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Keyboard Calligraphy

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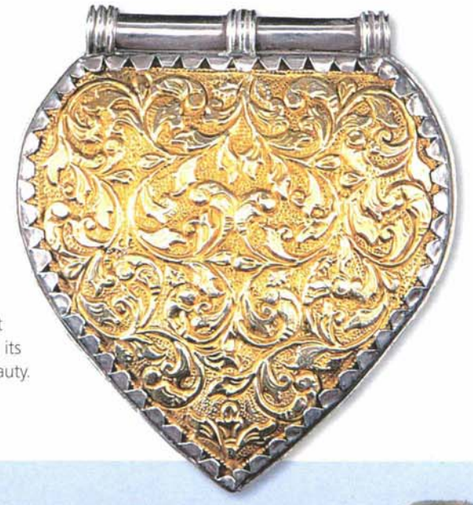

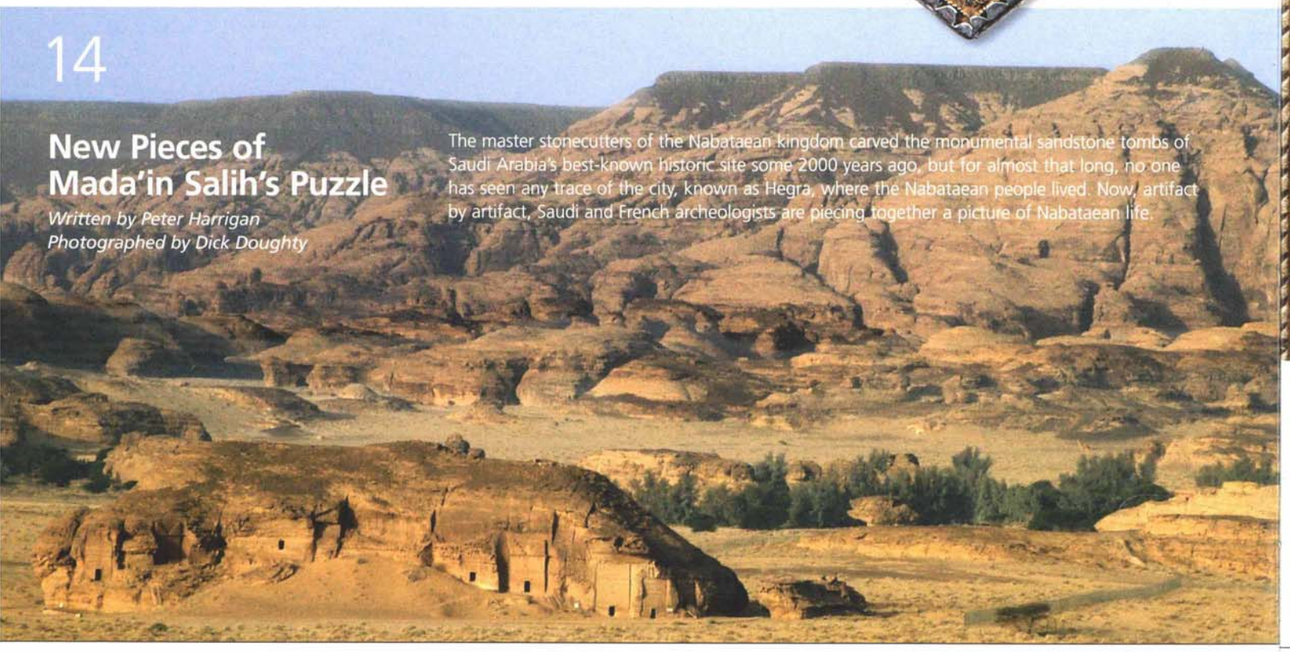

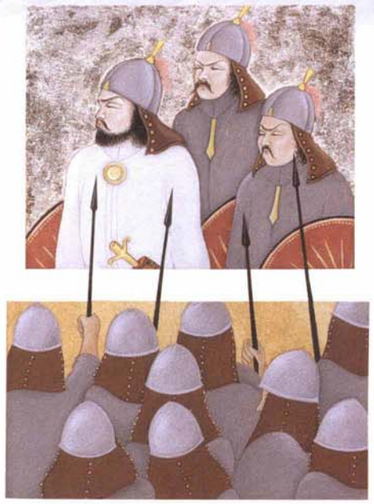

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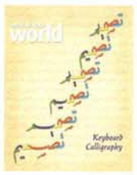

Four letters (one used twice) spell *tasmeem* ("design") in Arabic, but there are scores of ways to write the word within the esthetic conventions of Arabic calligraphy—a variability that made satisfactory typesetting impossible until now. The variations shown include the initial *ta* (light blue, on right) with vertical or horizontal points, the *sad* (red) and *meem* (yellow) in two forms each, and the *ya* (dark blue) and final *meem* (green) in three forms each. Background: a list of letter combinations. Typesetting by Thomas Milo.

Back Cover:

Set aglow by the afternoon sun, the edges of a Nabataean tomb's carefully proportioned cornices contrast with the rough, eroded surface of the sandstone cliff from which it was hewn. At both Mada'in Salih and Petra, Nabataeans developed hybrid architectural styles that drew from both tribal Arabia and the Greco–Roman Mediterranean. Photo by Dick Doughty.

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Written on the Wind

Written by Lucien de Guise

Photographs courtesy of the Islamic Arts Museum Malaysia

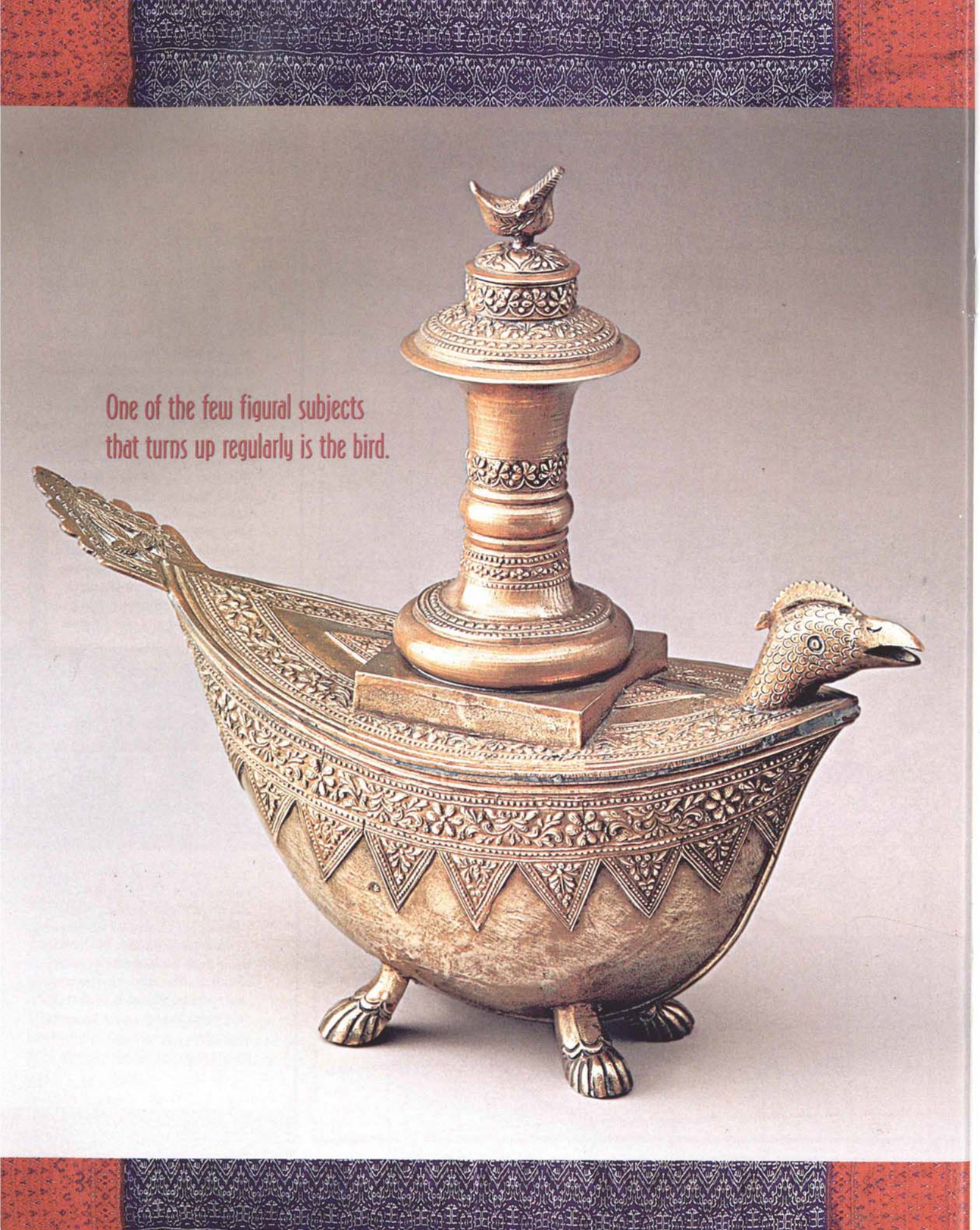
In the late 15th century, just as the last Islamic kingdom in Spain was giving way to the Christian *reconquista*, new Muslim rulers were emerging in the Malay Archipelago halfway around the world. The Kingdom of Granada in al-Andalus—Arab Spain—differed in almost every respect from the Sultanate of Sulu in the southern Philippines, but they shared a religion that shaped their culture. Islam not only determined such quotidian details as what Muslims ate and drank—or didn't drink—it also encouraged a distinctive approach to art.

The contribution of al-Andalus to Spanish art is inescapable. Whether describing Washington Irving's "dreamy palace," the Alhambra, or the Great Mosque of Córdoba, the words "Spanish" and "Muslim" fit comfortably together. At the other end of the Muslim world, the Islamic content of Southeast Asian art is much less appreciated.

The exhibition *The Message & the Monsoon: Islamic Art of Southeast Asia*, held at the Islamic Arts Museum Malaysia in 2005, thus blazed a new trail. As the show's title suggests, there was a close connection between the arrival of Islam in the Malay Archipelago and the archipelago's posi-tion on the monsoon route. In the age before steamships, wind power was the engine of seaborne trade—trade in

An English map from the mid-18th century shows the directions and the active months of the monsoon winds that propelled both commerce and the growth of Islam in the Indian Ocean. Today, more than 200 million Muslims live in Indonesia, Malaysia, the Philippines and Thailand; they are the majority in the first two countries named. Below: In a photograph from the early 20th century, three women from the ruling class of Sumatra, Indonesia's largest island, wear brocade-like *songket* shoulder cloths and headdresses that glisten with gold and silver thread.

Background: **Among the most prized heirlooms of Southeast Asia are calligraphic *ikat* textiles, whose patterns are formed by the weaving of resist-dyed threads. This masterpiece from the early 20th century shows an exceptionally fine pattern that includes the word *Allah* ("God") four times in each of the 23 central diamonds.** (See the full cloth in high resolution at www.saudiaramcoworld.com.)

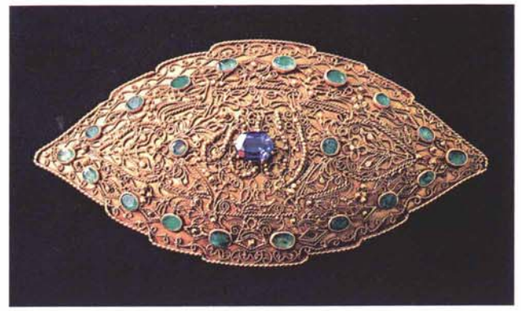


ideas as well as goods—and the Asian monsoons were among the most spectacular means of propulsion on any ocean. They remain highly dependable today, though these days they are more likely to carry smoke from Indonesian forest fires than cargoes of goods and ideas.

The Muslim merchants who began visiting Southeast Asia in the seventh century came from India, China and Arabia. They found a wide variety of communities holding an array of beliefs. These societies ranged from the sophisticated Hindu–Buddhist Srivijayan Empire, which, at its height in the ninth century, controlled most of the Malay Peninsula, Sumatra and West Java, to animist hunter-gatherer hill tribes in the upland areas of Borneo, the smaller islands of the archipelago and the interior of the Malay Peninsula.

Most traders conducted their business in the coastal areas. They impressed local rulers with their learning and their economic power; over time, many of these rulers embraced Islam. Once the elite had converted, the rest of the society soon followed.

The first Muslim sultanate in the archipelago was established in the 13th century at its most westerly point, Aceh, which became known as the "verandah of Makkah," and by the 15th century Islam was the religion of much of maritime Southeast Asia. In parts of the region, inhabitants became Christian in the 15th and 16th centuries. In remote inland areas, meanwhile, some of the old rock-worshiping ways have endured into the 21st century. The last outpost of Hinduism is Bali, and Buddhism exists in the region thanks to a 20th-century influx of emigrants from China.



Above: **In this bejeweled gold belt buckle from the Malay Peninsula, a filigree of fine wire and granulation beads forms the Arabic word *Allah* in the center. Lower: The silversmith who created this tray in east-central Sumatra inscribed it with the year of its completion, the *hijri* year 1127, equivalent to 1715.**
Opposite: **A water vessel from the 19th century.**

The Islamic nature of Malay art is usually easier to see when it is compared with the art of these other communities. In many cases, its most obvious feature is an absence of what the others have in abundance. Hindus, Buddhists and Christians have religious images; animist societies have a complex pantheon that is often expressed in a highly figural manner. Islam's most obvious contribution was to raise calligraphy to the highest art form. At the same time, Islamic art does not make the obvious distinction between the sacred and the secular that is so evident in other communities. Because Islam has so few objects that are specifically religious, there is room for many other items to acquire a spiritual dimension.

Catholicism made a more immediately visible artistic impact in the areas where it took root, mainly in the Philippines, beginning in the 1500's, and nowhere is it more obvious where the two great monotheistic religions of Southeast Asia differ. The line that divides the Muslim south of the Philippines from the rest of the island group is still apparent. Apart from where Protestant evangelical Christianity has made inroads into Catholic territory, this is a land in which the religious icon is supreme. In the southern Philippines, the aniconic Muslim approach prevails.

