rock crystal are often blown or cut into smooth or faceted items that play with both form and light. Some glass ewers include intricately carved projections adjacent to their spouts (fig. 5, cat. no. 5). This type of ornately carved protuberance was situated at the top of a handle on a glass pitcher, where it served to steady the hand while pouring liquid. Although any small piece of glass would have sufficed for this purpose, the thumb rest takes the shape of a finial or leaf pattern. This decorative detail is as elegant as it is practical. In addition, the colorless glass and the chiseled pattern of the ewer’s spout resemble rock-cut crystal, which was employed to make luxury vessels especially during the period of Fatimid rule (909–1171) in Egypt. Thus, both glass (a molten substance) and rock crystal (transparent quartz) cultivate the aesthetic potential of gemlike translucence.11

Fig. 3 (opposite). Spindle whorls, 9th–10th centuries, Fustat (medieval Cairo), Egypt, incised bone. Kelsey Museum of Archaeology, 1969.2.60 and 1969.2.61 (cat. no. 7).

Fig. 4 (opposite). Water filter with lion design, 10th–12th centuries, Fustat (medieval Cairo), Egypt, hand-tooled and pierced clay. Kelsey Museum of Archaeology, 1971.1.3 (cat. no. 10).

Fig. 5. Pouring spout with ornate thumb rest, 10th–12th centuries, Egypt, blown and cut glass. Kelsey Museum of Archaeology, 1970.3.60. (cat. no. 5).


Other objects are made to create decorative patterns and to fulfill useful quotidian functions for members of society at large. For instance, many small clay stamps survive from medieval Egypt. These round objects were used to impress various designs into soft bread dough, and their ornamentation ranges from geometric starbursts to animals and inscriptions wishing *bon appétit* (fig. 6, cat. no. 6). Since bread was (and continues to be) a basic food staple, its production was well established before the advent of Islam. To a considerable extent, the inhabitants of medieval Cairo inherited bread-making practices of the Coptic period. Often individuals baked their daily bread in communal ovens, and thus one of the primary functions of bread stamps was to help customers identify their loaves as they came out of the oven. Functioning like personal seals that are at once ornamental and pragmatic, these common ceramic objects created distinguishing seal-like marks in batches of freshly baked bread.

Beyond these types of portable objects, a similar use of decoration for practical purposes is often found in architecture. Numerous buildings in the Islamic world are revetted with glazed brick-, marble-, and tile-work, which help seal and strengthen a structure’s rubble or clay core. Quite frequently premodern palaces, mosques, and mausolea are studded with niche-like forms set at various angles, as can be seen in the early fourteenth-century

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12. Kühnel 1939 (in which Kühnel argues that bread stamps could have been used as a means of marking or recording bread quotas by the *muhtasib*, or market controller and inspector); and Grabar 1992, 98. For antecedent Coptic bread stamps, see most especially Galavaris 1970.

13. For a related question on seals as magical and practical, see Porter 2004.
tomb of Sultan Öljeytū (ruled 1304–1316) located in Sultaniya, Iran (fig. 7). Here, a cornice is articulated in colorful honeycomb motifs. Such niches also can be placed within receding tiers within an edifice’s curved areas, including iwans (archways) and mihrabs (prayer niches). In medieval Anatolia (modern-day Turkey), these architectural elements are often clad with turquoise-and black-glazed ceramic pieces (fig. 8, cat. no. 4).14 Known as muqarnas, these honeycomb formations serve to elegantly transition from the square form of a building to the circular base of a dome, thereby fulfilling both aesthetic and practical purposes. While muqarnas function structurally to support and redistribute the weight of an arch or dome, they also manipulate form, color, and light to produce dazzling crystalline effects within the built world of Islam.15

Another way of exploring the manifold intersections between function and beauty is through objects that are used to make oneself beautiful. The old adage that cleanliness is next to godliness has an equivalent in the Islamic context, in which personal hygiene is praised as “half of faith.” While the ritual cleansing of one’s body for prayer is of utmost importance in Islam, proper hygiene constitutes an integral (and not necessarily religious) aspect

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15. There exist numerous studies on the muqarnas. For its application within domes and its use in Egyptian architecture, see in particular Tabbaa 1985; and Bloom 1988.
Thus arose the need for a range of objects to clean the body. There exist many items that were used for the purposes of maintaining personal hygiene and health, including double-sided wooden combs (fig. 9, cat. nos. 18 and 8). These combs include one side with thicker teeth to detangle hair, while the other side with finer denticulation was effective in removing dirt, residue, and lice. Although essentially functional in their application, some combs are ornamented with roundels, concentric circles, and other designs. Sometimes they also bear inscriptions that praise their aesthetic results, in which the object is imagined as gaining a voice that proudly declares: “I am a comb for the hair. I am only used for beauty.”

Additionally, perfumes and essential oils have played an important role in practices of hygiene and self-beautification throughout the centuries. Various vessels, such as rosewater sprinklers, incense burners, and perfume bottles, were required for the storage and application of unguents and aromatic...
liquids (fig. 10, cat. nos. 21, 22, 57, 19, and 20). Besides oils and fragrances, minute vessels stored other cosmetic materials, most especially kohl, a natural black powder used to darken the area around the eye. Like mascara or eyeliner, kohl is typically applied with a thin metal applicator (fig. 11, cat. nos. 23 and 42). Vials were functional as portable storage units but also served to add fragrance and highlight parts of the human body. It was perhaps only fitting then that the vessels themselves be decorated, for example, with carved relief reminiscent of faceted teeth, echoing the pearly whites produced organically by the human body. Such delicately chiseled “molar” flasks indeed count among the most popular forms of small glass vessels of varying colors, sizes, and shapes excavated in Fustat.  

A great number of other items—including cosmetic implements, textiles, and jewelry—also were used to adorn the human body. The Kelsey Museum of Archaeology holds a particularly rich collection of glass jewelry produced in premodern Egypt, among them colorfully patterned bangles and beads (fig. 12, cat. no. 17). In the Islamic world, as in other world cultures, clothing and accessories keep the body clean and protected while also emphasizing the wearer’s social, political, and economic status. For example, inscribed fabrics (tiraz) of the medieval Arab world were often given as honorific gifts, while Kashmiri shawls made in more recent centuries functioned as both status symbols and fashionable accessories in the Islamic world and, later, in Europe and America (fig. 13, cat. no. 14). Another common wardrobe item is the turban, which comes in various sizes and shapes in order to denote social position, profession, tribe, Sufi affiliation, or even crime. For example, a petite headpiece could have served as the core around which a turban cloth would be wrapped, thereby fulfilling both

Fig. 11. Left: Cosmetic spoon, 10th–11th centuries, Fustat (medieval Cairo), Egypt, bronze. Kelsey Museum of Archaeology, 1969.2.96 (cat. no. 23); Right: Flask, 11th–12th centuries, Egypt, free blown and marvered glass. Kelsey Museum of Archaeology, 1968.2.100 (cat. no. 42).


22. On the turban as part of the attire of Muslim mystics, see Atasoy 2000; and Karateke and Anetshofer 2001.
structural and ornamental functions (fig. 14, cat. no. 16). This small patterned cap was worn by male and female urban-dwellers and Bedouins in the medieval Islamic world. When such conical caps were covered with odd objects like foxtails and shells, however, they were intended to mark and humiliate the wearer as a form of public punishment.23

All in all, these many everyday objects serve dual functions: one practical or utilitarian, the other decorative or aesthetic. From filtering water to supporting domes, and from spinning wool to wearing perfume, artists and inhabitants of the Islamic world cleverly incorporated beauty into their daily lives. Such visually appealing objects added both awe and pleasure to everyday tasks and duties, even those as seemingly mundane as the combing of one’s hair or drinking water.

23. Dozy 1845, 262–278 (viz. turtur); and Lange 2008, 80, 85–87, 170, and 234.
Play and Protection

Beyond their aesthetic appeal, objects in the Islamic world also include images and patterns that dare viewers to decipher or solve a variety of visual challenges. While some of these art forms are lighthearted and ludic, others cater to the more serious business of imparting wisdom and curing ills. Whether used for play or protection, such objects act as potent devices to engage and test the senses as well as to cultivate and channel unseen forces.

One particularly popular decorative device applied to a variety of vessels is known as a “fishpond” motif (fig. 15, cat. no. 36). Whether molded in clay, painted on glass, or incised in bronze, the image of swimming fish on a vessel meant to hold liquid exploits the function of the object in order to play an optical joke on the viewer. The undulating liquid symbolically animates the fish, and for a brief moment it would seem as though marine life were coming alive and taking over libations. The visual pun demonstrates the cleverness of artists as they craft objects meant for the drinking of water or wine within a social setting such as a feast. As witty conversation pieces, “fishpond” cups and bowls certainly challenge their users to distinguish between animate and inanimate objects (fig. 16, cat. nos. 41–43). Playing with similar effects, a tiny clear glass vessel is formed into the shape of a fish. Cleverly, the liquid would have been poured into and out of the fish’s mouth, as if it were ingesting the liquid or spitting out his contents. Due to the translucent glass, the liquid also would have been visible inside the vial, playfully moving about in the creature’s belly. Likewise, glass containers decorated with marvered patterns that resemble waves appear to deploy aquatic metaphors in order to comment visually on their own functionality.

The presence of playfulness in Islamic art is not limited to visual puns. Paintings of chess competitions and carved game pieces of various kinds survive as evidence of a lively medieval gaming culture. Within Egypt, dice carved out of bone and various gaming pieces were discovered in the archaeological excavations at Fustat (fig. 17, cat. nos. 24–26). The numerals on dice are denoted with a series of concentric circles and include numbers one through five, with the final side of the cube bearing twelve circles. Dice could be used in virtually any game requiring a chance drawing of numbers, most especially backgammon. Chess also was played in the Islamic world, likely entering Central Asia and Persian lands through India before the Islamic

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25. Soucek 1978, 5, cat. no. 43.
26. On this subject, see Atil 1994.
Fig. 15. Basin with fishpond motif, 12th–13th centuries, Syria or Egypt, brass. Kelsey Museum of Archaeology, 28801 (cat. no. 36).