The people of Southeast Asia who embraced Islam adopted changes in their lifestyles, including a new approach to the arts. The images of deities that filled the Malay Archipelago were soon replaced by a new esthetic: the word of God. Figural imagery, whether of people or animals, disappeared almost entirely—to a far greater extent than in many other Islamic societies.

Despite this, some images of God's creatures persisted in cultural expressions such as circumcision ceremonies, when depictions of such Hindu–Buddhist deities as Garuda were used. These could be as large as the six-meter-high (20') palanquins in the shape of a bird known as the *burung petala indra* that carried newly circumcised princes through the crowded streets of Kota Baru on the east coast of Malaysia until the 1930's.

The bird is one of the few living creatures that turns up regularly in Malay Islamic art. Its most surprising manifestation is on calligraphic batik cloths. Resembling a dove, this representation is composed of letters from Qur'anic verses or from pseudo-calligraphy intended to resemble holy words. The bird has none of the fearsome aspects of Garuda. It looks well-fed and friendly, a symbol of good fortune. This is exactly the role that birds generally play in Islam, although they are seldom depicted

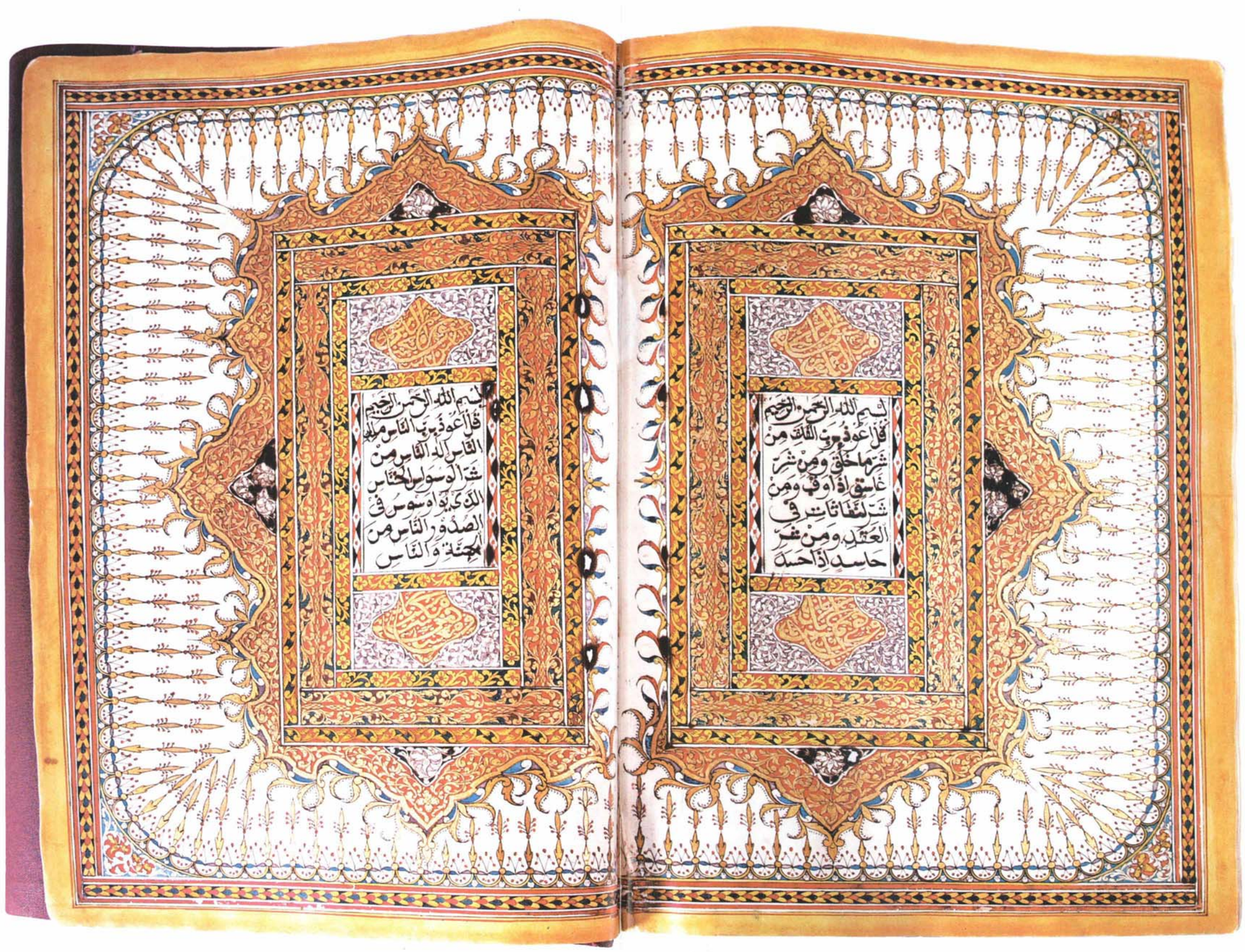
as charmingly as in the Malay world. They also appear in the Qur'an. In one reference (Chapter 3, Verse 49), the annunciation to Mary includes the future words of the Prophet Jesus:

"I have come to you,
With a Sign from your Lord,
In that I make for you
Out of clay as it were
The figure of a bird,
And breathe into it,
And it becomes a bird
By God's leave."

The cultures that brought Islam to Southeast Asia made changes to religious life without denting the old concept of divine kingship. Nor did they affect all the art created by the region's recently converted. The mosques that were built to replace temples as places of worship usually looked very much as the temples had. Indeed, until the colonial era in the 19th century, the region's mosques—built on stilts and with square, stupa-like roofs—were quite different from what is now considered "Islamic architecture."

In another link to the past, yellow remains a symbol of kingship. Today, it is still a matter of etiquette to avoid wearing yellow in the presence of royalty in countries such as Malaysia. In fact, rulers retained much of the religious influence they had previously enjoyed, having moved from the priestly caste to become the local representatives of Islam. The hierarchical structure of Hindu society was maintained to a much greater extent in the Malay Archipelago than in some other parts of the Islamic world. Among the Malay sultanates there was less of the egalitarianism of tribal societies that we know from the Arabian Peninsula.

A sense of hierarchy is also present in the art of the Malay world. Although it was never officially spelled out—as it was in China, where books of connoisseurship were always in demand—there was a clear sense of which objects occupied the higher rungs of the esthetic ladder.



Left: **Among the most lavish Islamic manuscripts from Southeast Asia is this copy of the Qur'an from the Malay Peninsula, created for the Sultan of Terengganu in 1871. Some smudging of the iron-gall ink is visible in the writing and decoration.** Lower: **Corrosion from iron gall ink has burned through the paper of this 19th-century Qur'an copy.**

Manuscripts

As in every Muslim society, the word of God surpassed everything else. At the apex was the Qur'an. While it is possible to write its 114 chapters on anything from a wall-hanging to a talismanic shirt, the calligrapher's preferred form was a book. Malay copies of the Qur'an are among the least appreciated of Southeast Asian contributions to Islamic art, perhaps because they are not as dazzling to the eye as Ottoman, Iranian or Mughal manuscripts. It is rare, for example, to see a Southeast Asian copy of the Qur'an with a profusion of gold illumination. Nor do these books tend to last very long: The climate of tropical Southeast Asia is not kind to any artifact, and works on paper are the first victims of humidity and insect infestation.

There is another element that has been especially damaging to Southeast Asian manuscripts: iron-gall ink. Easily made from inexpensive, readily available ingredients (vegetable tannin from oak galls or other sources, iron sulphate, gum arabic and water), iron-gall ink is indelible and stable

The climate of tropical Southeast Asia is not kind to any artifact, and works on paper are the first victims of humidity and insect infestation.

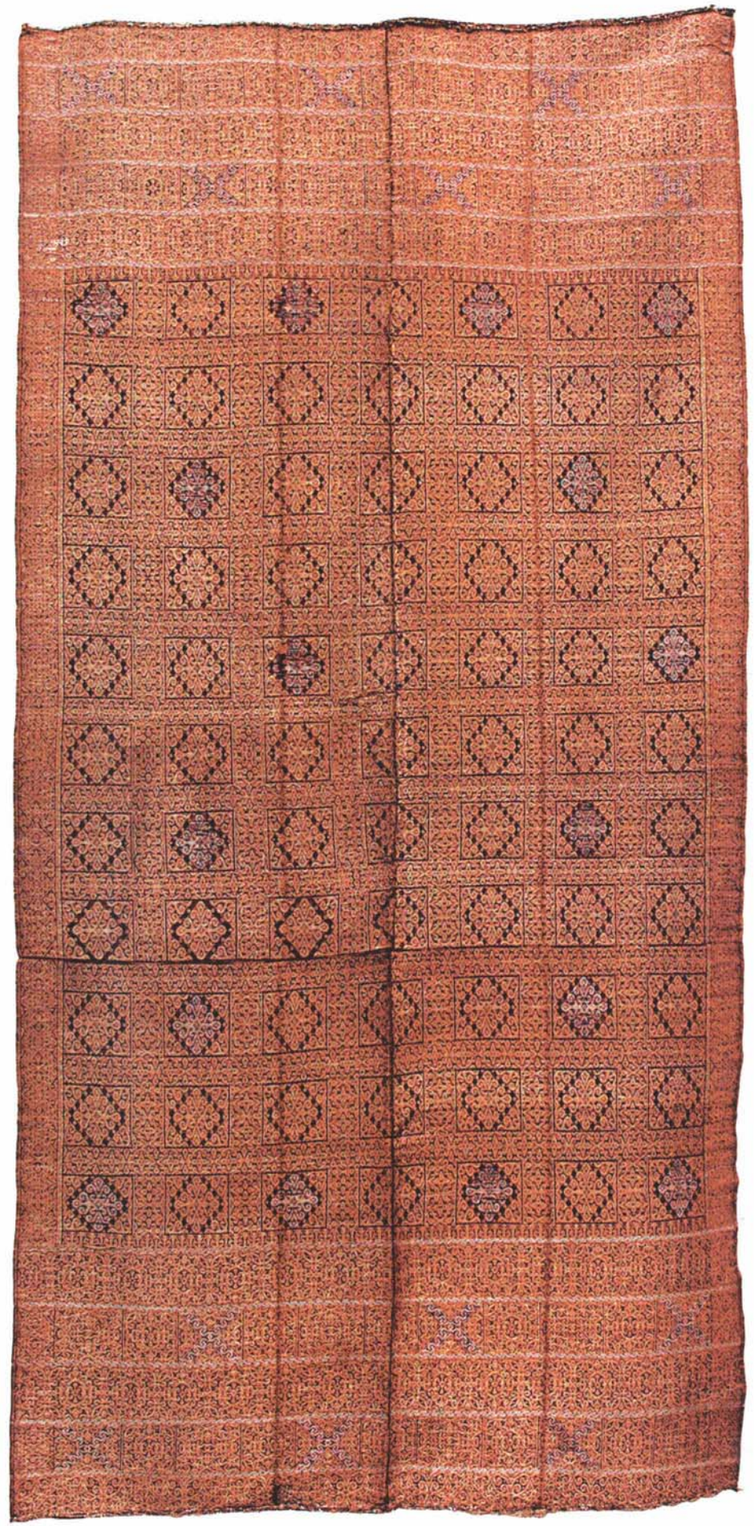
in light. Over time, however, especially in a damp environment, chemical processes result in deterioration of the ink. It turns from a velvety blue-black to dark brown and the calligraphers' work starts to look smudged. Ultimately, the ink can actively eat through the paper it is written on and can corrode an entire book.

As with all the finer works of the Malay world, manuscripts were a product of royal court culture which was also the center of religious scholarship. As well as commissioning books, rulers often took part in court discourse, debating with their own scholars and welcoming foreign visitors. In the 14th century, the North African traveler Ibn Battuta wrote of his time at the court of the Sumatran king, "Al-Malik Al-Zahir Jamal al-Din, one

Displayed or worn, textiles were often heirlooms and expressions of status.

of the most eminent and generous of princes, of the sect of Shafia, and a lover of the professors of Muslim law. The learned are admitted to his society, and hold free converse with him, while he proposes questions for their discussion." The "Shafia" school he refers to is one of the four schools of jurisprudence that comprise Sunni Islam.

The writing itself is usually not the most distinctive aspect of a manuscript. Although calligraphers in Southeast Asia were given the same honored position as elsewhere in the Islamic world, none seems to have achieved celebrity status. The absence of a colophon, or calligrapher's "credit," on most of their



Supplementary gold and silver threads were inserted between the silk or cotton weft threads to make *songket* cloth, which resembles brocade. This Sumatran songket would have been worn across one shoulder as a symbol of high rank.

works means that we know even less about Malay calligraphers than their counterparts elsewhere. This is very much in keeping with regional culture, in which artisans worked with more anonymity than in the Islamic heartlands.

A key feature that Malay manuscripts share is the inspiration of the natural world. This is not surprising in an environment where nature's bounty imposes itself so vigorously. In Southeast Asia there is a profusion of greenery that has made its way into every art form. Tendrils meander through manuscripts, metalwork, woodwork and textiles. Stylized fruits and flowers are never far away.

Other striking features of Malay manuscripts are their geometry and colors. Red, blue and black are combined to extraordinary effect. The designs often have pronounced triangular features that are similarly eye-catching.