Fig. 16. Left: Vessel fragment, 8th–10th centuries, Egypt, free blown and marvered glass. Kelsey Museum of Archaeology, 1965.3.223 (cat. no. 43); Center: Fish-shaped vessel, 8th–9th centuries, Fustat (medieval Cairo), Egypt, glass. Kelsey Museum of Archaeology, 1970.3.965 (cat. no. 41); Right: Flask, 11th–12th centuries, Egypt, free-blown and marvered glass. Kelsey Museum of Archaeology, 1968.2.100 (cat. no. 42).

Fig. 17. Left: Gaming piece or noisemaker, date unknown (possibly 10th–15th centuries), Egypt, bone. Kelsey Museum of Archaeology, 1962.1.52 (cat. no. 25); Center: Gaming piece or furniture fragment, 9th–10th centuries, Fustat (medieval Cairo), Egypt, bone, Kelsey Museum of Archaeology, 1969.2.62 (cat. no. 26); Right: Die, date unknown (possibly 10th–15th centuries), Fustat (medieval Cairo), Egypt, bone. Kelsey Museum of Archaeology, 1962.1.104 (cat. no. 24).
conquests. Chess pieces were made in various media (including bone, glass, and rock crystal) and in various shapes and stylized figures.28

Other figurines excavated at Fustat that are carved out of bone may represent a different kind of plaything (fig. 18, cat. nos. 28–29). These palm-sized sculptures roughly resemble the human form, with an emphasis on facial features. While such figurines were common for centuries in medieval Egypt, their specific functions remain unclear. Perhaps they were dolls—that is, toys for children. Some of these figurines have small holes drilled into the figure’s ears or chest, suggesting that other elements—such as clothing, ornaments, or wigs—were attached to it. If it was used as a toy, a child could play with the doll by dressing it or changing its hairstyle. On the other hand, the holes in some figurines suggest that they were affixed to a surface or on the human body, hence implying that these small figural objects may have fulfilled apotropaic functions as well.29

Other images, inscriptions, and designs likewise require symbolic activation in order to serve their intended function. For example, as a form of licit magic, Islamic talismans and amulets serve to protect their wearers from harmful forces, including malevolent spirits and the evil eye. Protective designs and writings usually necessitate some kind of physical contact with the body and thus often ornament talismanic shirts and metal pendants (fig. 19,

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29. Rodziewicz 2012, 9–20, pls. 45, 102, and 106; Bacharach and Rodenbeck 2002; and Scanlon 1968, 16–17; 1964, pl. XVII, fig. 7.
The perceived power of such objects derives from both their visual characteristics and physical properties. Moreover, many exhibit stars and magic squares that are inscribed with letters or numbers, whose total sum remains consistent across horizontal, vertical, and diagonal lines. They also include invocations to God as the “Protector” (al-Hafiz) as well as the names of the Seven Sleepers of Ephesus, which are believed especially effective in ensuring safe passage at sea. Displaying alphabetic and numerical puzzles as well as other protective designs, these amulets contain dormant blessings, or baraka, that are thought to be activated through the owner’s physical interaction with the object.

Wearing talismanic objects is just one way of seeking out and harnessing protective blessings. In addition, baraka can also be ingested via liquids that are believed to be invigorated with healing properties. A potion’s curative properties are increased through contact with the Qur’an, itself God’s sacred word. Besides the chalk washed off boards containing verses of the Qur’an, so-called magic bowls also contained liquids that were used in popular healing and devotional practices (fig. 20, cat. no. 34). These kinds of medicinal bowls exhibit allover pictorial and textual designs, impregnating the liquid contents with perceived healing powers. In Islamic premodern practices of spiritual medicine, a folk doctor administered such blessed water to an


31. For a general discussion of seals, see Porter 2004 and Porter and Frembgen 2010; on Seven Sleeper amulets, see Porter 2007; on magic squares, see Cammann 1969; and on protective six-pointed stars, see Dawkins 1944.

individual in order to help him or her recover from the sting of a scorpion, a nosebleed, problems with fertility and child birth, and countless other ailments. Prayers were uttered during the object’s ritual use. At times, such prayers are inscribed on tablets affixed by a wire or thread to the rim of a magic bowl (as in fig. 20), turning the tiny metal tabs into a sonorous rosary when shaken. Last but not least, magic bowls were also used for divination; the liquid was believed saturated with magical powers to enable the augury seeker to better see into the future.33

Whether for the sake of humor or healing, these few examples highlight the perceived agency and power of objects in the Islamic world. They also pay tribute to the wit and wisdom required of their makers and invite their owners and viewers to stimulate their dormant powers through the interrelated practices of visual engagement and tactile interaction.

Media Metaphors
In his treatise, al-Tawhidi draws a parallel between calligraphy and jewelry by using one art form as a metaphor for the other. This phenomenon, in which one medium mimics or refers to the qualities of another, is relatively common in Islamic art. While such connections across media can be thought of as comparative thinking put into practice, they also emerged from artists working in adjacent workshops and collaborating on multimedia projects under one roof.34 Thus, it is not rare to find artful designs executed as drawings also present in paintings, leather bindings, textiles, tiles, glasswares, metalwares, and woodwork.

Symbolically crossing over from earthen clay to precious stones, a number of medieval ceramic vessels seem ornamented in sumptuous jewelry (fig. 21, cat. no. 48).35 Such “jeweled” ceramics appear as if studded with faceted and embossed precious stones as well as ornamented with pearl bands, much like gold or silver vessels encrusted with gemstones. Perhaps such bezzled ceramic vessels were merely the poor man’s version of jeweled metalwork, as the more expensive material object was recreated in a much less expensive medium. However, these spheroid-conical containers are not merely covered in faux-gemstones and naïve imitations of luxury wares. For example, some ceramic versions of pendants appear as if hung around the neck of the vessel, mimicking the way in which a person would wear a similar piece of jewelry. In such cases, the earthenware is rendered in distinctly corporeal terms, the
metaphor extending well beyond another medium to encompass the human body itself.

Another example of intermedia relations in both practice and aesthetics can be detected in glass relief-cutting techniques, whose results recall the delicately chiseled designs of rock-cut crystal (fig. 22, cat. nos. 5, 20, and 49). While glass is often blown or molded when it is in semi-liquid form, crystal is a hard stone that requires meticulous carving. One wrong tap of the hammer could crack the extraordinarily thin walls of the transparent quartz, rendering the highly expensive crystal useless. In some instances, glass—a much less expensive medium—is made to look like rock-cut crystal by using a similarly subtractive method in executing its decoration, thus emulating a luxury product typically reserved for royal patrons.36 Furthermore, rock crystal was considered by medieval Muslim scholars to be one of the clearest and thus purest substances on earth, just after air and water. In fact, rock crystal was often analogized to light and petrified water, both of which are believed to carry life-endowing properties.37 The play among these many substances—glass, crystal, water, air, and light—is not merely imitative. Rather, it points to


each artist’s mastery of his craft, which allowed him to take advantage of the full range of each medium’s aesthetic, physical, and material properties.

While some media purposefully mimic others, such as the ceramic vessel covered in gemlike motifs and relief-cut glass inching closer to the look of rock-cut crystal, other motifs appear in many different media regardless of their material makeup. For example, during Mamluk rule in Egypt and Syria (1250–1517), court officials were tasked with specific duties and granted symbols of office, which were applied to the portable arts and architecture they sponsored. These symbols were emblazoned on all manner of objects, from clothing and pottery to carpets and enameled glass lamps (fig. 23, cat. nos. 54–55). For example, a ceramic sherd and appliquéd roundel, the latter of which in all likelihood would have been affixed to an item of clothing, bear an image of a goblet. This chalice denotes the administrative position of the saqi, or royal cupbearer. As one of the sultan’s close cohorts, the cupbearer oversaw food and drink at the Mamluk court and while the ruler was on the move.38

Although some visual elements like Mamluk blazons fluctuate across material goods, other decorative devices do in fact emerge from and cite a particular medium. For instance, ceramics may emulate metalwork and include designs reminiscent of textile patterns. Such is the case with a sherd that represents both the decoration and color scheme characteristic of Mamluk pottery (fig. 24, cat. no. 51).39 While these incised patterns and techniques closely resemble contemporaneous metalwares, the knotted pattern is not novel. Interlacing is a process that developed in conjunction with the medium of textiles or fabric production, well before the advent of Islam. Already

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during ancient times it was used as a decorative device on many media, including ceramics. And in a rather self-referential manner, it was even represented on textiles themselves.40

Another visual feature that ornaments various media but also originated in textile arts is the *tiraz* band, or line of Arabic text. Although derived from the Persian word for embroidery, generally the term *tiraz* simply indicates an object or building that bears an inscription. Epigraphic texts on objects and buildings usually include Qur’anic verses, offer blessings and well wishes to the patron or owner, list his honorific titles, and provide other useful information such as a date of manufacture or construction.41 At other times, the text band is in pseudo- or mock Arabic calligraphy, and thus decorative and illegible. In such cases, the letterforms are not merely non-communicative. Instead, they craft icons of literate culture or else appeal to devotional feeling.42

Often bands of Arabic inscriptions embellish medieval textiles, the silk text woven rather than embroidered onto the undyed linen ground cloth (fig. 25, cat. no. 59).43 Albeit largely in fragmentary condition, many *tiraz* textiles survive today due in large part to their use in funerary contexts. In life, such “scripted” textiles were used as honorific robes, declaring both the wearer’s status and his allegiance to the monarch who gifted the item to him.44 In death, it is believed that certain words and phrases have the ability to protect and bless the deceased individual. Exiting the textile arts, inscribed bands appear in other media as well, including stone revetments and wooden friezes used in both religious and secular structures. For example, one medieval wooden panel most likely decorated the interior of a medieval Egyptian

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42. Ettinghausen 1974; and Aanavi 1968.

43 Day 1937, 435, 441, fig. 20; Contadini 1998, 60–61, pl. 15; Marzouk 1943, 164–166; Sokoly 1997a, 71–78; Micklewright 1991.