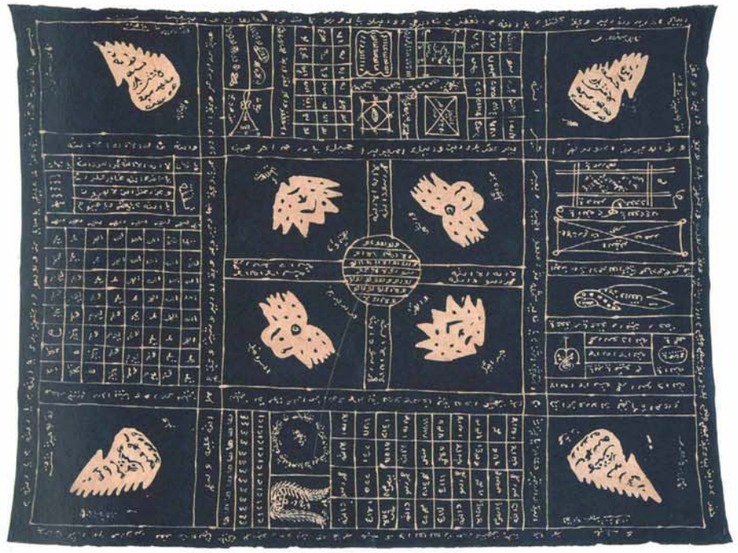
With the demise of royal patronage in the 20th century, calligraphy and manuscript illumination went the same way as every other court art. Western luxury goods have since proved to be a more tempting prospect for those who can afford them.

Textiles

Calligraphy was also the supreme art in many media unrelated to books: textiles, for example. This is the field of Southeast Asian art that excites collectors as much today as it has in centuries past, and one in which the most outstanding Islamic element is calligraphy.

Southeast Asian textiles are rarely viewed as "Islamic art," however. They tend to be secular in appearance and are often similar to the works of neighboring non-Muslim societies. Their most Islamic aspect is a negative: the absence of the figural imagery that forms a vital category of subject matter for the region's other communities.

Cloth, either as clothing or as lengths of material hung on a wall or draped across furniture, was among the most highly valued of all regional heirlooms. While many rulers around the world have emphasized personal fashion, their garments were never their greatest financial asset. In the Malay world, a man's worth might truly have been measured by the shirt on his back, or more likely the sarong around his waist. As Ma Huan, a Muslim member of Chinese admiral Zheng He's legendary 15th-century armadas, noted of a Javanese Muslim king, "He has no robe on his person; around the lower part he has one or two embroidered kerchiefs of silk. In addition, he uses a figured silk-gauze or silk-hemp to bind the kerchiefs around his waist."



Above: **This waistcoat from the early 20th century features religious inscriptions embroidered in gold thread.** Below: **This elaborate, calligraphic batik from Java features the names of four archangels and the first four, or "rightly guided," caliphs of Islam. It likely held talismanic value for its owner.**

While luxury batik and *songket* textiles popular in the past are still produced in Southeast Asia, their significance is not what it was a hundred years ago, and certainly not what it was 500 years ago. The widespread adoption of western clothing in the 20th century undercut the need to express one's status with locally made textiles, nearly putting an end to a weaving tradition that was extremely labor intensive.

The most prized of all Malay textiles today are songket weavings—a shiny form of brocade—whose gold threads give them an air of unsurpassed luxury. This is achieved by the addition of extra weft threads wrapped in gold.

In the past, the top of the textile tree was occupied by *ikat* weavings with religious inscriptions. The ikat tie-dye process, perfected in the Malay Peninsula and Sumatra, is

now almost extinct, especially in its calligraphic form, and few examples have survived. Their inscriptions are uncompromisingly religious: usually the word *Allah* or the Muslim profession of faith, "There is no god but God; Muhammad is the Messenger of God."

The other calligraphic textiles of Southeast Asia had a lower status than the songkets or ikats. They were usually made of batik, a simpler wax-resist process that was less closely associated with royal courts. Though in Java and Sumatra some batik designs were considered so special that only rulers could wear them, calligraphic cloth was not in this category. Batiks with writing served purposes that are not clearly understood. Many were used as coffin covers. Others were turned into headdresses. Their talismanic value was paramount and they would never have been used as a sarong or any other sort of clothing that would come in contact with parts of the human body considered impure.

Upper: **Each of these straight-bladed keris shows the distinctive *pamor* of pattern welding and distinct styles of sheathing: wood and brass with vegetal arabesque** (left) **and wood marquetry** (right). Above: **This silver spearhead, inscribed with calligraphy, was made in the 19th century in Borneo.** Right: **Keris made for women were often smaller than those carried by men; many, like this one, featured an ivory hilt shaped like a bird's head.** Opposite: **This keris, with its gold hilt and sheath, almost certainly once had a royal owner. Its steel blade has seven *lok*, or waves, and the sheath, besides its decoration of scrolling tendrils and chevrons, is inscribed with the Muslim *shahada*, or profession of faith, on its reverse side.**

Weapons

The supreme expression of mystical power in the Malay world is the distinctive dagger with a wavy blade known as a *keris*. It is inseparable from Southeast Asian history. In addition to being a weapon, a talisman and a symbol of manhood, it is also regarded as a work of art. Examples of early keris exist in numerous European royal collections. In Islamic Southeast Asia they appear in every royal arsenal and remain part of the regalia in royal courts of Indonesia and Malaysia.

Tales of the supernatural strength of the keris are so common that it is impossible to go far into any Malay account of the occult without finding a reference to this weapon. In almost every case, the keris serves the forces of righteousness and saves the day, though occasionally the confidence of its user is misplaced. The 1857 edition of the *Journal of the Indian Archipelago* examined the case of a "very old and decrepit villager" in possession of a magic keris who attempted to kill a tiger that had been ravaging his neighborhood. "The astonished beast immediately struck him down and would have killed him on the spot had not one of a band of youths who had followed at some distance behind the old man, shot it," reported the *Journal*.

Such incidents are extremely rare in Malay literature, where the keris is a weapon closely linked to Islam as well as to vestiges of pre-Islamic superstition in the region. Its origins are hotly debated. Although the earliest examples are from the time when Islam became a major force in Southeast Asia, it is acknowledged that this is a weapon with a Hindu–Buddhist past.

By the 14th century, the keris had become a ubiquitous feature of Muslim communities throughout Southeast Asia. Few non-Muslims adopted it, apart from the Hindu inhabitants of Bali, whose keris were distinguished only by hilts with figural carving. In most cases, the development of the keris shows how effectively Islam had taken root in its new Southeast Asian home. The hilt in particular went through an iconoclastic evolution. In idol-worshiping times, the figures of Vishnu, Shiva and other members of the Hindu pantheon predominated. The most famous type of hilt, known as *jawa demam* ("feverish Javanese"), was transformed from a distinctly anthropomorphic design to an abstract bird-like figure that looks very distant from the Hindu divinity Garuda.

Although the blade of a keris provides its mystical value, it is the hilt that reveals its origins. The difference between a Javanese, Sumatran and Malay Peninsular keris is most apparent in the hilt. The most common form in the southern Thai area of Patani is

The keris is the best-known weapon of the Southeast Asian Islamic world; its use today is only ceremonial.

the *keris tajong*, a vestigial face with a very long nose; in Java it is the *kraton* type with an upright figure that no longer bears any resemblance to the Hindu deity it once represented.

The hilt material itself is less indicative of a keris's origins: wood, metal and ivory are found throughout the region, while more exotic substances, such as rhinoceros horn and hippopotamus teeth, turn up less regularly. Some materials were reserved for the highest levels of society, including gold in many places. Wood, despite its ubiquity in the region, was held in very high regard, for magical properties are ascribed to many types of trees. The *kayu hujan panas* ("hot rain wood"), for example, might be found at the end of the rainbow; it can only be cut when it is raining and the sun is shining simultaneously.

The keris blade is forged in a manner similar to many other pattern-welded swords of the Islamic world. The first recognizable feature is the shape, which can be anything from straight to having up to 25 "waves" in it. In all cases, the blade flares dramatically toward the hilt. Like the superbly damascened swords found elsewhere in the Islamic world, the keris blade features a variety of patterns (*pamor*). The most prestigious pamor relates to the Prophet Muhammad; it is a repetition of vertical marks called "Muhammad's ladder."

Much has been written about pamor and their significance, but little attention has been given to Islamic calligraphic inscriptions. As with most other art forms, blades had previously featured images of Hindu deities. After the new faith's acceptance, the word of God was sometimes incorporated to dramatic effect on the blade of the keris and, more often, on larger daggers.

Spears are another neglected feature of the Malay armorer's art. Any weapon made of steel or high-quality iron was prized in the region, especially in Java, where supplies of iron ore have always been negligible. This esteem continued into the Islamic era. A steel spearhead with the words "Allah" and "Muhammad" in silver inlay must have been a treasured item. With the arrival of the British in the 19th century came regulations for weapons. The spears and keris that have been made since the 20th century are purely ceremonial.

Above: **This box, with its elegantly carved vegetal motif, would have been used prosaically by fishermen as a lunchbox.** Below: **Tendrils proliferate on this large (174 cm, 66") wooden chest, originally painted in red, green and blue with additional gilding on the verses from the Qur'an in the two front panels.**

Wood

As they did with the adornment of their weapons, the Muslims of Southeast Asia also expressed their faith in the decoration of their homes. Typical of Islamic communities everywhere, their whole way of life was viewed as an expression of devotion. There was an emphasis on nature's bounty—most obviously wood. It was the closest to primordial clay an artisan could get; all he needed to work it were simple tools.

Wood abounds in the Malay Archipelago, although previously in larger quantities than in the chainsaw-wielding present. Every sort of building, from an animal enclosure to a mosque, was once made of wood. In pre-Islamic times, the priestly class favored stone. With the arrival of Islam, wood became the supreme building material.

Much of the elite woodwork of the Malay world is a canvas for the application of paint and gilding, often on a spectacular scale. Huge, elaborately carved doorways were created for royal residences, and usually covered with red and gold. These two closely connected colors are manifestations of wealth for the Chinese, a preoccupation that may have influenced their neighbors in the "Southern Sea." But it is more likely that gold and associated colors are a reference to the sun as the giver of life—symbolized in the Hindu swastika.

The lushness of the region is inescapable in its art.

The advent of Islam in the region did not diminish the use of gold as a decoration on wood or as an adornment. While Muslim rulers elsewhere avoided wearing gold in excess, their Malay counterparts had no such reticence. A representative of the British East India Company wrote in 1823 about a Sumatran sultan, "He was dressed in a superb suit of gold thread cloth." The theme was maintained in his jewelry, belt buckle and weapons. Objects made of wood were also likely to have a liberal application of decorative gold, especially where this helped verses from the Qur'an stand out. Many wooden artifacts have strong religious associations. These include boxes for storing the Qur'an and prayer screens that separated male and female Muslims in mosques without solid partitions. Many humbler wooden pieces also exist, including fishermen's lunchboxes decorated with elaborate patterns.

Whether plain, painted or gilded, the woodwork of Islamic Southeast Asia always incorporates plant motifs. The lushness of the region is inescapable in its art. This natural richness is perhaps one of the reasons that Southeast Asian works are so rarely admitted into the "Islamic art club." The geometric patterns expected of Islamic art have been replaced by the more fluid arabesques of real plant forms.

Indeed, although there are shared esthetics in all Islamic lands, Malay art gets little mention in surveys of Islam's accomplishments. The art of Southeast Asia has for generations been considered regional rather than Islamic. Most historians of Islamic art have fixed ideas about the geographical limits of their subject, and Southeast Asia is simply too far east. Furthermore, its merit as art has been debated more recently than that of art from the Islamic heartlands, although it is worth remembering that what are today considered "classic" examples of Islamic art were until the 20th century thought to be no more than decorative. A similar ethnocentrism may be affecting how the Islamic art of the Malay Archipelago is viewed today.

Southeast Asian Islamic works, even in museums as nearby as Australia, are usually displayed alongside non-Islamic works, with little effort made to show the difference between them. However, as Southeast Asia's population grows —Indonesia is already the Islamic world's most populous nation—the awareness of its different cultures and its varieties of art, Muslim and non-Muslim alike, should increase.

Top: **This building—probably a school—shows a distinctive regional style of wooden architecture.** Below: **This calligraphic panel of carved wood from the Malay Peninsula was most likely made for a mosque.**

Lucien de Guise (luciendeguise@yahoo.com) is the acting head curator of the Islamic Arts Museum Malaysia in Kuala Lumpur. In addition to writing about art, he has edited the *Malaysia's Best Restaurants* guide since 1993.

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New Pieces of Mada'in Salih's Puzzle

Viewed by a casual and untrained eye,

Written by Peter Harrigan
Photographed by Dick Doughty

the clearly incised flat sandstone

above a ledge on the cliff face looks like the early stages of the carving of one of the hundreds of tomb façades in the area. But this is not an unfinished work mysteriously frozen in time: It is one of four large-scale quarries. Here, some 2000 years ago, Nabataean masons split, hewed and carved out building blocks for their homes, markets and wells in Hegra, the second-largest city of their realm, today known as Mada'in Salih, Saudi Arabia's most famous archeological site. At another quarry nearby, the Nabataeans lowered a sandstone ridge by an estimated five meters (16') as they split off rock in successive layers. To this day, debris still lies along the leveled surface, and deep incisions in the floor of the cut indicate both the size of the blocks and the techniques of carving them out.

These long-abandoned quarries vividly contradict a stereotype of the Nabataeans, who ruled northern Arabia and the southern Levant for some four centuries before the Romans conquered them. Renowned as carvers of iconic, natural-rock necropolises, they have been regarded only passingly, if at all, as builders. The quarries of Hegra are evidence that the Nabataeans were capable of more.

Previous spread, left: **Recently found and dated to the first century of our era, this rare Nabataean textile remnant is shown here larger than its actual size, approximately 7.5 centimeters (3") square.** Right: **Carved with precision from the weathered strata of northern Arabia's sandstone cliffs, the 94 decorated tombs of Mada'in Salih have long prompted questions about their builders: Where were their homes? How did they live? Much archeological fact has emerged, and planned new excavations will bring more answers.**

Originally nomadic, tent-dwelling Arab pastoralists and traders, the Nabataeans began to settle more than 2300 years ago. Over the following eight centuries—the first four as an autonomous kingdom and the latter under Roman rule—Nabataean settlements and their trading routes flourished, along with agricultural activities that nurtured social and political systems, art, crafts and architecture. (See map, p. 18.)

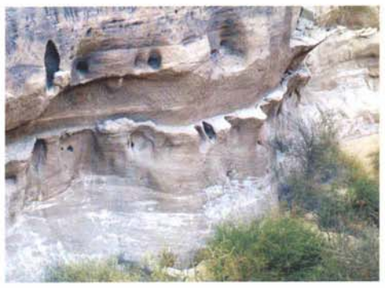
Of the historic Nabataean centers, the largest is their capital Beqem, now known as Petra, in Jordan. There, more than 600 tombs, paved streets, temples, markets, a theater, hydraulic installations and dwellings, including elaborate villas, have made it one of the best-known historic monuments in the Middle East. Such was its status that, after imperial Rome annexed Nabataea in the year 106, the Romans accorded Petra the honorific title of metropolis, and the Nabataeans continued to coexist with their occupiers.

Hegra ("Rocky Tract") is now known as Mada'in Salih, or "the cities of Salih" in Arabic. (The name refers to the pre-Islamic prophet Salih, whose rejection by the people of Thamud is recounted in the Qur'an.) Set in a coarse-sand highland plain studded with apricot-colored sandstone outcrops, Hegra was the southernmost Nabataean settlement and a center for the kingdom's traders, farmers, engineers, stonemasons and artisans. Now, between 2008 and 2012, it will be the focus of a new phase of excavations and studies—the most extensive to date—under a Saudi–French program that will bring archeologists, epigraphers, numismatists, topographers, ceramists, paleobotanists, anthropologists, geophysicists and draftsmen to the site.

"Apart from the big quarries, there are at least 20 small ones, each likely located near a building under construction," explains archeologist and epigrapher Laïla Nehmé. "I do like quarries, but I'm also interested in small monuments and artifacts: These are often the significant elements that reveal most about everyday life. Many people think that the tombs are the most important feature in Mada'in Salih."

Opposite: **Cuts show where Nabataean masons prepared to extract blocks of stone that archeologists now believe may have been intended as foundations for homes that still lie buried.** Below: **Many of the 130 Nabataean wells at Mada'in Salih have been maintained and deepened by Arab farmers.** Right: **Archeologist Mutlaq Suleiman al-Mutlaq of the al-'Ula Museum looks over the plain where Hegra once stood, the second-largest city of Nabataea.** Below right: **A small aqueduct carved into the rock captured runoff along its 100-meter (320') length and led it to a cistern.**

LEILA NAHMÉ



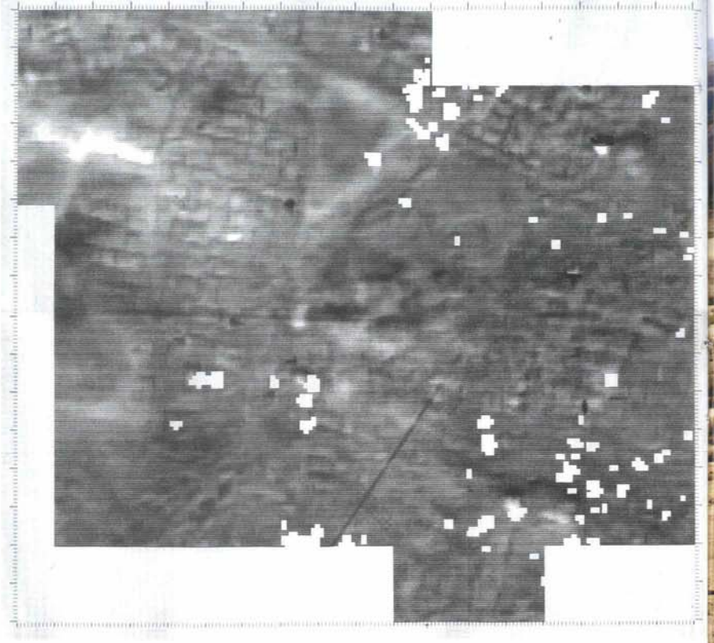
A world authority on the Nabataeans, Nehmé is the joint director of the French team of some dozen experts who will work alongside Saudi archeologists. "We already know a lot about the Nabataeans, except for their southerly reaches, south of Wadi Rum in Jordan. From here, for some 400 kilometers [250 mi] to their Arabian frontiers, we know very little," Nehmé explains from her Paris research base in the Laboratoire des études sémitiques anciennes. "Mada'in Salih is considered central to understanding the connection between the core region of Nabataea and the southern parts of their kingdom, and their long-distance trading links with South Arabia, the Gulf and beyond, as well as their more proximate links to the Red Sea, their capital to the north and the eastern Mediterranean littoral. This therefore is a very significant missing piece of the jigsaw puzzle."

"Jigsaw" is a term also used by other scholars when they refer to the slow unraveling of the story of the Nabataeans. Philip Hammond, director of the American Expedition to Petra, writes of the "kaleidoscopic jigsaw puzzle of passing references, known sites, architectural remains, ceramics, religion, inscriptions, economic strands, politics and other sundry bits and pieces." Hammond, professor emeritus at the University of Utah, argues that if we weave these together "with the background fabric of their era," we will be able to reconstruct a great deal more of Nabataean cultural history and understand more of "this enigmatic group of bedouin pastoralists which became possibly *the* major commercial nation in the Middle East in the days of Augustus Caesar."

The quarries at Mada'in Salih represent just one piece of the puzzle from which the joint team hopes to tease answers. "Where was the quarried stone being used?" asks Nehmé. "And remember, in addition to the stone from the quarries, there were enormous quantities of cut stone and building material coming out of almost 100 rock-cut tombs. We know this stone was used for building, as there is no evidence of spoil heaps. This is certainly a missing link, a puzzle for us to look at solving," she says, adding that the puzzle is made more complex because, thus far, no inscription or evidence has been found that can accurately date the quarries.

What is more puzzling still is that across the open desert plain amid Mada'in Salih's clusters of carved tombs, there is

Right: **Using geophysical detection techniques, archeologists can peek before digging: This image shows a rough grid of unexcavated homes, market stalls, roads and possibly temples that lie to the right and beyond one of the two excavation sites to date,** opposite. **The geophysical detection area is about 25 times the size of the excavation in the photograph.**



not a single visible trace of a building of any kind. Answers lie unseen, near the quarries and sandstone outcrops, and underground, buried beneath layers of sediment borne over centuries by wind and water. One extensive, slightly sloping area is littered with a mixture of stones, sherds and other debris that shows clear signs of human settlement. It has been fenced off by the Department of Antiquities within the guarded and fenced main site (which encompasses 14.5 square kilometers, or 3583 acres) and it is here that the buried remains of the residential area of Hegra lie. A tennis court-sized area has already been partially excavated, revealing foundations and the lower stone parts of dwellings and other buildings, as well as remains of a wall.

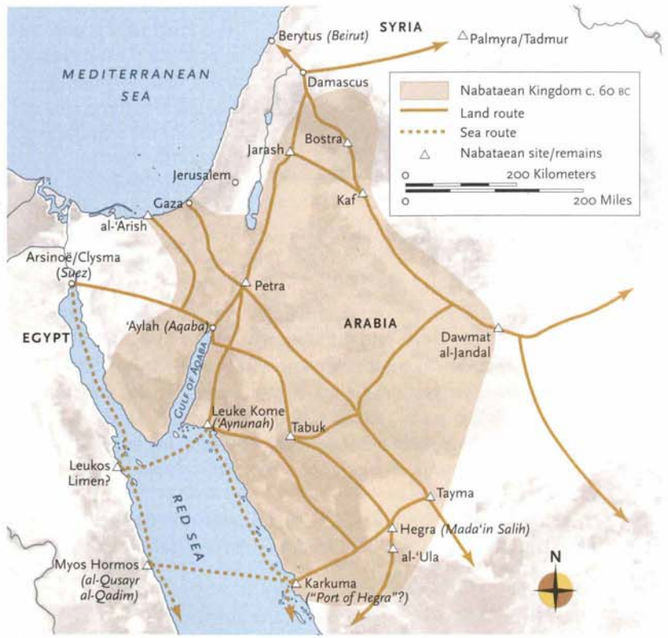
Using existing survey evidence and recent geophysical detection data from tens of thousands of differential magnetometer soundings, archeologists have traced out the buried remains of Hegra's walled urban center, which covered about 650,000 square meters (160 acres). This was just one of the destinations for the sandstone blocks hewn from the quarries and cut from the sandstone cliffs as the Nabataeans carved out their tombs and burial chambers.

Leading the Saudi team of archeologists at Mada'in Salih is Dhaifallah al-Talhi, head of research and survey at the Saudi Department of Antiquities, based at the National Museum in Riyadh. A quietly charming and unassuming expert with more than two decades of surveying, excavating, recording and reporting at Mada'in Salih under his belt, he has clocked up more "dirt time" at the site than any other archeologist, and for him, the residential area has always been the most interesting. He spent several seasons uncovering a small portion of it, and during the most recent season, he was rewarded with an important find.

"We came across a courtyard paved with stone, revealing a stairway and columns. This is significant enough, for it represents the first discovery of a paved floor at the site." But there was something better: "At first we thought it was part of the pavement buried in the soil. Once we removed the meter-thick [39"] layer of hard mud, sand and dirt, we realized we had found a sandstone block engraved with a complete Latin inscription. It was in very good shape, with just a few letters lost," recalls al-Talhi.

Translated, the inscription throws new light on the little-known Roman links with Hegra—and it overturns current thinking.

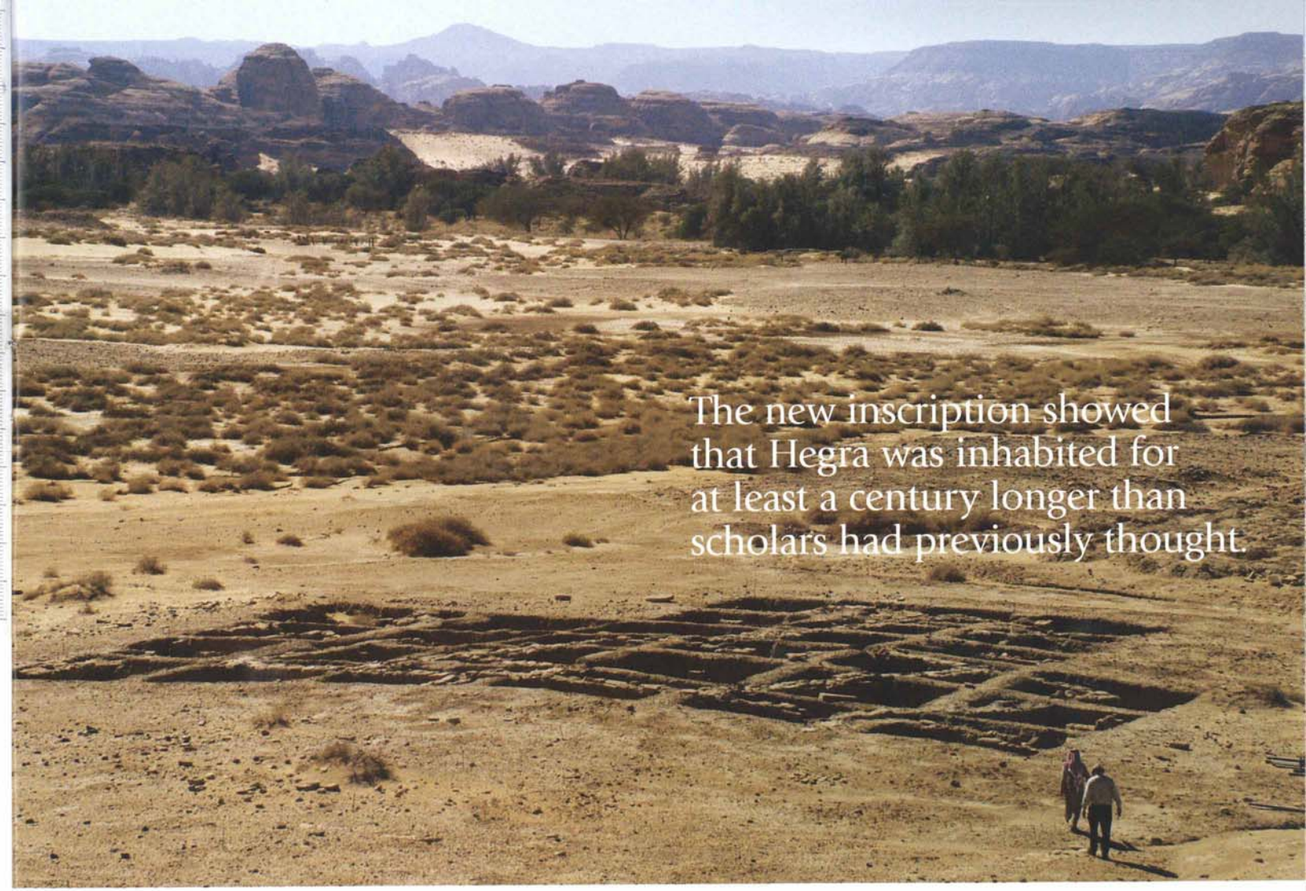
Unlike Petra, where only one tomb has a dated inscription, one-third of the monumental tomb façades at Mada'in Salih have them, and all range from the year 1 to the year 75 of our era. This might suggest a short period of Nabataean occupation, and al-Talhi cites several authorities on Roman Arabia who have suggested that the Nabataeans may have withdrawn from the area of Mada'in Salih after the year 75.



Archeologists have determined the maximum extent of the Nabataean kingdom largely through finds of distinctive pottery at more than 2000 sites. At its zenith, Nabataea extended over much of what is now southern Jordan, Syria and the Negev and south into northwestern Arabia. It was from Hegra, the kingdom's southernmost settlement, emporium and entrepôt, that long-distance camel caravans set out for the far reaches of the Arabian Peninsula in pursuit of aromatics, spices and other rare commodities, some of which came from India and even China.