44. On robes of honor (*khila‘*), see most especially the articles by Allsen, Hambly, Petry, Sanders, and Sourdel in Gordon 2001; and Golombek 1998, 29.
home (fig. 26, cat. no. 60), where it permanently offered its owner, his family, and visitors glad tidings.45 From textiles to woodwork, *tiraz* bands show how inscribed objects were used in the Islamic world to mark social status, extend well wishes in life, and safeguard the body in death.

Besides textiles and buildings, a ruler extended his presence and declared his wealth through coinage, which embodied his political strength and dispersed his power geographically. Many Islamic coins are purely epigraphic: they provide basic statements of the faith, the ruler’s name and titles, and the date and place of the coin’s minting. However, a number of exemplars also employ visual metaphors and motifs, such as logos, animals, human figures, and signs of the zodiac (fig. 27, cat. nos. 66–68). In Ottoman lands, coins often included the *tuğra*, a stylized calligraphic signature comprised of intertwining letters that form the various parts of the ruler’s name and titles. This ornate monogram represented the sultan’s sovereignty and, like the blazons of Mamluk officials, functioned as an immediately recognizable symbol of elite power regardless of its legibility.46 In addition, within Egypt bust portraiture emerged in numismatic arts during the modern period, while solar, lunar, and stellar imagery appear on Iranian coins from at least the seventeenth century. By the Qajar dynasty (1785–1925), however, the image of the sun and lion (*shir o khorshid*) acquired new cosmic, political, and sectarian meanings under the Shi‘i shahs of Iran.47

Gold and silver coins did not always weigh a standard size or include pure content. For these reasons, within medieval markets purchases were made not by a specific number of coins but rather by coin weight (fig. 28, cat. nos. 69–72). Precious metal coins were measured on a balance against glass coin weights in order to settle on the correct monetary sum, regardless of the number of actual metal coins. Different sets of coin weights were used for gold *dinars*, silver *dirhams*, and copper *fulus*, and frequently such glass weights imitate the form and epigraphic content of their metal analogs. Moreover,

45. Glidden 1939, 94, and fig. 4; Bloom 2007, 67, fig. 38; Contadini 1998, 111–112, and pl. 52a–e; Mayer 1958, 13–14; Pauty 1931; Décobert and Gril 1981; and Wiet 1958.


47. Soucek 2001, 66; 2006; Piemontese 1969; and Hinz-Göttingen 1937.
large glass weights were also used to measure items in bulk. They are quite rare, as metal weights were far more common for measuring products—such as olive oil and grain—by the pound. While weighing coins was a common practice across the medieval Islamic world, the use of glass in particular seems to have started in Egypt, where both glass coin and pound weights were made by impressing one or more inscribed stamps into a measured globule of glass while it was in a semi-liquid state.48

Media metaphors are pervasive across these art forms. At times a material was valued for its particular characteristics such that other media were manipulated to emulate it, as in the case of “jeweled” ceramics. In other words, a medium’s material properties—along, perhaps, with its perceived monetary value—were imitated in and symbolically carried over to another. At others, a pattern was at first popular within a particular medium and then spread to others, as is the case with interlace designs and tiraz inscriptions. Further still, some motifs—like swimming fish and cup blazons—entirely transcend a particular material and appear in a variety objects, from glassworks to metalwares. Through their artistic creativity and expressive freedom, artists and craftsmen often experimented with new techniques, perfecting their craft while concurrently pushing the limits of their own media.

48. Miles 1951a; Bates 1993; 1981; Balog 1981; and Ettinghausen 1939.

Fig. 27. Egyptian, Ottoman, and Iranian coins, 19th–20th centuries, metal. Clockwise from right: Kelsey Museum of Archaeology, 75794 (cat. no. 67), 75784 (cat. no. 68), 75938 (cat. no. 66), and 75939.

Fig. 28. Glass coins and weight, 8th–12th centuries, Egypt, green and brown glass. Kelsey Museum of Archaeology, 91244 (cat. no. 71), 91481 (cat. no. 70), 1964.2.13 (cat. no. 69), 1964.2.14 (cat. no. 72), and 1964.2.16.
Illumination

While al-Tawhidi likens beautiful handwriting to wisdom and order, another way to visually represent spiritual and intellectual enlightenment in book arts is through illumination—that is, the embellishment of manuscripts with geometric and vegetal designs painted in gold, lapis lazuli, and other organic and inorganic pigments. Islamic manuscripts, in particular copies of the Qur’an, are illuminated in a variety of ways, especially in their opening pages (fig. 29, cat. no. 80). In Islamic metaphorical thought, light (nur) represents God’s presence and revelation on earth. As God’s sacred Word, the Qur’an is thus particularly subject to lavish illumination, where it does not merely function as ornament. Much more significantly, it serves to illuminate—to shed light on—something, in this instance the “correct path” into faith and belief. Illuminating a codex with gold pigment certainly increases its intrinsic material, and hence symbolic, value. Moreover, it also lends it glory and majesty as well as a touch of the numinous.49

Gold paint was used alongside other pigments in Islamic pictorial traditions, including representations of historical events and religious tales. That figural representations are strictly forbidden is one of the most common misconceptions about Islamic art, both within and outside Islamic cultural spheres. Images of living entities, including holy persons, appear most especially in illustrated manuscripts made in the premodern Persian and Turkish world. For example, a painting included in an Ottoman illustrated copy of Fuzuli’s Hadīqat al-Su‘ada (Garden of the Blessed), a Shi‘i martyrology, depicts the death of the Prophet Muhammad as he is surrounded by his loved ones (fig. 30, cat. no. 81).50 Here, the five members of the holy family (ahl al-bayt) are set apart by their flaming gold haloes in order to visually emphasize that they were touched by divine flux. At some later date, a viewer evidently added (rather sloppily executed) black veils to cover the faces of Muhammad and his family, while the two attendants’ visages remain untouched. This later manipulation of the painting forces the viewer to contemplate solely the figures’ radiant aura rather than their individual facial traits. What’s more, the insertion also bears witness to fluctuating sensibilities toward figural imagery in the Islamic world over the course of several centuries.51

Handwritten manuscripts and printed books were not the only objects that were enriched with light-reflective pigments. Plenty of stone inscriptions and tiraz textiles were highlighted in gold paint as well (fig. 31, cat. no.

49. Waley 1991, 89.

50. See the manuscript’s online catalogue entry at http://mirlyn.lib.umich.edu/Record/006822121/Description#tabs; and comparative paintings in Milstein 1990, 100–105, cat. nos. 14–31, figs. 12 and 21.

51. On the light of God and the Prophet Muhammad, see Rubin 1975; on “light” depictions of the Prophet in Islamic manuscript paintings, see Gruber 2009; and on the varying responses to figural images within Islamic traditions, see Flood 2002.
Within textile arts, the application of gold paint to a cotton base reveals the extent to which cloth could be conceptualized and used as a supple support for painterly elaboration, much like parchment or paper. Unlike manuscripts, however, the gilt inscriptions on medieval textiles were meant to be seen rather than secreted away behind book covers. Moreover, if draped on the human body, such gold-painted textiles allowed their elite wearers to both embody and exude radiance, dazzling onlookers along the way.

For both practical and spiritual reasons, there also exists an abundance of objects that literally emit light, chief among them lamps. While all lamps serve the same function, they come in a variety of forms and media, from blown enamel-painted hanging mosque lamps to smaller ceramic ones meant for domestic use. The latter are typically decorated with hand-executed or molded decorative patterns (fig. 32, cat. no. 74). Some oil lamps are also covered in monochrome glazes, some of which appear iridescent. Whether made of glass or ceramic, each type of lamp emitted light but also played with it. Those with gilding would be further illuminated, as the gold painted onto the convex surface would have sparkled when lit (fig. 33, cat. no. 78). The gold-painted designs, inscriptions, and blazons found especially on Mamluk glass lamps would have seemed as if haloed. While setting an interior space alight, their glowing radiance would have ricocheted off the lamps’ own reflective surfaces, placing function and beauty in aesthetic concert.

Fig. 30 (opposite). The Prophet Muhammad’s death, Fuzuli (1495–1556), Hadiqat al-Su’ada (Garden of the Blessed), text dated AH 1006/1598 CE, possibly Ottoman Baghdad, ink, pigment, and gold on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 386, page 137 (cat. no. 81).

Fig. 31. Tiraz textile, Yemen or Egypt, 10th–12th centuries, cotton with resist-dyed warp (ikat), ink, and gold paint. Kelsey Museum of Archaeology, 22621 (cat. no. 3).

32. Kubiak 1970, 3–6, fig. 1; and Scanlon 1964, pl. XVI, fig. 8.

The aesthetics of light are explored in a multitude of ways in Islamic art. From radiant lamps and gold-painted textiles, which generate luminosity and whose bodies may glow, to the widespread use of gold in manuscript illumination and illustration, the conceptual and visual linkages among light, illumination, and spiritual enlightenment are a hallmark of Islamic artistic expressions. Fluctuating from one medium to the next, light is made visually present and palpable all the while it transcends both matter and material.

Conclusion
Al-Tawhidi’s brief statement about the fine art of calligraphy raises a number of questions about art and its intersections with allegorical and analogical expression in the Islamic world. His wise saying is also made all the more nuanced and textured through an exploration of the holdings of Islamic art at the University of Michigan, Ann Arbor. The objects included in the exhibition “Pearls of Wisdom” serve to concretize, elucidate, and expand upon his poetic assertions. In addition, through its thematic approach, the exhibition explores a number of intertwining “strands”—from everyday beauty, play, and protection to media and light metaphors. The conjunction of these strands highlights how beauty and harmony are variously conceptualized and given form through the many ways artistic expression has enhanced the world of Islam from the seventh century until today.

As the art of beautiful writing, calligraphy is not just a means to convey information. It has been admired for its form and beauty from medieval times to today. Contemporary artists have used the Arabic alphabet to produce calligraphic paintings, calligraffiti, and abstract formal compositions.