TOP: A. KERMORVANT, LABORATOIRE D'ARCHEOMETRIE, UNIVERSITE DE TOURS; MAP: MAPPING SPECIALISTS

RIGHT: DHAIFALLAH AL-TALHI / NATIONAL MUSEUM OF SAUDI ARABIA



However, the inscription (at right), dedicates the restoration of the Nabataean covered market (or wall—*macellum*) at Hegra under the direction of a headman with a Nabataean name. It involves Emperor Caesar Marcus Aurelius and presents all of his titles, by which the inscription can be dated fairly precisely to between the year 175 and the emperor's death five years later. This is significant, and so is the inscription's implication that at the time of its writing—in the late second century—there still existed at Hegra a rather large city where a Roman legion was stationed.

The inscription's late date "throws new light on Mada'in Salih and the time line of its existence," says al-Talhi, adding that with the documented life of the settlement now extended by a full century beyond what was previously known, "the entire history of the occupation and later abandonment of Hegra has to be reevaluated. We now have to establish what happened to the Nabataeans in the century following the year 75." The inscription's reference to the initiative to restore the market or wall also contradicts scholarly opinions that there was disunity among Nabataeans after Roman occupation, and shows rather that there was at least some cooperation and coexistence between the military commanders of the Roman armies in the region and the Nabataean inhabitants of Hegra.

"For the welfare of Emperor Caesar Marcus Aurelius Antoninus Augustus Armeniacus Parthicus Medicus Germanicus Sarmaticus Maximus, the community of the Hegreni restored the wall, destroyed by the passage of time, at its own expense, under the governorship of Iulis Firmanus, legate of the emperor with the rank of praetor; the work being arranged by Pomponius Victor, centurion of Legion III Cyrenaica, and his colleague, Numisius Clemens, and construction being supervised by Amrus, son of Haian, the headman of their community."

—translation by Rudulf Haensch
German Archeological Institute, Munich

About 25 kilometers (15 mi) south of Mada'in Salih, the valley known as Wadi al-Qura narrows between ridges of the Sarawat Mountains. Here, the town of al-'Ula has served as a regional center since the 13th century. Adjoining the modern town of some 30,000 people is the picturesque mud-brick old town, abandoned since the early 1900's.

On the other side of the hill from Mada'in Salih's protected area, farms still draw from the water table that has supported cultivation in the region since at least the sixth century BC, several hundred years before the arrival of the Nabataeans.

DICK DOUGHTY / AL-'ULA MUSEUM (3, BACKGROUND); DICK DOUGHTY / NATIONAL MUSEUM, RIYADH (2, ON BASES)

American archeologist, explorer and scholar Nelson Glueck (1900–1971) was one of the first to write and elaborate on the varied accomplishments of the Nabataeans, beyond their standard characterization as tomb-carving caravaneers. "They were one of the most gifted peoples of history," he wrote in *Deities and Dolphins* (1965). "Theirs was a record of remarkable accomplishment, extending from commerce to agriculture and from engineering to architecture and art." Dotted across Mada'in Salih there is also abundant evidence of the Nabataeans' "prodigious feats of imaginative farming" and their masterly utilization of scarce water resources. This will provide another focus for the Saudi–French team's excavations and fieldwork.

The Nabataeans were expert hydraulic engineers, and their skills in constructing wells, cisterns, runnels and aqueducts enabled them to develop advanced agriculture and practice soil conservation. At Petra, however, there are no Nabataean wells: Water from springs and channeled runoff fed more than 200 rock-carved cisterns. By contrast, at Mada'in Salih there is no evidence of surface springs; the Nabataeans here depended on more than 130 wells and channeled their sporadic rainfall into cisterns cut into the sandstone.

The wells gave access to a water table that, two millennia ago, was likely about five meters (16') below the surface. The Nabataean wells are stone-lined for the first few meters of their depth—revealing yet another destination for the stone cut from their quarries.

The numerous old wells scattered around the oasis supported extensive cultivation. Today, the water table has dropped to below 20 meters (65'), yet local Bedouin and other contemporary settlers have made use of the original Nabataean wells, clearing them and boring them deeper. At one, near a cluster of now abandoned mud houses, smallholders ingeniously lowered a water pump three meters (10') below ground level, supporting it on a length of iron rail set across the well's diameter. The rail, stamped "Providence Russe 1906," is a salvaged remnant of the nearby Ottoman Hijaz Railway, whose Mada'in Salih station complex, with engine repair sheds, double water tower and barracks, is almost within sight north of the tombs.

Still other wells are outside the fenced antiquities site, and it is here the archeologists are hoping to find a suitable target for excavation. "Silted wells that have not been reopened can reveal much, and we're looking forward to significant pottery finds," says Nehmé. "We want to carefully excavate at least one well, and we need to find one which has not been reused in the 19th and 20th centuries and which is also not too dangerous because of collapsing walls."

Ali Ayed al-Faqeer recalls how he and other children who grew up near Mada'in Salih traded Roman and Nabataean coins for sugar.

Investigations during the coming excavation seasons will go beyond the residential and oasis areas. Mada'in Salih holds 94 tombs with decorated façades, 35 plain funerary chambers and more than 1000 non-monumental graves and other stone-lined tombs. "We plan to excavate two or three monumental tombs that appear not to have been robbed, and we will be looking for other unviolated burial chambers," explains Nehmé.

A precious few fragments of Nabataean textiles, rope and other organic materials have already been found, and now there is the prospect of more, perhaps even skeletal remains. The discovery of textile fragments and the analysis of the ointment which might be found on some of them can provide new information on the still little-known burial practices in the Nabataean realm.

The city walls that enclosed the residential area are evident from aerial photographs taken in 1978 and from satellite imagery. Nehmé explains that the new geophysical detection evidence reveals open areas and suggests that perhaps some areas within the walls were not so built up. "The city walls appear to have been constructed at an early stage and the city then extended up to them," she explains.

Most Nabataean artifacts recovered from Mada'in Salih in modern times are coins and small ceramic pieces, some of which are decorated.

Learning About

Mada'in Salih

1876: Charles Doughty becomes the first westerner to visit the site of Hegra in modern times; he records his observations in *Travels in Arabia Deserta*.

1881: French traveler Charles Huber visits Hegra.

1883–1884: The French Academy sends Huber back to Mada'in Salih together with the German Julius Euting, and the pair record inscriptions and sketch tomb façades.

1884: Nabataean inscriptions are deciphered by the French philologist Ernest Renan, using Doughty's transcriptions.

1907–1910: Two French priests, Antonin Jaussen and Raphaël Savignac, make three visits to Mada'in Salih, inventorying and recording inscriptions, making exhaustive surveys and classifying the tombs.

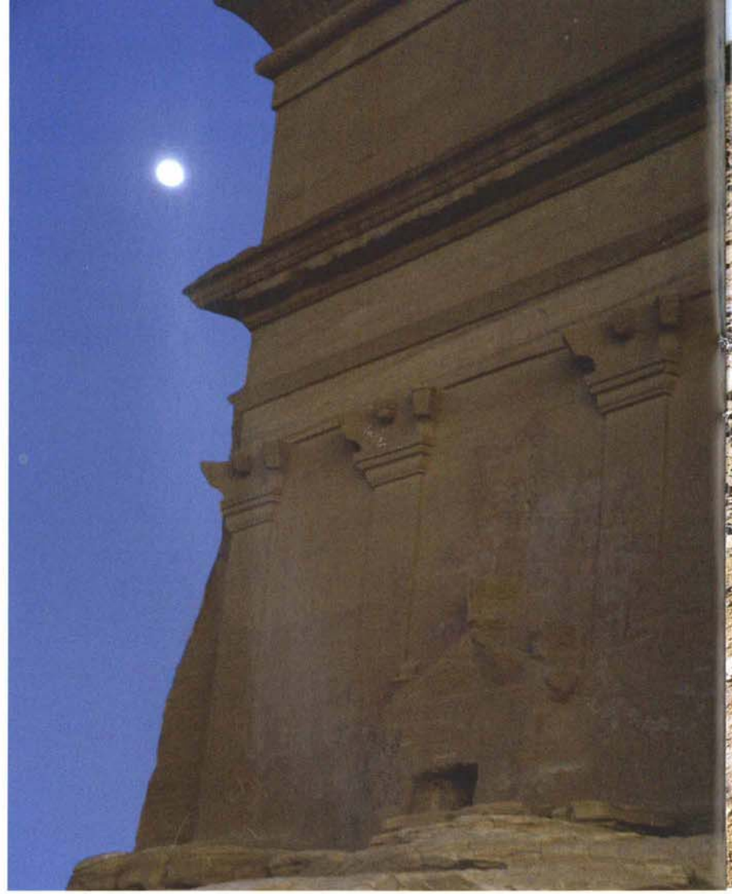
1978–1979: In conjunction with the Saudi Department of Antiquities, the French National Geographical Institute embarks on surveying, photographing, mapping and numbering all tombs and other features, based on the work of Jaussen and Savignac.

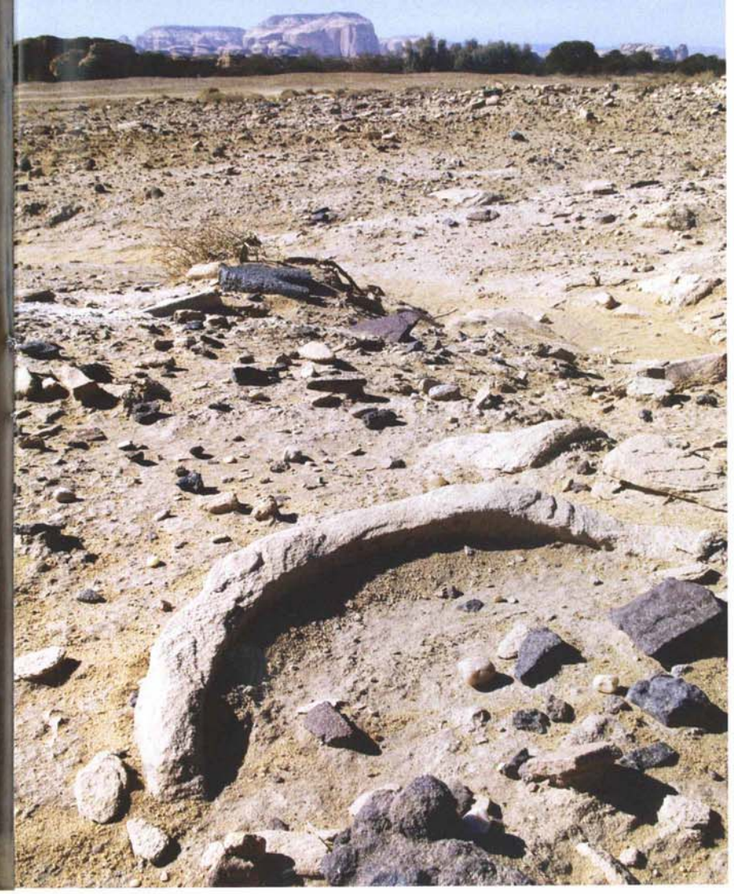
1986–1991: Dhaifallah al-Talhi heads five seasons of surveys.

2001: The Saudi Ministry for Antiquities and Museums launches the Mada'in Salih Archaeological Project with funding assistance from the French Ministry for Foreign Affairs.

2001–2005: Second series of five seasons of remote sensing and ground surveys.

2008–2012: Third series of five seasons proposed for Saudi–French excavations.





Many historical puzzle-pieces still lie on the surface of old Hegra, which is now fenced to protect the artifacts. Opposite: **After the Prophet Muhammad passed through Hegra on his way to Tabuk, the old trade routes of the Nabataeans soon became Muslim pilgrim roads, too. Later, the 10th-century geographer al-Maqdisi and the 12th-century geographer and cartographer al-Idrisi both passed through Hegra on their way to Makkah.**

Today, as Saudi and foreign visitors continue to pass through the site, there is an increasing interest in developing the area as a major attraction. In the town of al-'Ula, some 25 kilometers (15 mi) to the south, two hotels now offer organized tours to the Nabataean site as well as other places in the highland desert. Work on an airport has started; new highways connect the area with Madinah and the Red Sea coast. The United Nations Educational, Scientific and Cultural Organization (UNESCO) is considering naming the area a World Heritage Site.

Ali Ayed al-Faqeer was born in what is now the antiquities area, and his ancestors lived in Mada'in Salih proper, where they used a few of the Nabataean wells for their own agriculture. Over more than two decades, al-Faqeer has met archeologists and other specialists from around the world, absorbed lore from fellow tribe members and others who have lived in the area for generations, sat in on discussions with Saudi scholars over countless servings of coffee, pondered Arabic texts and read Qur'anic references. He now spends some of his time guiding visitors around the site, and he is working on a book to present his interpretations and theories on the Nabataeans.

"I remember when I was young we used to get a kilo bag of sugar in exchange for a Nido [powdered milk] can full of Nabataean and Roman coins that we had picked from the site. No one seemed that interested in what was here," says al-Faqeer. Things have certainly changed, and he talks animatedly about the Nabataeans by way of presenting his hypotheses: There are undisturbed tombs outside the known site; colored plaster once lined the now-bare tomb chambers and paint colored the tomb facades; a mountaintop beacon lit the way at night for caravans. Perhaps most contentiously, he asserts that the tombs of Mada'in Salih were built by Roman masons and slaves captured by Nabataeans.

However controversial and perhaps homespun they may appear, al-Faqeer's ideas reveal the growing popular fascination that the Nabataeans hold, and they illustrate also the learning process still under way amid the many unsolved mysteries of Nabataean civilization. And al-Faqeer's deep roots in the area offer an intriguing recent parallel to the story of the Nabataeans' own transition from nomadic to sedentary life: Just a few generations back, his Bedouin ancestors lived in tents as pastoralists; with the unification of the Saudi kingdom, they settled and now live comfortably in a modern, irrigated farmstead along the paved road that encircles the historic site. As if to reinforce the analogy, an entirely new tract of homes, platted on paved street grids with pre-installed street lighting and utilities, sprang up last year just a kilometer or two from the site's main entrance on the open sands of the plain on which Nabataean settlements may once have flourished.

Peter Parr, who taught at London's University College Institute of Archaeology for more than 30 years, has had a lifelong scholarly interest in Nabataeans, and participated in early excavations at Petra and Mada'in Salih. He started off in Petra in the 1950's, focusing on the settlement areas, which had, until then, been largely overlooked in favor of the rock-cut monuments. In the 1960's and 1970's he also participated in the first comprehensive archeological surveys in Saudi Arabia, which included Mada'in Salih. Now retired, he maintains an active interest in studies of the Nabataeans, and he plans to lead a tour of museum members next year called "In the Footsteps of the Nabataeans."

"With Mada'in Salih, just as with Petra, actual origins are still very much a mystery," says Parr. "When was the settlement formed? What was the nature of the early settlement? What were the stages of its growth, and how was the settlement financed?" One of the problems with studies of the Nabataeans, he adds, is the dearth of documentary evidence. "We are not really sure what Mada'in Salih actually was: a frontier town, a military base or an administrative and customs center. This new and major phase of excavations will help us understand the true nature of this settlement."

Perhaps as he guides his tour over the site next spring and poses the questions, a new generation of young Saudi and French archeologists working with his longtime friend and colleague al-Talhi will be uncovering more new pieces of the tantalizing puzzle of the Nabataeans at Mada'in Salih.

DICK DOUGHTY / AL-'ULA MUSEUM

How did they do it?

See "How to Build a Nabataean Tomb" in this issue's Web edition at www.saudiaramcoworld.com.

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http://nabataea.net/

Saudi–French Expedition:
www.diplomatie.gouv.fr/fr/actions-france_830/

World Heritage Site Nomination:
http://whc.unesco.org/en/tentativelists/5084/

The editors extend their thanks to Dhaifallah al-Talhi, Laïla Nehmé and Mutlaq Suleiman al-Mutlaq for their generous assistance in the preparation of this article.

HISTORY'S HINGE

'AIN JALUT

WRITTEN BY DAVID W. TSCHANZ
ILLUSTRATION BY HAMRA ABBAS

IN THE SPRING OF THE YEAR 1260, AS THE CITIZENS OF CAIRO WENT ABOUT THEIR BUSINESS, SULTAN AL-MUZAFFAR SAYF AL-DIN QUTUZ FACED THE KIND OF MOMENT THAT RULERS DREAD.

Before him and his generals stood four emissaries from the Mongol ruler Hülegü Khan. They handed Qutuz a letter. It was not couched in the diplomatic tone usually adopted by one head of state when addressing another.

From the King of Kings of the East and West, the Great Khan. To Qutuz the Mamluk, who fled to escape our swords.

You should think of what happened to other countries...and submit to us. You have heard how we have conquered a vast empire and have purified the earth of the disorders that tainted it. We have conquered vast areas, massacring all the people. You cannot escape from the terror of our armies.

Where can you flee? What road will you use to escape us? Our horses are swift, our arrows sharp, our swords like thunderbolts, our hearts as hard as the mountains, our soldiers as numerous as the sand. Fortresses will not detain us, nor arms stop us. Your prayers to God will not avail against us. We are not moved by tears nor touched by lamentations. Only those who beg our protection will be safe.

Hasten your reply before the fire of war is kindled.... Resist and you will suffer the most terrible catastrophes. We will shatter your mosques and reveal the weakness of your God, and then we will kill your children and your old men together.

At present you are the only enemy against whom we have to march.

Qutuz withdrew, commanding his generals to follow him. Their impromptu council of war was held in light of chilling facts.

Seven years earlier, in 1253, Hülegü Khan ("khan" derives from the Turkic *han*, "prince"), brother of the Great Khan Möngke and a grandson of Genghis Khan, had been told to gather his forces and move into Syria "as far as the borders of Egypt." His mission was to conquer those lands as a step toward Genghis Khan's unabashed goal: world Mongol rule.

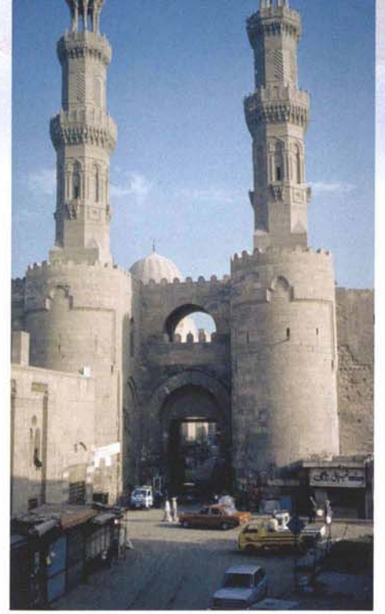
Scholars debate the exact size of Hülegü's force, but it was enormous by the standards of the time. The *ordu* ("army" in Turkic, from which comes the English "horde") comprised approximately 300,000 warriors, all master horsemen and archers. Their training, discipline, reconnaissance, mobility and communications far surpassed those of any contemporary force. Organized in units based on factors of 10, they could cover 100 miles in a day. Including women, children and other noncombatants, the entire host numbered, by conservative estimates, about two million.

The Mongols arrived in Persia from the east in 1256 to settle an old score with the formidable Assassins, who had plotted to murder the Great Khan. Their revenge was a two-year campaign of conquest against 200 fortresses scattered across northern Iran, Syria and Lebanon. Located atop mountains and considered impregnable, they were known as "eagles' nests," after the name of the main Assassin redoubt at Alamut.

Yet the Mongols moved out from the Elbruz Mountains of northeastern Iran, reducing fortress after fortress with workmanlike efficiency. Chinese engineers set up siege engines, and one by one the eagles' nests fell, and the Assassins were destroyed.

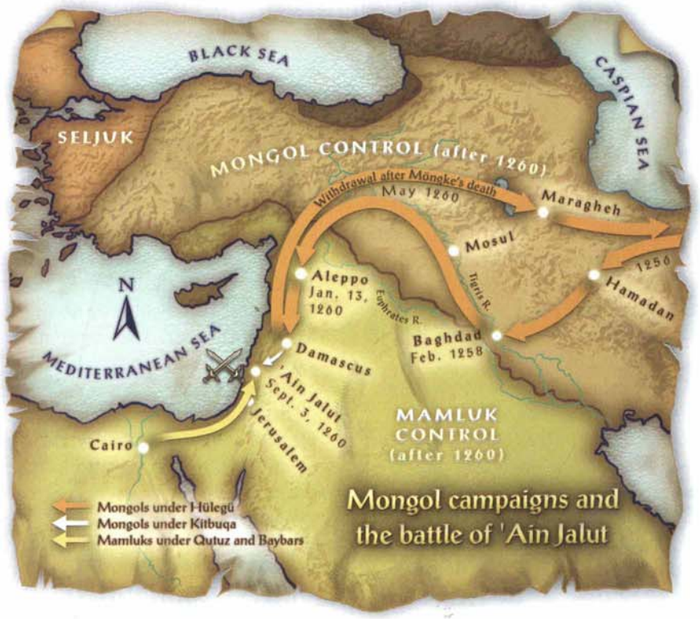
Hülegü then turned his attention to Mesopotamia and the Abbasid capital, Baghdad. Though no longer the center of political power in the Islamic world—that now lay in Cairo—it remained the intellectual heart of Islam. No longer: In February 1258 it was sacked and burnt in one of the most brutal conquests of the age. More than any other Mongol act, Baghdad's conquest shook the entire Islamic world. Hülegü fell back to Tabriz in northern Iran, while lesser potentates along the Mongols' line of travel came and did him homage.

Among those offering an alliance to Hülegü was Hayton, the Christian king of Armenia. Hayton regarded the Mongols' invasion as a new crusade to free Jerusalem from the Muslims, who had retaken the city from the Crusaders only recently, in 1244. His perception was encouraged by Hülegü's chief lieutenant, Kitbuqa, who was not only a Christian, but



In Cairo, not far from the palace where Sultan Qutuz received the Mongol messengers, the fortified city gate Bab Zuwayla stands today.

This 14th-century Persian manuscript shows Genghis Khan and three of his four sons. The youngest, Tolui, fathered Möngke and Hülegü; it was the death of Möngke in early 1260 that prompted the pullback of Hülegü's army, leaving a much smaller Mongol force to advance on Egypt.



LOWER: BIBLIOTHEQUE NATIONALE, PARIS / ART RESOURCE; RIGHT: JOHN FEENEY / SAUDI ARAMCO WORLD / PADIA; MAP: MAPPING SPECIALISTS

From 1256 to 1258, the Mongol forces deployed an estimated 300,000 warriors as well as siege engines, like the trebuchet being prepared for use above, to subdue more than 200 fortresses in northern Iran and the Levant. Right: A 14th-century Persian depiction of the February 1258 sack of Baghdad.

also claimed to be a direct descendant of one of the three Magi who had brought gifts to the infant Jesus. Following his visit to the Mongol leader, Hayton sent messages to his Crusader neighbors that Hülegü was about to be baptized a Christian, and strongly urged that they too ally themselves with this new force, and turn it to the Crusader cause.

In September 1259, Hülegü moved his army again, quickly subduing all of Mesopotamia east of the Tigris. Then he crossed the Euphrates on a pontoon bridge at Manbij, in present-day Syria. The Ayyubid sultan of Syria, Al-Malik al-Nasir, offered to submit, but he was rebuffed. He organized the defense of Aleppo, then fell back to prepare Damascus. The Mongol army, now 300,000 strong, arrived at Aleppo on January 13, 1260. Engineers deployed catapults, and the city fell in a matter of days. Aleppo suffered Baghdad's fate. This had the desired effect on the citizens of Damascus, who drove Al-Nasir from the city and sent an unconditional surrender. Hülegü entered the city accompanied by Kitbuqa, Hayton and Bohemond IV, the Crusader prince of Antioch who had heeded Hayton's advice. Al-Nasir fled toward Egypt, but Mongol soldiers caught up with him near Gaza, and he was taken to Hülegü's court in chains.

It was at this time that Hülegü dispatched his emissaries to spread fear in Cairo.

Qutuz was a Mamluk, raised and educated as a warrior. As distasteful as an ultimatum might be, he was also a realist: To his generals, he admitted that the Mamluks were probably no match for the Mongols. The commanders agreed, and they recommended capitulation.

But that was not Qutuz's decision. He had come to power by knowing when to take decisive action: Observing the weak character of the 15-year-old sultan Nur al-Din 'Ali, Qutuz had deposed him four months earlier. He was not about to surrender without a fight. Qutuz ordered his guards to execute the envoys, and his generals he ordered to prepare to defend the city.

Hülegü's vast army made ready for the long-awaited march on Egypt. It outnumbered the 20,000-man Mamluk army 15 to 1. The survival of Cairo—and perhaps the fate of Islamic civilization—hung in the balance.

Then fate intervened.

A messenger came to Hülegü with word that the Great Khan, Möngke, had died in Karakoram and, in keeping with Mongol tradition, all the princes, including Hülegü, were summoned there at once to elect his successor. Hülegü pulled his main army back to Maragheh and, apparently confident of victory, he ordered Kitbuqa, camped in Syria with 20,000 men, to press on to Egypt.

A few weeks later, Qutuz picked up an unexpected ally in Baybars, the leader of a rival Mamluk group that had been offended by Qutuz's rise to power. Baybars and his supporters were based in Syria, from where he had been launching raids on Egypt, but Baybars realized that the fall of Qutuz would also crush his own aspirations, and so when Damascus fell, Baybars offered Qutuz his support.

Kitbuqa sent a raiding party into Palestine, cutting a swath of destruction through Nablus all the way to Gaza, but it avoided attacking the narrow strip of Crusader-held territory along the coast. The Crusaders, too weak to provide any significant resistance to the Mongols on their own, became further embroiled in the debate over whether or not to ally themselves with the invaders. Kitbuqa hoped his show of relative restraint would sway the argument in his favor. He was wrong.

Two Crusader leaders, John of Beirut and Julian of Sidon, launched retaliatory raids on the new Mongol-held territories. Kitbuqa, in turn, sent a punitive expedition against Sidon,

AFTER HÜLEGÜ'S CONQUESTS OF BAGHDAD AND ALEPPO, THE CITIZENS OF DAMASCUS SURRENDERED IN JANUARY 1260.

ABOVE: BIBLIOTHEQUE NATIONALE, PARIS / BRIDGEMAN ART LIBRARY; OPPOSITE: EDINBURGH UNIVERSITY LIBRARY

FROM SLAVES TO SULTANS

Mamluk cavalrymen canter around a pool in this page from the *Compendium of Military Arts*, written in Cairo and dated 1366.

The word *mamluk* means "one who is owned." The term was originally applied to boys from Central Asian tribes who were bought by the Abbasid caliphs and raised to be soldiers. The same practice was adopted by the Fatimids, an Ismaili dynasty based in Tunisia that conquered Egypt in 969 and founded Cairo as its new capital.

When Salah ad-Din (Saladin to the West), the son of a Kurdish general, supplanted the Fatimids and founded the Ayyubid dynasty in 1174, he formed the Mamluks into a distinct military body. Since the Ayyubids were strangers in Egypt, they likely felt more comfortable with the support of their fellow foreigners.

Slave traders bought the children of conquered tribes in Central Asia, promising them security, discipline and the possibility of great fortunes. Mamluk boys then endured several years of rigorous training in horsemanship and archery. They were used both as royal bodyguards and to offset the dominating influence of the Arab military in the state. Not to be confused with ordinary slaves, the Mamluks were members of an elite military corps—a kind of proto-Foreign Legion or a knighthood of Islam. In 1254, the Mamluks revolted against the Ayyubid ruler and one of their own—a Turk named Aybak—married Shagar al-Durr, the wife of the murdered sultan: The Mamluks had accomplished the rare feat of transforming themselves from slaves to masters.

Power in the Mamluk realm was not based on heredity. Every Mamluk arrived in Egypt or Syria as a slave-soldier. The young men were converted to Islam and worked their way up the ranks on merit alone. Every commander of the army and nearly all of the Mamuk sultans started life in this way. The result was a succession of rulers of unbounded ambition, courage and ruthlessness.