In this painting, Syrian-born contemporary calligraphic artist Khaled al-Saa’i constructs an ethereal composition by layering and juxtaposing Arabic letterforms in varying sizes. He plays with space and light while also deconstructing words into letters and rhomboids. The painter transcends legibility and instead focuses on the form of the letters and the oral effects they generate. For example, the repeated soft letter ha produces the sound of sighing or exhaling. Suggestive of breathing through mist, the ha is appropriate for this painting, which al-Saa’i made during his 2002 stay in Ann Arbor. Through letterforms, their oral effects, and crisp hues, he attempts to convey his memorable experience of a chilly and snowy—yet soothing and picturesque—Michigan winter.

Examples of the letters *alif*, *ba*, *ha*, and *he* with pearl-shaped measures in red ink, Tacebyzade Mehmet bin Tacettin (d. 1587), *Risale-yi hat* (Calligraphy Treatise), penned by the calligrapher Kebecizade Mehmet Vasfi Efendi (d. 1831), Ottoman lands, ca. 1772, ink on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 401.

A third manuscript page showing the letter *kaf* appears opposite page 1 above.

Calligraphy in the Arabic script is created using a system of proportions based on the rhomboid. This shape is formed when the ink-soaked tip of the reed pen is pressed onto a writing surface like paper. In this calligraphic treatise written in Ottoman Turkish, the scribe demonstrates the rhombic system in the margins, measuring each Arabic letter with rows of red circles.

After many years of training, a calligrapher would not need to measure letters in this way since he could sense proper proportions with each stroke of his pen. For these reasons, this treatise showcases the mastery of the craft along with visual exemplars. Moreover, in his tract the author develops precise terminology for each letterform.

Beyond establishing a system of proportionality, these rhombic marks also possess symbolic meanings. As al-Tawhidi explains, when aligned they act like chains of ordered pearls that parallel the order of the universe and an organized mind filled with knowledge and wisdom. The rhombus is also likened to a blood clot, which represents the origin of life.

*Bibliography:* Manuscript’s online catalogue entry (http://catalog.hathitrust.org/Record/006822263); Schick 2000; Rosenthal 1948; and Schimmel 1987.

This *tiraz* (inscribed) fragment stands out not only for its painted gold inscription but also for its complex patterning of color, which is achieved by resist-dyeing the warp threads prior to weaving the cloth. This technique, known as *ikat*, is characteristic of Central Asian textiles. This particular color palette and *ikat* pattern, however, were commonly used in *tiraz* textiles produced in medieval Yemen, after which imitations started to be produced in Egypt.

The *ikat* technique has the potential to yield highly polychromatic textiles. Each color requires a new dye bath and many hours of labor to untie and retie the warp threads between dye baths. As a consequence, the technique was rather costly, yielding expensive textile products targeted to elite wearers. Whether *ikat* dyed or plain, *tiraz* textiles performed several social functions beyond mere clothing. They were used to declare allegiance in the form of robes of honor and conferred blessings when used as burial shrouds.

In this example, a barely legible Arabic benedictory inscription is painted in gold and highlighted in black pigment. Above the line of foliated script appears the short laudatory expression “Dominion belongs to Him [God]” (*al-mulk lahu*).

Tile mosaic *muqarnas* fragment, 13th century, Konya, Turkey, glazed ceramic in plaster. Kelsey Museum of Archaeology, 80070.

This architectural fragment comprises a single unit of a complex structural formation known as *muqarnas*. When many of these niche-like units are juxtaposed at different angles and placed on several tiers, they produce a honeycomb effect that plays with color and light patterns. Yet *muqarnas* are just as functional as they are beautiful. The network of *muqarnas* niches would be used in the space between the square frame of a building and the circular base of a dome, thus embellishing an otherwise awkward transition zone. In addition to domes, *muqarnas* are used in other concave zones such as archways (*iwan*) and prayer niches (*mihrab*). This particular *muqarnas* fragment was probably made during Seljuk rule in Konya, located in Anatolia (modern-day Turkey). It is decorated with alternating turquoise and deep purple glazed tiles in a manner that resembles a woven pattern. This decorated architectural fragment is just one example among many demonstrating how architects, designers, and artisans “clothed” and decorated buildings in the Islamic world.

Pouring spout and ornate thumb rest, 10th–12th centuries, Egypt, blown and cut glass. Kelsey Museum of Archaeology, 1970.3.60.

Even in their fragmentary condition, this pouring spout and thumb rest are beautiful in their translucent purity. The intricately carved piece would have been situated at the top of a handle on a glass pitcher, where it would have functioned to steady the hand while pouring. While any small piece of glass would have sufficed for this purpose, this thumb rest is highly ornamental, making it as beautiful as it is practical. The colorless glass and the chiseled pattern resemble rock-cut crystal, which was also employed to make such vessels. It is possible that glass carved in this manner was intended to mimic crystal, a more delicate and difficult to carve luxury material that in Islamic thought was analogized to petrified water.


When pressed into soft dough, these small clay stamps create a decorative star design baked into bread. The production of patterned bread was common in Coptic Egypt and thus well established by the Islamic period. In medieval Cairo, individuals had their daily bread baked in communal ovens. Therefore, one of the functions of such stamps was to help distinguish different loaves as they came out of the oven to be retrieved by customers. It also is possible that bread stamps were used as a means of marking or recording bread quotas in the marketplace. While these radial patterns were quite popular, other motifs were applied as well. Among them are animal designs and inscriptions, including the well-wishing exhortation: “Eat well!”

*Bibliography:* Kühnel 1939; Grabar 1992, 98; and Galavaris 1990, 8–9.

These small circular objects carved from bone are probably whorls—that is, the weighted part of a drop-spindle used for sustaining centripetal force while spinning yarn or thread on a spindle. Their small scale indicates that these whorls were likely used to spin a fine yarn. The incised patterns are purely decorative. However, they cleverly play with the functionality of the object, as the pattern would have been seen in both static form and in circular motion.


While only the base of the teeth survive, this incised bone tool clearly functioned as some sort of combing device. It may have been used as a comb to brush hair and remove dirt and lice. It also may have been an implement in artistic processes, such as detangling warp threads before weaving them into cloth.

While this type of everyday object or tool was manufactured for utilitarian purposes, it nevertheless was embellished. In this instance, the center of the comb is ornamented with a symmetrical composition of curvilinear incised patterns situated within a double-lined frame.


This ceramic vessel is historically significant for its intact condition even though the pattern of its water filter is less ornamentally complex than other extant examples. In its integral shape, this vessel demonstrates the construction and utility of vessels outfitted with water filters. On the inside of the neck a circle of pierced holes filtered impurities out of the water as it was poured out of the vessel. In addition, the filter also protected the interior liquid contents from insects, dust, and other debris.

Bibliography: Olmer 1932; Scanlon 1970a; 1964, 65–68, pl. XV, figs. 6–7; 1986, 4, fig. 6; 1968; and Watson 2004, 133, cat. Ae. 1.

This ceramic water filter includes a delicately carved lion set against a background of pierced rhomboids. The filter serves its purpose just as well as any other, but the design sets it apart as more than just a utilitarian object. The ornamented filter thus blurs the lines between beauty and utility. Besides this lively lion, zoomorphic water filters excavated at Fustat (the capital of medieval Egypt) depict a variety of animals, including birds, rabbits, elephants, gazelles, and peacocks.


The pierced holes that comprise this ceramic water filter create a star-shaped geometric pattern. The pointed tips and incised lines result in a lively radial design. Like the decoration found on spindle whorls, this filter’s decorative composition plays with the round form of the ceramic vessel’s neck. Delicate and functional, this kaleidoscopic lattice filtered a variety of undesirable materials from the liquid contained in a ceramic vessel.

*Bibliography: Olmer 1932; Scanlon 1986; 1970a; 1968; 1964; and Watson 2004, 133, cat. Ae. 1.*


Unlike other ceramic water filters decorated with concentric geometric patterns, this example does not include a radial design. Instead, its simple triangular shapes are repeated to form a grille that resembles woven or braided textiles. These kinds of patterns that mimic textiles can be seen in many art forms, from water filters to architecture. Ornamented with rhythmically alternating rows of triangles, this utilitarian water filter (and others like it) served to add a touch of beauty to everyday life.


This modern embroidered textile, or suzani, is in immaculate condition. Its every inch is covered in expertly stitched embroidery. The dark indigo-black of the base cloth can hardly be seen beneath the dense embroidered patterns executed in a warm color palette of reds, oranges, and yellows, with occasional touches of pale green. The design is almost symmetrical across the width, and rows of arch-like motifs demarcate the textile’s central point. The patterns of geometric motifs are worked largely on the diagonal. Such a large textile could have fulfilled a variety of functions as a wrapped garment or wall furnishing.


Full-page illustration on page 10 above.

Large shawls like this one were worn on the body, strategically draped to show the fine artistry of the design and craftsmanship of the construction. This square shawl in particular was made from many small pieces of woven cloth masterfully stitched together in the so-called patchwork technique. It exhibits at least a dozen colors of dyed wool woven from the down of the Cashmere goat, a fine fiber still coveted today. While popular in Kashmir during the late 19th century, such luxurious shawls also became highly fashionable garments in Europe, where they sparked a new shawl-weaving industry that was aided significantly by the advent of the automatized Jacquard loom.


This delicate linen textile fragment is covered in rows of finely woven patterns, including a few bands of barely discernable script. Such decoration was quite time-consuming and reserved for the finest cloth. Previously stark inscribed (tiraz) textiles became more ornamental during the Fatimid and Mamluk periods (10th–15th centuries) in Egypt, as textile designers began to add rows of colorful geometric, vegetal, and animal patterns. An inscription is present in this fragment but remains almost invisible among the detailed designs. In this instance, legibility is set aside in order to emphasize the overall ornamental quality of the fabric and its rhythmic effects. While it is impossible to determine the exact use of a piece of fabric in such fragmentary condition, the weight of the cloth and the delicacy of the designs suggest that it may have been worn on the body.

Bibliography: Day 1937; Golombek 1988; Marzouk 1943; Mcklewright 1991, 39; Sokoly 1997b; Blair 1989, 329; and Ettinghausen 1974, 304.