After the Mamluks made themselves masters of Egypt and Syria, they continued the tradition of recruiting foreigners for their military. Agents were sent to buy and import boys from Central Asian tribes, chiefly Circassians, Turkomans and Mongols. Mamluks looked on their Egyptian-born sons as socially inferior and would not recruit them into regular Mamluk units, which only admitted boys born on the steppes.

This constant influx of new blood prevented the dynasty from decaying from within as a result of less-capable princes ascending to the throne, but it also made for turmoil at the top: While some Mamluk sultans ruled for a decade or more, the average length of rule was only five years. As an autocratic military caste, the Mamluks ruled with considerable harshness, imposing heavy taxes and holding all political and military power. They did employ the native-born population in civil posts; such persons often achieved high rank and honors in the civil administration. In contrast to their harsh reputation as rulers, the Mamluks also bequeathed an astonishing legacy of artistic achievement. Much of the glory of medieval Cairo still visible today is the result of Mamluk patronage.

The Mamluks ruled Egypt until 1517, when Cairo fell to the Ottoman Turks whose artillery and firearm skills far surpassed that of the Mamluks who, as consummate horsemen, disdained such novelties. The Ottoman ruler, Selim I, ended the Mamluk sultanate but did not destroy the Mamluks as a class; they kept their lands, and Mamluk governors retained control of the provinces and were even allowed to keep private armies.

In the 18th century, when Ottoman power began to decline, the Mamluks were able to win back an increasing amount of self-rule. In 1769 a Mamluk leader, Ali Bey, proclaimed himself sultan and declared independence from the Ottomans. Although his reign collapsed in 1772, the Ottoman Turks still felt compelled to concede increasing measures of autonomy to the Mamluks and appointed a series of them as governors of Egypt. The last great charge of the fabled Mamluk horsemen took place on July 17, 1798, when Napoleon Bonaparte's modern army shattered the Egyptian cavalry at the Battle of the Pyramids. Their power as an elite class ended in 1811 when Muhammad Ali, an Albanian Turk who had wrested control of Egypt from the Ottomans in 1805, invited several hundred prominent Mamluks to dinner in the Cairo Citadel. After diner, as the Mamluk notables and their entourages made their way to one of the fortress's lower gates, Muhammad Ali's troops massacred them all, a violent final chapter for a dynasty whose rulers rose from slavery to control much of the Middle East.

OPPOSITE: CHESTER BEATTY LIBRARY; BELOW: PRIVATE COLLECTION / BRIDGEMAN ART LIBRARY

which was plundered and its citizens massacred. Christian ardor for the Mongol cause cooled considerably, and turned colder still when news reached the Crusaders that another Mongol army had invaded Poland.

Almost simultaneously, William of Rubruck, the envoy to the Mongols from the French Crusader king Louis IX, returned from Mongolia with a complete report. After reading it, Pope Alexander IV sent word throughout Christendom that anyone making an alliance with them would be excommunicated. This deprived the Mongols of any Christian support.

When news reached Qutuz of Hülegü's withdrawal to Karakoram, he realized at once that the military situation had been transformed to his advantage. He ordered a halt to defensive preparations and commanded his men instead to prepare to advance against the Mongols. In another audacious move, he sent envoys to the Crusader leaders in Acre asking for safe passage and the right to purchase supplies.

WHEN NEWS REACHED QUTUZ OF HÜLEGÜ'S WITHDRAWAL, HE REALIZED THE MILITARY SITUATION HAD BEEN TRANSFORMED TO HIS ADVANTAGE.

For the surprised Franks, the request presented a dilemma. To cooperate with Qutuz would mark the Crusaders clearly as enemies of the Mongols, exposing them to the notorious Mongol wrath; on the other hand, Qutuz was their only hope of ridding the region of them. After a lengthy debate, they acceded.

On July 26, 1260, the Egyptian army began its march northeast. Near Gaza, Baybars's vanguard destroyed a small Mongol force on long-range patrol. Kitbuqa, from his base at Baalbek (today in central Lebanon), assembled his army and began a march to the south, down the eastern side of Lake Tiberias.

On the outskirts of Acre, while the nervous Crusader leaders watched the Mamluk army pitch its tents in the shadow of their city, Qutuz

A Chinese painting shows a small Mongol convoy. Mongol cavalrymen each had three mounts and traveled very light: Each man wore a silk shirt under a tunic, and heavy cavalry also wore chain mail and a leather cuirass. Each carried a leather-covered wicker shield and a helmet of either leather or iron, depending on rank, and was armed with two composite bows and 60 arrows. Soldiers also carried clothing, cooking pots, dried meat and water in a saddlebag made from a cow's stomach, which, being waterproof and inflatable, could also be used as a float to cross rivers. Thus equipped, the cavalry could travel up to 160 kilometers (100 mi) a day.

In the late 13th century, Mongol rulers in Iran, the Levant and Central Asia became increasingly embroiled in internecine conflicts, and they were never again strong enough to threaten Egypt.

purchased supplies and planned his next move. Word soon arrived that the Mongols, and a large contingent of Syrian conscripts, had circled Lake Tiberias, and they were approaching the Jordan River along the same invasion route used by Saladin in 1183. Qutuz moved his army southeast to meet them.

On September 3, Kitbuqa turned west across the Jordan and up into the hills to the Plain of Esdraelon. Qutuz established positions at 'Ain Jalut ("the Spring of Goliath"). There, the plain narrowed to just under five kilometers (3 mi), protected on the south by the steep slope of Mount Gilboa and on the north by the hills of Galilee. Qutuz concealed units of Mamluk cavalry in the surrounding hills, and ordered Baybars and the vanguard forward against an enemy who had never tasted defeat.

Baybars quickly made contact with Kitbuqa's force as it came toward 'Ain Jalut. As Qutuz hoped, Kitbuqa mistook it for the whole of the Mamluk army, and Kitbuqa ordered a charge, leading the attack himself. The forces collided and seemed to check each other in the fierce clash that followed; then Baybars ordered a retreat. The Mongols rode confidently in pursuit, victory seemingly in their grasp.

When they reached the springs, Baybars ordered his army to wheel and face the enemy. Only then did the Mongols realize they had been tricked by one of their own favorite tactics: the feigned retreat. As Baybars reengaged the Mongols, Qutuz ordered the reserve cavalries to sweep out from the foothills to attack the Mongol flanks.

Kitbuqa ordered a charge to the Mamluk left flank. It held, wavered, held again and then was turned, cracking under the ferocity of the Mongol assault.

As the Mamluk wing threatened to dissolve and it appeared the army might be routed, Qutuz rode to the site of the fiercest fighting and threw his helmet to the ground so the entire army could recognize his face. "O Muslims!" he shouted three times. His shaken troops rallied, and the flank held. As the line solidified, Qutuz led a countercharge that swept the Mongols back.

Despite the Mamluk pressure, Kitbuqa too continued to rally. Then his horse took an arrow, and he was thrown to the ground. Captured by nearby Mamluk soldiers, he was taken to Qutuz and executed.

With their leader gone, the remaining Mongols fled 12 kilometers (7½ mi) to the town of Beisan, the Mamluks in pursuit. The survivors fled far to the east, across the Euphrates. Within days, the victorious Qutuz reentered Damascus in triumph, and the Mamluks moved on to liberate Aleppo and the other major cities of Syria.

THE MONGOLS WERE TRICKED BY ONE OF THEIR OWN FAVORITE TACTICS: THE FEIGNED RETREAT.

A Mongol herdsman stands with his grazing horse. Behind the mobile Mongol warriors was a host of men, women and children who maintained the fighters' weapons and other material, cooked, ensured water supplies and tended herds.

The clash of Mamluk and Mongol at 'Ain Jalut was one of the most significant battles of world history—comparable to Marathon, Salamis, Lepanto, Chalons and Tours—in that it set the future course of both Islamic and western civilization. Had the Mongols succeeded in conquering Egypt, they might have been able, following the return of Hülegü, to carry on across North Africa to the Straits of Gibraltar. Europe would have been surrounded from Poland to Spain. Under such circumstances, would the European Renaissance have occurred? Its foundations would certainly have been far weaker. The world today might have been a considerably different place.

As it was, the Mamluks not only stopped the Mongols' westward advance, but—just as important—they also smashed the myth of Mongol invincibility. The Mongols' belief in themselves was never quite the same, and 'Ain Jalut marked the end of any concerted campaign by the Mongols in the Levant.

In saving Cairo from the fate of Baghdad, the battle of 'Ain Jalut also sealed the doom of the relatively weaker remaining Crusader states. Mamluk Egypt rose to the pinnacle of Islamic political, military and cultural power, a position it maintained until the rise of the Ottomans some 200 years later.

As for Qutuz himself, however, the fruits of victory were snatched quickly from his hand. After Aleppo was retaken, Baybars suggested that, in recognition of his contributions to the campaign, he himself be given command of the region. Qutuz refused. When the Mamluk army was only a few days from its triumphal return to Cairo, Baybars went to see Qutuz on the pretense of a matter of state. Reaching out as if in greeting, he drew a dagger and drove it into Qutuz's heart. Qutuz had ridden out of Cairo to meet the Mongol challenge, but it was Baybars who rode home triumphant as sultan, and to this day, his story can be heard in the shadow-plays in the back streets of old Cairo.

Baybars, Qutuz's ally and assassin, is remembered less for perfidy and more for his many achievements following the victory at 'Ain Jalut: 17 years of largely successful military campaigns against other Mongol forces, and more than 20 victories against Crusaders. This leather silhouette, from a Cairo shadow-play, depicts his army at sea en route to attack a Crusader port.

ABOVE: TOPKAPI PALACE MUSEUM / BRIDGEMAN ART LIBRARY; RIGHT: STAATLICHE MUSEEN ZU BERLIN / PREUßISCHER KULTURBESITZ / MUSEUM FÜR ISLAMISCHE KUNST; OPPOSITE: PRIVATE COLLECTION / BRIDGEMAN ART LIBRARY

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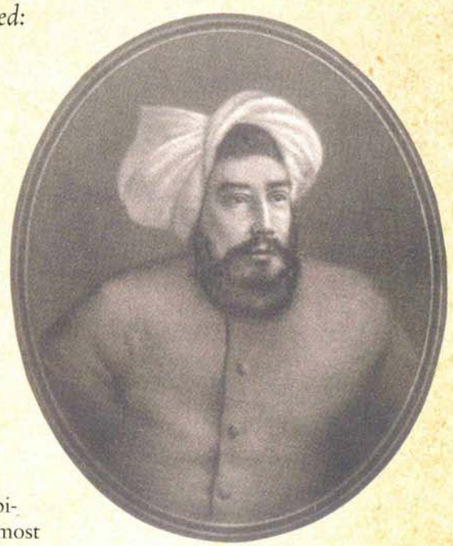
Painter and sculptor **Hamra Abbas** (hamraabbas@yahoo.com) was born in Kuwait in 1976. She lives and works in Berlin and Lahore.

Keyboard Calligraphy

Written by Eildert Mulder

In a recent exhibition on Ottoman culture held in Amsterdam's Nieuwe Kerk was an unimpressive-looking little 18th-century book, a printed version of a manuscript produced 150 years earlier. Usually a manuscript is more rare than a printed work, but in this case the cultural and historical importance of the printed book surpassed that of the manuscript from which it derived: This was one of the first books printed in the Middle East in an Arabic typeface. The language was Ottoman Turkish.

The book, titled The History of the West Indies, *dates from 1730, comprises 91 pages and four maps and includes illustrations of plants and people. Its author is uncertain, but the name of the printer who produced it is known: He was the Hungarian Ibrahim Müteferrika, the man who started an information revolution in the Muslim world.*



FROM A. X. RAFIKOV, *OCHERKI ISTORII KNIGOPECHATANIYA V TURTSII*, SCIENCE PUBLISHERS, LENINGRAD, 1973, COURTESY OF THOMAS MILO; OPPOSITE: THOMAS MILO

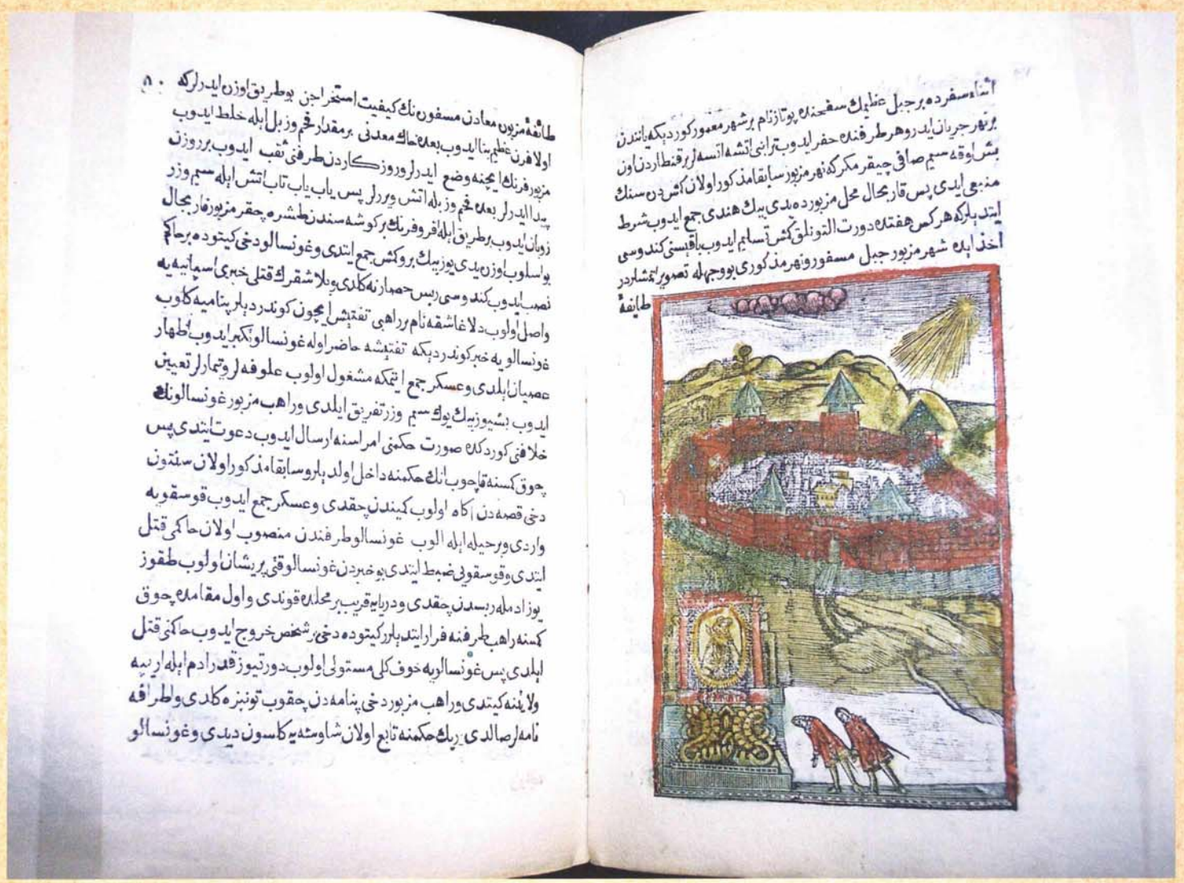
Johannes Gutenberg introduced printing with moveable type in Europe in about 1450. By 1500, Gutenberg's innovation had completely transformed the intellectual and economic landscape of Europe—but it had not been adopted in any Middle Eastern country. Why not?