This small patterned cap is called a *turtur* in Arabic. It most likely served as the core around which a turban cloth would have been wrapped. The undyed threads create a design in high contrast against the indigo ground. Curvilinear shapes interlock around the exterior of the cap, which is then topped with an embroidered star.

As in many world cultures, attire and headgear carry great cultural significance in the Islamic world. Such rimless, conical headpieces were worn by both men and women in medieval Egypt. They also were used by Bedouins and mystics, some of whom wore distinctive headgear adorned with star patterns. At others times, such caps were covered in strange objects (such as foxtails and shells) and worn by criminals as a form of ridicule as they were paraded through the streets. Thus, these caps could serve various functions, from personal adornment to visual punishment.


Colorful glass jewelry was produced for hundreds of years before the advent of Islam, especially during the Roman period. Therefore, dating such objects is difficult since the technology and designs changed very little over time. These bangles were made from threads of colored glass that were softened, twisted, and combined in various ways in order to create different patterns. They come in many sizes, suggesting that both adults and children wore them. Alternatively, they may have been worn on different parts of the body, such as the wrist or upper arm.


The wooden combs found in Fustat (medieval Cairo) were used in Egyptian everyday life. They detangled knots, and cleaned and styled hair. The different widths of denticulation allowed for the comb’s dual function. The broader teeth unkinked the hair, while the finer teeth rid it of lice as well as dust and dirt. Its uses were thus hygienic and aesthetic. In addition, functional objects such as these were quite often ornamented with patterns, including series of concentric circles like those delicately carved into the center panel of this wooden comb. Other combs also include inscriptions that praise solely their aesthetic results, proudly declaring: “I am a comb for the hair. I am only used for beauty.”

Bibliography: Georges 1911; Scanlon 1997; and Raziq 1972, 407.


This small bottle carved from relatively opaque glass is a popular shape for glass cosmetic containers used in medieval Egypt. Commonly referred to as “molar flasks,” these vessels’ shape is thought to resemble a tooth. The four “feet” function as a tiny pedestal for the miniature flask, which would have been filled with various cosmetics, including kohl (a black unguent used as an eyeliner) and essential oils to perfume the body.


Rather than a molar tooth, this glass cosmetic container resembles a miniature amphora. The delicately carved aqua-colored glass vial mimics the cut-relief work of rock crystal objects made in Egypt during the 10th and 11th centuries. These types of small glass vessels were used to store unguents, oils, and cosmetics. For example, kohl, a black powder, would be stored in small flasks and applied to the eyes using a wetted applicator—much like modern-day eyeliner. Perfumes and essential oils have played important aromatic and olfactory roles in the Islamic world throughout the centuries. For these reasons, a variety of vessels have been produced, from rosewater sprinklers to perfume bottles.


This so-called molar flask is made of clear glass and has a long neck. The unguent or oil housed in this diminutive vial would have been applied to the body or face using a wooden or metal applicator, such as a cosmetic spoon (see cat. no. 23).

Large molar flask, possibly 9th–10th centuries, Egypt, cut glass. Kelsey Museum of Archaeology, 1968.2.43.

This deep blue flask is relatively large for a glass cosmetic container. In addition to essential oils and perfumes, these types of vessels stored kohl, a natural black powder used to darken the area around the eye, like mascara or eyeliner. Such items were functional and also served to ornament and beautify the human body. It is thus fitting that the vessels themselves were decorated, and typically with carved relief designs. Although such flasks are small and delicate, they have been found in substantial quantities in Fustat (medieval Cairo).


This long and thin metal implement would have fit perfectly into the small glass containers used to store cosmetics such as perfumes, oils, and kohl. If used as a kohl applicator, the tip of the tool would be moistened and dipped into the black powder and then drawn around the eye, like modern-day eyeliner. Kohl served to protect, beautify, and highlight the eyes of men, women, and children.

Bibliography: Georges 1911; Bacharach 2002; and Scanlon 1968; 1964.

In addition to various gaming pieces, carved bone dice such as this one were found in the archaeological excavations at Fustat (medieval Cairo). The numerals are marked by a series of concentric circles, and they include numbers one through five, with the final side of the cube bearing twelve circles. Dice could be used in virtually any game requiring a chance drawing of numbers, chief among them backgammon.


The function of this carved bone piece decorated with a pattern of concentric circles remains unclear. It may be an amulet that was worn as a pendant or a noisemaker, since a small rod could be attached to the object and scraped along the pattern to produce sound. Alternatively, it may have been a piece belonging to an unknown game.


This small bone piece was carved on a lathe. It is impossible to determine with certainty its function, however. Perhaps it served as a decorative element for a wooden object, such as a cabinet or window grille. Alternatively, it may have been part of a chess set, a highly popular board game in the Islamic world.

*Bibliography:* Rodziewicz 2012, 7–9, 20–22, pl. 28 and 93–95; Bacharach and Rodenbeck 2002, 84; Jenkins 1986, 52; and Ekhtiar et al. 2011, 112.


Because glass-making techniques changed very little over the centuries, glass objects such as this small piece are hard to date. Their pattern is created by a technique called millefiori or “thousand flowers,” which dates back to the Roman period. Long rods of colored glass are gathered and fused together. Then the cylinder is cut to reveal a pattern that resembles many tiny flowers. While it is difficult to determine with certainty the various functions of these small objects, they may have been used in a board game like backgammon.


While it might be easy to label this minute figure carved out of bone a “doll,” the function of the statuette remains unclear. It may have been a toy, but the holes pierced through the chest suggest that it may have been tied to another object and thus fulfilled amuletic functions. What is clear, however, is that the body of the figure was carved quickly and easily from a piece of bone. The deep cuts that form the arms and legs suggest a human body and are not modeled naturalistically. More detailed attention is given to the figurine’s head, with its delicately carved ears, nose, mouth, and especially large eyes.


While only the head remains of this small statuette, its features are carved delicately. A thin brow surmounts its wide-open eyes, which are especially large in relation to the minute nose and mouth. Great attention has been paid to other details, including the pierced ears. These holes may have enabled the affixing of a miniature wig or earrings. The purpose of these small bone figurines remains unclear. They may have functioned as amulets as well as children’s toys.


The ring at the top of this pendant suggests it is to be worn, perhaps as a necklace. The pentagram may be related to the six-pointed star known as the seal of Solomon. The five- or six-pointed star recalls the seal or sign that allowed Solomon to maintain his power over the jinns (evil spirits). Often the seal of Solomon can be found in talismanic shirts, prayer books, and amulets. Wearing such protective designs and objects comprised a form of licit magic in the Islamic world, as it was used to protect the wearer from both earthly and spiritual harm.


This tear-shaped lead amulet is clearly a pendant meant to be worn. It includes inscriptions on its front and back, which are intended to physically and spiritually protect the wearer. At the top of the amulet’s front side appears the phrase “Ya Hafiz,” which invokes God as the “Protector” (Hafiz). Below, a circle of intersecting words (forming a five-pointed star) provides the names of the Seven Sleepers of Ephesus, ancient legendary figures who are said to have slept for hundreds of years. The Sleepers are mentioned in the Qur’an (18:9–26), and in later centuries it was believed that inscribing and reciting their names could protect an individual from harm. On the amulet’s back side, a five-by-five grid comprises a magic square, or murabba’. Within this checkerboard design are inscribed pairs of letters that are slight permutations of the so-called mysterious letters initiating some chapters in the Qur’an (here, chapters 19 and 42). Encircling the magic square are the names of the four protective archangels: Gabriel, Michael, Israfil, and ‘Azra’il.

32. Checkerboard of the “Beautiful Names” of God, Muhammad ibn Sulayman al-Jazuli (d. 1465), *Dala’il al-Khayrat* (Proofs of Good Deeds), 1799, Ottoman Turkey, ink on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 249.

This collection of prayers includes a grid containing the ninety-nine “Beautiful Names” of God (*al-asma’ al-husna*). The text area is bordered by a thick gold frame, situated within a lavender-dyed and gold-flecked page. The names of God are written in the vocative and transcribed in alternating colors of red and black ink within separate cells. The “Beautiful Names” of God comprise his many attributes and epithets, including *al-Rahman* (The Compassionate) and *al-Rahim* (The Merciful). As part of prayer practices, devotees recite these names, often with the aid of a string of thirty-three prayer beads.

*Bibliography:* Witkam 2007; Pearson 1907; and Burrell and Daher 1995.

Like its counterpart (cat. no. 34), this magic bowl displays the signs of the zodiac on the outer surface. Inside, however, appears the image of an archer, situated above two stylized and interlaced dragons snarling at each other. Vegetal and geometric patterns, including inscribed magic squares, fill the rest of the surface. An object used in folk medicine, this type of bowl was used to heal spiritual ailments such as affliction by the evil eye and physical illnesses like the pains of childbirth or gastro-intestinal problems. When it was filled, the bowl’s incised motifs were believed to imbue the liquid with power and blessing (baraka), which the afflicted would then imbibe as a curative potion.

34. Magic bowl with attached prayer tablets, probably 19th or 20th century, Iran, brass. Historic Scientific Instrument Collection, Special Collections, Hatcher Graduate Library, GL7.

Every surface of this metal bowl is incised with inscriptions framed by variously shaped cartouches. It also depicts the signs of the zodiac. In the Islamic world, this type of magic bowl was used for healing purposes and/or divination. When filled, the vessel was believed to transfer the power of the word into the liquid, which then was consumed by a patient or customer to cure various ailments or discern the future.

The central protrusion inside the dish is called an omphalos, or göbek in Turkish, meaning “navel.” A hole in the rim allows for a string of tablets to be affixed to the bowl. These tablets—known in Turkish as kırk anahtar (forty keys)—include bismillah prayer formulas. It is believed that these tablets function like prayer beads or rosaries. Although they are attached by a string to this particular magic bowl, other surviving exemplars show the tablets attached to the rim by a metal wire or else affixed around the central omphalos. Whether located on the outside of the bowl’s rim or else encircling its central göbek, these tablets would have rattled while the bowl was in use.


In addition to geometric patterns and zoomorphic imagery, ceramic water filters were also decorated with Arabic and pseudo-Arabic inscriptions. This filter features a cartouche filled with Arabic letters, set against a diamond within a circle patterned with waves. As with any other filter, the pierced holes would have served to prevent contaminants from entering and exiting the water contained within. Moreover, given the widespread belief in the talismanic power of the written word in the Islamic world, it is possible that the text imbued the liquid with symbolic protection as it passed through the filter.

Although dented and worn, this large brass basin originally would have shone brightly with silver and gold inlay. The different metals would have played with the light as it hit the concave and convex surfaces. The outlines of inscription bands and pictorial motifs remain. Around the basin’s outer surface, a large calligraphic inscription praises the last Ayyubid prince Najm al-Din Ayyub. The interior of the basin includes a design known as a fishpond motif. The incised circle is filled with the outlines of dozens of small fish that appear to be swimming about. When filled with water, the reflective metal and the basin’s contents would have animated the fish, making it appear as though marine life had infiltrated the libations.

**Bibliography:** Grabar 1961; Ward 1993, 84–85; and Baer 1998, 104–107; 1968.

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This ceramic vessel’s pale green glaze is typical of Chinese celadon wares. While lotus petals decorate the dish’s exterior, a molded design forms two small scaly fish on its interior. The double fish motif is a traditional Chinese symbol of marital happiness as the word for fish (yu) is a homophone for wealth and abundance. The fish would have appeared to come to life when the bowl was filled with undulating liquid. These and other Chinese ceramics were imported into the Islamic world, where they inspired Muslim artisans to imitate and experiment with Chinese designs and colors. Most frequently, the Islamic versions of these imported wares emphasized the aesthetic look of the imported product over fidelity to its material makeup and manufacturing technique.


The two small fish at the bottom of this glazed ceramic bowl can be considered a variant of the so-called fishpond motif. The presence of aquatic motifs on the surface of bowls and cups made of ceramic, metal, and glass added a playful commentary on the function of these types of vessels. With its fish molded in relief and greenish glaze, this fragment clearly mimics Chinese celadon wares. Chinese ceramics were imported into the Islamic world as early as the 9th century. From then on, Muslim ceramicists, including those active in medieval Cairo, responded to these luxury imports by creating local imitations of Chinese prototypes.


The greenish color and fish pattern on this large ceramic vessel may have been initially inspired by imported Chinese celadon wares. However, the final result clearly shows significant innovation on the part of the Muslim craftsman. The vessel’s exterior wall is decorated with a band of large-scale pseudo-Arabic inscriptions. In its interior, a row of silhouetted fish swim around the inner wall of the bowl. At the bottom, this circular motion is enhanced by a spiral design. When it was filled, the liquid inside would further animate the motifs, setting the whole scene into symbolic motion. Even the vessel’s lip is decorated with undulating vegetation, as if plant life were growing on the surface of this ceramic “fishpond.”


Aquatic motifs can be found on vessels made in various media. Here, an enamel-painted fish appears to swim above a band of inscriptions on a blue background. It is located on the upper rim of what likely would have been a beaker or drinking cup. The metallic sheen would have reflected light, further enhancing the motif’s resemblance to a living sea creature. The mottled glass also resembles a natural pool of opalescent water.


This tiny clear glass vessel is formed into the shape of a fish. The fins are made from heated threads of glass that were strategically affixed and pinched. The vessel’s liquid—perhaps a perfume or essential oil—would have been poured out of the fish’s mouth. Due to the translucent glass, the liquid also would have been visible inside the vial, playfully moving about in the creature’s belly.


This spear-shaped flask is decorated with a wave pattern, which is created by marvering white threads of glass around a glass body of contrasting color. The threads are combed or pulled while still in a semi-liquid form. This color combination of blue-purple glass with white threads is typical of the technique of glass marvering, which was quite popular in the medieval period. This small flask would have been used to store cosmetic materials such as kohl powder or essential oils.


The fragmentary condition of this blown glass vessel does not detract from its fine decoration. The deep blue glass is decorated with threads of white glass marvered across and melded to the vessel’s surface. The color and pattern evoke sea waves and foam. The vessel’s aquatic look was perhaps intended to reflect its function—namely, to hold liquids.


A spotted rabbit hides among large flowering vegetation on this polygonal glazed tile. The animal turns around, ears perked, as if it has just heard a noise. As an architectural revetment, this tile was fitted into others and used to decorate the exterior surface of a building. In order to cover a building, tiles such as this one were mass-produced using a technique wherein wet clay is pressed into a plaster mold before being fired and glazed. Perhaps the tile that would have abutted this one bore a predatory animal such as a lion or dragon, poised to strike. While it is impossible to know the overall pictorial or narrative context of this tile, this lively scene painted in luster would have reflected light and brought pleasure to the building’s viewer.

45. Water filter with rabbit design, 10th–12th centuries, Fustat (medieval Cairo), Egypt, hand-tooled and pierced clay. Kelsey Museum of Archaeology, 1969.2.120.

This lively rabbit pierced into the neck of a ceramic water filter recalls the minute rabbits woven into a tapestry also from the Fatimid period (see cat. no. 46). Indeed, animals were popular decorative motifs on everyday objects in medieval Egypt. While serving the primary purpose of filtering water and preventing unwanted impurities from entering the vessel, this filter design aesthetically enhances an otherwise utilitarian object. Playing with the function of this object, the prancing rabbit was perhaps meant to appear as if splashing in a water puddle.

Bibliography: Olmer 1932; Scanlon 1986, 38–40, pls. 21c–d; 1970a, esp. fig.6e–f; 1968; 1964, esp. fig.12c; and Grube 1976, 123–125, cat. nos. 78–81.

Although in fragmentary condition, this textile is delicately designed. Several registers of finely woven dyed cotton are superposed to form various patterns. The central band consists of tiny rabbits running within a row of red roundels. The miniscule creatures are playful, with their ears perked and feet poised to jump. These types of patterned textiles emerged from the tradition of decorating plain fabric with densely woven or embroidered decorative polychrome bands. In this manner, the more durable and valuable bands of ornament could be reused when the plain linen or cotton ground cloth wore out. This type of textile ornamented with animal figures flourished during the Fatimid period in Egypt.

The iridescence of the luster-painted designs on this ceramic bowl was achieved through a double-firing technique. The second firing is necessary to create the lustrous, light-reflective effect of the bird and inscription band. Luster-painted ceramics were popular in Egypt and the Levant during the medieval period. Many surviving vessels and sherds display a variety of designs, including animals and zodiac signs as well as Arabic inscriptions and pseudo-inscriptions. The metallic sheen produced from luster painting on ceramic mimics metalwork inlaid with gold, thereby achieving a similar effect in a more affordable medium.


The exterior surface of this thick ceramic vessel fragment is adorned with large protuberances that resemble pearls and cut gemstones. The object appears to mimic jewelry and thus wealth and luxury, but in a more affordable medium. The function of these “jeweled” sphero-conical vessels has, however, remained a subject of debate. It has been suggested that they were used to store various liquids or unguents such as perfumes, mercury, or alchemical concoctions. Evidence also suggests that they functioned as beer gourds or water pipes. Some scholars have even suggested that they could have been used as medieval grenades, although this hypothesis has been largely refuted. While the scholarly community has yet to come to a consensus, the most likely explanation is that they were used for a variety of purposes.


This clear glass fragment is adorned with patterns carved in relief. The ornamentation is highly delicate given the thinness of the vessel's walls and the fragility of its medium. The chiseling technique used to relief-cut this glass resembles the way rock crystal is worked. Rock crystal, or transparent quartz, was considered by medieval Muslim thinkers to be one of the clearest substances on earth, just after air and water. In fact, rock crystal was often analogized to light and petrified water, both of which are believed to carry life-endowing properties. Thus, this remarkably clear glass, which is carved in a manner similar to rock crystal, was perhaps used as a beaker or, more metaphorically, a fountain of life.

Textile fragment with interlace design, 11th–12th centuries, Egypt, linen and silk. Kelsey Museum of Archaeology, 91614.

During the Fatimid period in Egypt, the ornamental bands found in textiles became much more elaborate than in centuries past. As can be seen in this example, a polychrome tapestry fragment is stitched to a plain linen ground. The pattern consists of interlacing ribbons in a silky and metallic yellow color that resembles gold. Interestingly, the practice of interlacing is a textile technique, but in this instance the image of interlace is woven as a decorative pattern. This type of knotted motif also appears in other media, including ceramics.


This sherd displays both the decoration and color scheme characteristic of pottery made in Egypt during the 14th century. The vessel’s body is made of red clay, while the ornamentation is incised in a white slip under an amber glaze. The knotted patterns resemble those found in contemporary metalwork and textiles (see cat. no. 50). Besides interlacing designs, ceramic vessels similar to this one also include inscriptions and blazons, the latter a hallmark of Mamluk art.

52. Fragment of tile mosaic, 16th century, Iran, glazed ceramic in stoneware. Kelsey Museum of Archaeology, T2007.34.

With its deep blue, turquoise, white, and ochre glazes, this fragment epitomizes the color palette of tile mosaic produced during the Safavid period in Iran. The pieces of glazed ceramic are carefully cut and formed into a composition of blooming vines. Lush garden imagery is common in the Islamic world and appears in almost all media, including architecture, ceramics, book arts, and textiles. During the winter months when gardens were not in bloom, verdant imagery on architectural tiles such as this one provided an enduring vision of blossoming flowers and trees.

Bibliography: Porter 1995, 64–79; Watson 1985, 23, fig. 11; and Pope 1964.

Shaped like a banner or flag, this small appliqué fragment is a lambrequin. It was used to decorate pillows or ceremonial tents during the Mamluk period (1250–1517). The undyed white cotton against the deep indigo blue ground creates an ornate pattern in high color contrast. Tents were used as portable dwellings as well as in imperial rituals and ceremonies. Cairo was well known for its tent-making workshops, which continued to function after the Ottoman conquest in 1517. In fact, there are expert appliqué tent craftsmen still working in Cairo today.


This rather unadorned appliqué roundel is divided into three registers, with a silhouetted image of a goblet in the center. The roundel would have been stitched to a garment and worn as a blazon or symbol of office. During the Mamluk period in Egypt, this blazon represented the office of the saqi, or royal cupbearer. As one of the sultan’s close cohorts, the cupbearer served the ruler wine and other libations. This and other blazons were represented on objects (such as glass lamps and ceramic vessels) and architecture, in which they served to identify an individual by the office he held.

Bibliography: Ellis 2001, 80–81, fig. 54. Lamm 1937, 67; Mayer 1933, 10–11; Suriano 1998; Walker 2000; and Whelan 1988, 220.


The image of a goblet on this ceramic vessel denotes the position of royal cupbearer. Each of the offices of the Mamluk court was represented by such symbols. This sherd in particular possesses two of these official symbols: the cup and the napkin, the latter represented by a pale ochre diamond shape. The napkin is the symbol of the master of the imperial wardrobe. Here, the combination of the two symbols shows that the individual who owned this vessel held both offices. These royal blazons were painted, chiseled, and stitched onto many objects, from ceramic vessels and buildings to glass lamps and carpets.


These two glass vessel fragments share a rich aubergine color, and both are ornamented through an engraving or scratching technique. While this decorative process antedates the advent of Islam in Egypt, the deep blue-purple color was particularly popular among Muslim craftsmen. The designs were scratched into the surface of the dark colored glass with a pointed tool, resulting in light-colored geometric striations. This type of freehand “sketching” technique in glass allows for a great flexibility of designs, including crystalline patterns, floral motifs, and cloud bands.


This clear glass vial was formed and decorated by a wheel-cutting technique that was popular during late antiquity and later revived during the medieval period in Islamic lands. The small vessel was likely used to house cosmetics such as kohl or unguents such as perfumes and essential oils. The shape of the minute vessel, with its four feet and chiseled sides, has earned it the appellation “molar flask.”

Bibliography: Carboni 2001, 98–100, cat. no. 27a–c and 124–127, cat. no. 2.28a–q; Georges 1911; and Jenkins 1986, 25, fig. 23.
Hilye (verbal icon of the Prophet Muhammad), calligraphed by Hafiz Osman, dated AH 1099/1687–1688 CE, Ottoman lands, ink and pigment on paper mounted on three folding panels. Special Collections, Hatcher Graduate Library, Isl. Ms. 238.

Executed by the famous Ottoman calligrapher Hafiz Osman (1642–1698), this calligraphic triptych verbally depicts the Prophet Muhammad. Organized into a diagram, the text describes the Prophet’s moral and physical attributes. The center panel consists of one large circle (göbek, or “navel” in Turkish) flanked by four small circles that frame the names of the first four caliphs, who succeeded Muhammad as leaders of the early Muslim community. At the head of the triptych appears a delicately painted image of the Ka’ba, the holiest site in Islam that every Muslim, if capable, must visit at least once in their lives. This hilye, or verbal icon of Muhammad, thus provides a contemplative device to envision the Prophet’s presence and the sacred city of Mecca. Last but not least, it is executed on three folding panels, thereby allowing its owner to transport it safely and also affix it to a wall much like a religious icon.


Although derived from the Persian word for embroidery, the word *tiraz* indicates an inscription band. While this *tiraz* fragment is in fact a textile, the silk text is woven rather than embroidered onto the undyed linen ground cloth. The bold design of deep blue on pale linen is typical of *tiraz* textiles produced during the 10th century in Egypt. This example in particular includes an inscription dedicated to al-Muti’ lillah, placing its manufacture around 946–966. In later centuries, inscriptions on textiles became increasingly less legible and at times quite stylized. While *tiraz* textiles were not the only type of patterned fabrics produced in medieval Egypt, their survival rate is largely due to their use in funerary contexts. Archaeological excavations of the late 19th and early 20th centuries uncovered many *tiraz* textiles that were used as burial shrouds. It was believed that certain words and phrases could protect and transmit blessings (*baraka*) to the deceased individual.


Woodcarving flourished in Egypt during the 11th and 12th centuries. At this time, a number of mosques, churches, and palaces were decorated with architectural friezes made of wood. This example probably served as a beam or panel surmounting a door within a private residence. Its use in a secular building is suggested by its non-Qur’anic contents. The panel’s inscription offers blessings, grace, and happiness. The epigraphic band thus embellished a private home while also offering well wishes to the property owner, dwellers, and visitors.

Bibliography: Glidden 1939, 94, fig. 4; Bloom 2007, 67, fig. 38; Contadini 1998, 111–112, pl. 52a–e; Ekhtiar et al., 2011, 110, cat. no. 68; Mayer 1958, 13–14; Pauty 1931, pl. G, cat. no. 9042 and pl. LXVI, cat. nos. 4729–4730; Décobert and Gril 1981; and Wiet 1958.

Several bands of embroidered inscriptions form a decorative corner pattern on this Mamluk textile fragment. The dark blue thread stitched into a tabby or plain weave ground that is undyed is typical of Mamluk embroideries. While embroidery was an independent art form at this time, some embroideries are stitched so that they resemble more complicated and thus more expensive woven patterned fabrics. In addition to this media mimicry, many Mamluk designs were not bound by a particular medium. For example, similarly stylized floral elements are found across the media, including wood- and metalwork.


The line of text written in deep ochre on a red ground repeats the Arabic word *al-mulk*, meaning power or kingdom. It is executed in tapestry, one of the more common techniques for producing *tiraz* textiles in medieval Egypt. The decorative program of this textile fragment is further enhanced with a dark blue and white repeating pattern of stylized tulips or lotus blossoms. The thickness of the tapestry weave makes the fabric more durable. For this reason, many *tiraz* textiles consist of tapestry-woven inscriptions stitched onto a lighter, plain cloth. Once the ground cloth wore out, the tapestry inscription could be cut out and sewn onto a new cloth, thus extending its life.

The first Muslim rulers to mint their own coins adopted and adapted the international language of coinage symbolism. However, by the late 7th century new designs began to set Islamic coins apart from other currencies in circulation. Islamic coins became largely epigraphic, as exemplified by this silver coin, or dirham, which was minted in Spain (al-Andalus) during the rule of the Umayyad caliph al-Hisham (723–743). This dirham includes the Muslim monotheistic creed along with the 112th chapter from the Qur’an (Surat al-Ikhlas), which proclaims God’s all-encompassing unity. For the early Muslim caliphs who ruled from the Arabian Peninsula all the way to Spain, one of the most important declarations of their international standing and authority was the minting of coins. Last but not least, this particular dirham is also pierced with a hole, suggesting that in later centuries it may have functioned as a pendant or amulet.

Once the basic layout for Islamic epigraphic coins was established, the design changed very little between the 8th and 13th centuries. However, the coins produced under the Fatimid dynasty of Egypt (909–1171) showcase a new layout. The text is often organized into concentric rings rather than horizontal lines, as can be seen in this gold coin (dinar) minted during the rule of al-Hakim (996–1021). Perhaps this shift in coinage design was meant to visually differentiate this Shi‘i dynasty from its Sunni neighbors while concurrently serving as a means by which Fatimid rulers could assert their power through economic exchange and trade.


This silver coin was minted in 1314–1315 for Sultan Öljeitü (ruled 1304–1316), a prominent monarch of the Ilkhanid dynasty, which ruled over greater Iran between 1256 and 1335. Öljeitü is known for having converted from Sunni to Shi’i Islam. This coin reflects his adherence to Shi’ism as the phrase “Ali is the friend of God” (Ali wali Allah) is added to the standard profession of faith: “There is no God but God and Muhammad is his Messenger.” In addition to this sectarian textual proclamation, the overall design of the coin differs from its predecessors. Rather than set in circular, square, or quatrefoil cartouches, the inscriptions are placed within hexafoil and heptafoil medallions.


Facial features are included in this sun motif, which is stamped onto the obverse of a small copper coin minted in Tabriz in 1824. While epigraphic coins were most common throughout the Islamic world, extant examples display a range of motifs, including animals, human figures, heraldic emblems, and signs of the zodiac. Solar, lunar, and stellar imagery appear on Iranian coins from the 17th century onward. By the Qajar period (1785–1925), however, the image of the sun acquired heraldic and sectarian meanings under the Shi‘i rulers of Iran, who envisioned themselves as cosmic rulers endowed with the light of God. Additionally, coins made of copper tended to be more experimental in their designs, as evidenced by this anthropomorphized sun.


Donning a fez, King Faruk I (ruled 1936–1952) is depicted in sharp profile on this Egyptian bronze coin. Figural representation in coins was not unknown in the Islamic world prior to the 20th century. However, this coin’s use of the bust profile and its inclusion of a Gregorian date (1938) on its reverse clearly follow contemporary European numismatic trends. The ways in which a Muslim ruler could declare his authority via coinage varied over the centuries. The earliest Islamic coins tend to proclaim rulership epigraphically, but even texts can be arranged into visual forms. Such is the case for the Ottoman imperial emblem, or tuğra. Additionally, some modern Persian dynasts experimented with solar imagery and heraldic devices. This coin, however, reproduces solely the ruler’s visage in a manner similar to coins that are in circulation today.

_Bibliography_: Wasserstein 1993; Heidemann 2010; Bates 1982, 46–61; Bates and Darley-Doran 1985, 393–395; and Nicol, al-Nabarawy, and Bacharach 1982, 208 and fig. 6238 (for a 1927 commemorative medal of King Farouk I).
68. Ottoman coin with the *tuğra* of Mahmud II, AH 1223/1808 CE, Constantinople, Ottoman lands, bronze. Kelsey Museum of Archaeology, 75784.

At the center of this large bronze coin appears the imperial emblem, or *tuğra*, of the Ottoman sultan Mahmud II (ruled 1808–1839). This royal calligraphic monogram is comprised of intertwining letters that form the various parts of the sultan’s names and titles. Each ruler of the Ottoman dynasty had his own distinctive *tuğra*, whose form became relatively standard-ized from the 16th century onward. Here Mahmud II’s *tuğra* is encircled by a patterned crescent, framed on its perimeter by a blooming wreath. The coin’s reverse specifies that it was struck in the city of Constantinople (modern-day Istanbul) in 1223 of the *hijri* calendar (1808 CE).


Inscribed glass disks like this transparent turquoise “coin” were used to weigh metal currency for payments in market transactions. This particular glass weight includes the name of Hayyan b. Shurayh, a finance director active in Egypt during the years 717–720. This early glass weight was thus made less than one hundred years after the emergence of Islam in the Arabian Peninsula. Just as significantly, coins such as this one attest to systematic efforts to regulate economic affairs in North Africa as early as the Umayyad period (661–750).

Bibliography: Miles 1951a; Morton 1985; Bates 1993; 1981; Balog 1981; and Sijpesteijn 2013, 90, 96, 193, and 300.

70. Coin weight, 8th–9th centuries, Egypt, brown glass. Kelsey Museum of Archaeology, 91481.

As glass comes in various colors and levels of opacity, glass weights are found in many different colors and even slightly mottled, like this example. Because coins were not always minted according to standard weight and purity levels, glass weights were used to measure the appropriate sum of money required for a purchase, regardless of the number of actual metal coins. Different sets of weights were used for gold, silver, and copper coins. This glass weight is quite small and thus could have been used to weigh a small amount of currency. Indeed, its brownish color is reminiscent of smaller and cheaper copper coins. When used in conjunction with differently sized glass weights, it would have measured weight more accurately.

Bibliography: Miles 1951a; Morton 1985; Bates 1993; 1981; and Balog 1981.
Glass weights were made by impressing an inscribed stamp into a measured globule of glass while it was still in a semi-liquid state. Emulating the layout of some metal coins, this weight’s text is arranged in concentric rings. Glass weights came in many sizes and denominations. They were regulated and used in medieval Egypt to measure many different items, from grains and olive oil to coins. Metal coins varied in weight and did not always contain pure gold and silver. For these reasons, in market transactions the weight of precious metal coins would be measured on a balance against glass coins in order to determine a correct sum of money. Glass weights were thus not used as currency but as a means to weigh metal coins accurately. Moreover, their common use in commercial affairs is recorded in medieval letters written by merchants who used the Arabic verb “to weigh” (wazana) as a synonym for “to pay.”

Bibliography: Miles 1951a; Morton 1985; Ettinghausen 1939; Bates 1993; 1981; and Balog 1981.

This double-stamped glass weight is of very large size. It was likely used for weighing a substantial quantity of metal currency or various commodities sold in retail transactions. The irregular rectangle shape is somewhat unusual for weights of this heft, as pound weights (ratl) were more commonly formed in the shape of rings, making them more graspable or suspendable. Metal weights were far more common than glass weights for measuring materials in bulk. While weighing coins was a widespread practice across the medieval Islamic world, the use of glass in particular seems to have started in Egypt.

Bibliography: Miles 1951a; Morton 1985; Ettinghausen 1939; Bates 1993; 1981; and Balog 1981.
Double-page painting showing Mecca (on the right) and the Last Judgment with scales of justice (on the left), Erzurumlu Ibrahim Hakki, *Ma'rifetname* (Book of Gnosis), manuscript dated AH 1237/1822 CE, Ottoman lands, ink and pigment on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 397.

This 19th-century manuscript is an illustrated copy of an 18th-century text covering a variety of topics including geography, astronomy, natural sciences, theology, and mysticism. This double-page diagrammatic painting at the end of the text’s introduction depicts the organization of the cosmos, including the so-called scales of justice used to weigh men’s deeds on the Day of Judgment. These scales, which are depicted slightly below the center of the left composition, determine whether the deceased will count among the saved in paradise (represented by a golden tree above) or the damned in hell (shown as a series of purple strata below).

*Bibliography:* Manuscript’s online record (http://mirlyn-classic.lib.umich.edu/F/?func=direct&doc_number=006822255&local_base=AA_PUB); Gruber 2014, 55, fig. 11; Karamustafa 1992, 88, fig. 3.18; Titley 1981, 48, cat. no. 40; Rustomji 2009, 138–140, figs. 7.5–7.6; Fisher and Fisher 1982, 102, cat. no. 58; Milstein 1990, 37–39, pls. 8–9; and Ziaee 2010.

This small molded oil lamp dating to the 9th–10th centuries is the oldest type of Islamic oil lamp found in Fustat (medieval Cairo), and it hardly differs from its Christian predecessors. The intricate relief patterns adorning the top of the lamp consist of abstracted vegetation, including stylized grape vines and a palm tree. When the lamp was lit, the rather shallow ornament would have been cast in higher relief due to the flickering light of the burning wick. The short spout bears scorch marks from lapping flames, and the interior is blackened from use.

_Bibliography:_ Kubiak 1970, 3–6, fig. 1.

Although fractured in several areas, this footed ceramic oil lamp clearly had more than one spout. These multiple spouts would have allowed for several wicks to be lit simultaneously, increasing the light emitted from the lamp. The bulbous body would have been filled with oil, poured into the tall funnel-like opening at the top of the lamp. The turquoise glaze is rather typical of ceramic oil lamps that were found in Fustat (medieval Cairo).

Bibliography: Kubiak 1970.

Oil lamps made in Fustat (medieval Cairo) during the Mamluk period are generally simpler in form and cruder in design than their predecessors. This small turquoise-glazed lamp is essentially a wheel-thrown saucer that is pinched to form a spout. It has a central chamber for oil, and its simple handle is tucked within the cavity. This type of lamp could be made quickly and easily, unlike the molded and wheel-thrown pieces, which required greater skills to produce and assemble.

Bibliography: Kubiak 1970, 15–16, fig. 15.

This small ceramic oil lamp has a polygonal body and a flattened rectangular nozzle. Its clay surface is covered with a glaze that now displays an iridescent patina. Oil lamps were practical items for lustration in private homes, including those located in medieval Nishapur, Iran.


These glass fragments from three different vessels bear Arabic inscriptions painted in enamel. Two include calligraphy painted in gold and outlined in red, and one displays letters in white surrounded by blue tendrils. At times, enameled glass vessels are so filled with decoration that their transparent glass body is almost entirely concealed. These fragments may have belonged to lamps or vessels. If on glass lamps, the inscriptions would have glowed from a lit wick placed within the object. Those with gilding would have sparkled even more. During the Mamluk period in particular, enamel-painted glass lamps illuminated the interior spaces of mosques and tombs in Egypt and the Levant. At times, such lamps include the “Light Verse” (ayat al-nur) from the Qur’an, which describes God as the “Light of the heavens and earth” and a glittering lamp.


This oblong, hinged pen box is made of brass and inlaid with gold and silver, much of which is now lost. The case belonged to a Mamluk official (*amir*) active in Egypt during the mid-14th century. The *amir’s* name, Sharaf al-Din, appears on the box three times within bands of Arabic inscriptions listing his various titles—such as “Warrior for the Faith” and “Defender of the Frontiers”—and the positions he held, including that of royal chamberlain. Ornately decorated and inlaid boxes such as this one functioned as tools and symbols of high office. Kept inside were a reed pen (*qalam*) and inkpot. A good pen could last decades if cared for properly, while its use in administrative and literary practices symbolized wisdom and learning.

80. Illuminated double-page opening of the Qur’an, dated AH 1032/1623 CE, Ottoman lands, ink and gold on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 167.

As a sacred text, the Qur’an is frequently illuminated, as can be seen in this particularly fine 17th-century Ottoman example. Illumination is a nonfigurative form of ornamentation in which a manuscript page is decorated by colored pigments, in particular lapis lazuli and gold. Because of its lustrous properties, gold is the favored medium for illumination. It can be applied as foil or paint, the latter allowing much finer detail work. In this manuscript copy, a large portion of the page is covered in gold and further decorated with flowers and vegetal patterns painted in red, blue, and various pastels. Besides adding radiant beauty and material value, this type of illumination also bestows visual majesty, thereby metaphorically showing the Qur’an as the “enlightened” word of God.

Bibliography: Manuscript’s online catalogue entry (http://catalog.hathitrust.org/Record/002641723); Waley 1991; and Zakariya 1991, 5.
81. The Prophet Muhammad’s death, Fuzuli (1495–1556), Hadiqat al-Su’ada (Garden of the Blessed), text dated AH 1006/1598 CE, possibly Ottoman Baghdad, ink, pigment, and gold on paper. Special Collections, Hatcher Graduate Library, Isl. Ms. 386, page 137.

This painting depicts the death of the Prophet Muhammad surrounded by members of his family. It is included in a late 16th-century illustrated copy of Fuzuli’s Hadiqat al-Su’ada (Garden of the Blessed), a martyrology that recounts the suffering and death of members of Muhammad’s family. This particular manuscript includes thirteen paintings, which depict Muhammad and his household (the ahl al-bayt) with flaming halos—and thus as a holy family touched by divine light. Except for Fatima, the Prophet’s daughter who bears a white facial veil, all other characters would have originally been shown without any facial veils. The rather sloppy swathes of black paint appear to have been added at a later date. They may have been inserted by a viewer who believed that figural representations are forbidden in Islam—itself one of the most widespread misconceptions about Islamic art.

Bibliography: Manuscript’s online catalogue entry (http://mirlyn.lib.umich.edu/Record/006822121/Description#tabs); and Milstein 1990, esp. 100–105, cat. nos. 14–31, figs. 12 and 21.

Syrian-born contemporary artist Khaled al-Saa’i creates delicate calligraphic paintings composed of Arabic letters. While some letters are discernable within the composition, *Resurrection* explores the formal potential and dynamic movement of letter shapes. Entangled in an ethereal mist, large calligraphic forms hover in mid-air, rising as if from a mound of debris below. At the top of the left panel a single rhombic dot marks a fading horizon. In Islamic traditions, the rhombus is considered the genesis of all Arabic letters. Classical calligraphers were trained to use the rhomboid to measure the strokes of their letterforms. Like strung pearls, chains of rhomboids calculate the proper proportions of each letter. In this calligraphic triptych, al-Saa’i builds upon older Islamic calligraphic traditions to further explore the rhombus as a creative force as his letters emerge from the brown earth and “resurrect” into new spiritual forms.

Bibliography


Acknowledgments

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