Moveable type had been tried and rejected before, in China in the 11th century and in Korea in the 13th. In both places, the enormous size of the Chinese character set used by both languages meant that it was faster to cut whole-page woodblocks than to cast as many as 40,000 different characters and set them one by one. A similar problem, part technical and part esthetic, blocked the use of moveable type in the Arabic-speaking world—and in the Ottoman Empire, whose language was written in Arabic script.

The technical problem is this: Arabic letters are generally not written separately but joined to each other in groups or entire words, like a script typeface in English. And though the Arabic alphabet has only 28 letters, most letters have four forms, depending on whether they occur at the beginning of the word, in the middle of the word, at the end of the word, or stand alone. Furthermore, each combination of letters is unique, creating a typographic challenge greater than Chinese. Because all letters connect dynamically with the preceding one, and most also with the following one, the number of unique combinations is almost astronomical.

The esthetic problem comes from the dizzying mutability of written Arabic. For example, there are actually three ways the letter *ha* can be written in the middle of a word, and the calligrapher's choice is influenced not only by the letter immediately preceding the *ha*, but also by the letters earlier in the word, and even by letters that follow it—yet, in whatever form, it is still in essence the *ha* in the beginner's textbook. A sequence of letters can run along a baseline the way Roman letters do—though Arabic runs from right to left, of course—or they may start above the baseline and descend in a diagonal if the connections from one letter to the next make that an esthetically pleasing choice.

The result is that the individual letters in a well-written piece of text are in constant motion, like dancers in a polonaise: In the course of the dance, they bow to each other, embrace each other, push each other away, hug each other's necks and fall at each other's feet—and there are some real acrobats among them. Thus, well-written Arabic texts feel alive to their readers, whereas mechanically typeset ones feel



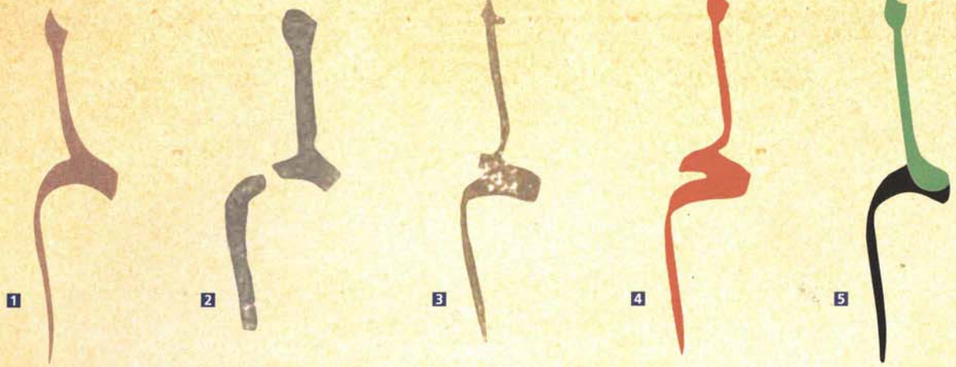
The History of the West Indies **was the third book printed in the Middle East using moveable type, and the first with illustrations. In Europe, moveable type was developed just after the fall of Constantinople sent Byzantine scholars—with their collections of Greek manuscripts—streaming into Italy, where the printing press facilitated the circulation of Greek learning throughout Europe. Printing from moveable type, coming as it did at the peak of the Renaissance, was also a key factor in the swift dissemination of advances in scientific, technological and industrial knowledge. Conversely, the absence of printing was an important element in the decline of the Ottoman Empire. Ibrahim Müteferrika** (opposite) **persuaded the Ottoman sultan that only wide dissemination of Europe's knowledge could enable the empire to arrest the decline, and he received permission to establish a printing press for that purpose.**

like graveyards: At their best they are only still photographs of the calligrapher's living, moving polonaise.

European type founders of the 16th century, including some famous names, attempted to produce Arabic fonts, but the results were terrible. The designers forced Arabic script to conform to the technical requirements of typesetting, for they had neither properly analyzed the script nor absorbed the Arabic textual tradition. Calligraphers, in contrast, absorbed that tradition and learned to make esthetic decisions as they learned their craft, by endless practice that eventually "made perfect."

The rejection of book printing between 1450 and 1729, when Müteferrika produced his first book, was thus not the result of conservative unwillingness or cultural inflexibility. It was the rejection of an unsuitable technology. As Thomas Milo, an Amsterdam Arabist and type designer, put it, "It was as if you had urged someone who was riding in a magnificent horse-drawn carriage to get out and ride in a Volkswagen with square wheels."

Ibrahim Müteferrika was a refugee, a Protestant Hungarian who lived in Transylvania, then part of the Austro–Hungarian Empire. Protestants had a hard life there, and Müteferrika fled to the Ottoman lands and converted to Islam. Perhaps because he was an immigrant, he noticed both the lack of a book-printing industry in his new homeland and the fact that public exchange and discussion of ideas—as well as technical and scientific progress—was less vigorous and widespread than in Europe. Müteferrika believed that the Ottoman Empire needed a book-printing

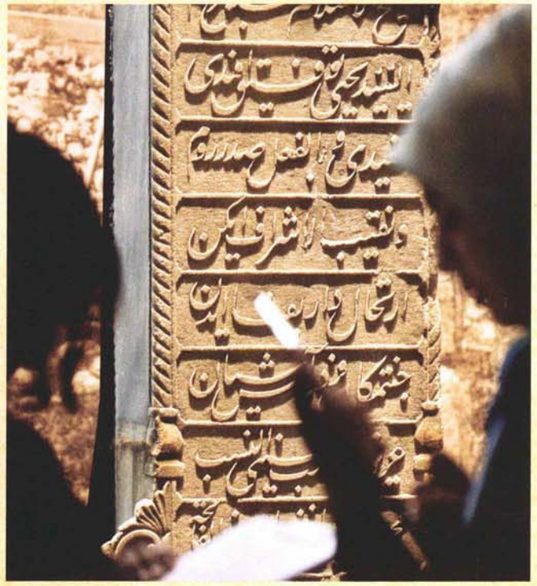


Here are five versions of the letters *lam* and *meem* joined together. Version 1 is the calligraphic version described in the text. Version 2 is metal type as designed and printed by Müteferrika: very clunky but correct. Version 3 is Mühendisyan's far more graceful presentation—but the tail of the *lam* surprisingly moves left, then right. Version 4 shows how Mühendisyan's successors blindly incorporated his aberration into their fonts and even made it more visible. Version 5 is by Tasmeem, which is based on analysis of the individual strokes of the usual calligraphic version.

industry in order to develop, but he also understood that no Ottoman printing industry would be possible without a typeface that deserved the name of Arabic.

To produce such a typeface, Müteferrika knew he had to analyze Arabic script. Calligraphers might learn to make the correctly shaped letter combinations by practice, without conscious application of tens of thousands of rules, but for machine reproduction of the script, deciphering those rules was exactly what was essential.

Using the limited technical resources of his time, Müteferrika succeeded in producing an Arabic typeface that gave primary importance to the nature of the Arabic script. Indeed, that had been part of his instructions from the Ottoman religious authorities, whose permission was essential for his project: He might mechanize existing calligraphic styles, he was told, but he was not to produce a bastardized, derivative form, and he was not to devise any new font designs. His font was the best produced to that time, says Milo.



Exhibition visitors view the calligraphy on an Ottoman tombstone.

Milo knows, because he has made the same kind of study of Arabic script that Müteferrika did. Together with Mirjam Somers, a graphic designer, and his brother-in-law Peter Somers, an aeronautical engineer, he created the conditions for the "essential" Arabic script.

That reconstruction is at the heart of the new Tasmeem computer typesetting system, which makes it possible for the first time to set Arabic text in its full calligraphic glory. (*Tasmeem* means "design" in Arabic.) An example was in the Nieuwe Kerk exhibition, where a mock-up of a mosque interior is decorated with verses from the Qur'an in Milo and Somers's Tasmeem, a perfect reproduction of the most beautiful Arabic calligraphy, coming not from the pen of a great Ottoman calligrapher but from a computer.

Immersing himself in his study of the Muslim world, Milo delved into a variety of disciplines, sometimes spotting cross-connections that might have eluded others. He studied Russian, Turkish and Arabic, and traveled throughout the Middle East. He found that the writings of Russian Arabists sometimes illuminated topics—including Arabic script—from angles not found in western sources. And Turkey, in particular—the country that switched from Arabic script to Latin letters almost from one day to the next in 1928—turned out to be a treasure house of the most beautiful examples of Arabic calligraphy and typography for Milo and Somers to work with, for Ottoman Turkey, the artistic and political center of the Middle East for more than four centuries, was where great masters—perhaps the greatest masters—of the art had worked.

TOP: THOMAS MILO; LOWER: PATRICK POST / HOLLANDSE HOOGTE; OPPOSITE: THOMAS MILO

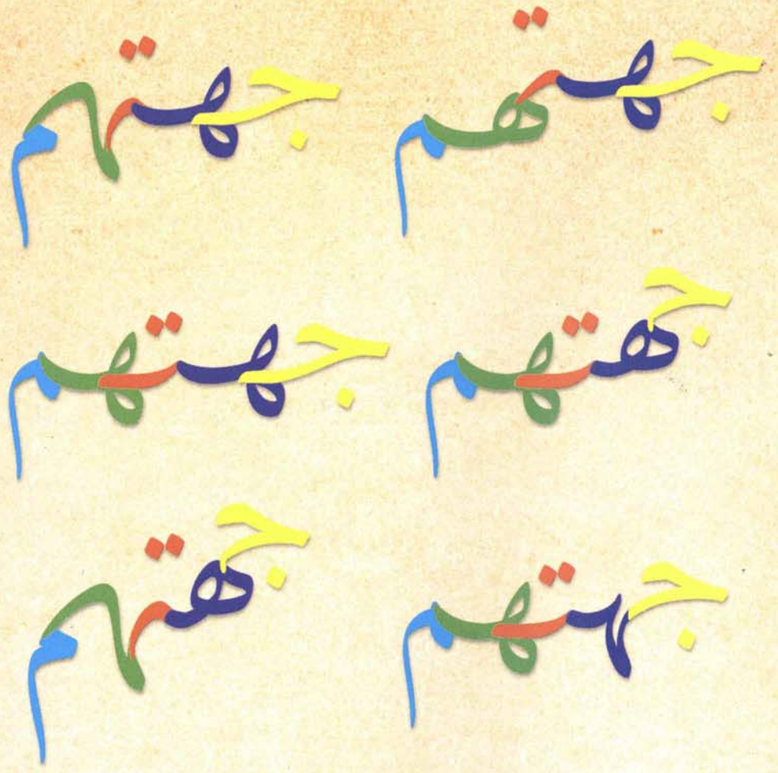
Tasmeem's computer calligraphy of the Throne Verse of the Qur'an embellished part of an Ottoman culture exhibition in Amsterdam.

An essential further step in Middle Eastern typographic design came, a little more than 100 years after Müteferrika, from the hands of an Armenian typographer named Ohannes Mühendisyan. His fonts—perhaps thanks to his early training as a jeweler—were far more graceful than Müteferrika's, and based, he wrote, on the "tauter" Ottoman calligraphy of the great Mustafa Izzet Effendi.

As the Tasmeem team examined Mühendisyan's work, they found an identifying characteristic: a small aberration that would also appear in the many later fonts produced by Mühendisyan's successors. He had done his analysis of the hundreds of possible letter combinations very well, but in one particular letter sequence, *lam–meem,* he drew the ligature between the letters in an unusual way. (*Lam* and *meem* are the equivalent of *l* and *m*, respectively.) In this situation, *meem* should start with a right-to-left curving horizontal stroke that flows into a vertical "tail," and the vertical stroke of the *lam* preceding the *meem* should end with a slight rightward movement that puts the pen in the correct position to begin the *meem*. This is not what one would expect, because *lam*, in its stand-alone form, ends the vertical stroke with a prominent leftward horizontal line. Mühendisyan's idiosyncracy was to curve the bottom of the *lam*'s vertical slightly to the left, then add an extra rightward stroke to put the pen in the correct position for the *meem*.

Despite such errors, Mühendisyan's typefaces honored the spirit of Arabic script and were the first to mobilize its full power and richness. Yet in subsequent centuries the central question would have to be answered again and again: Could Arabic script retain its own character in the technical world? Must typesetting technology adapt itself to the special demands of Arabic script, or must Arabs be satisfied with "arabesque" typefaces that do not connect with their visual and literary traditions?

In Arabic-language books and newspapers today, little of the script's richness is in evidence, due in part to a new



The Arabic word meaning "their direction" demonstrates some varying steps in the calligraphic polonaise. The yellow *jeem* (sounds like *j*) appears in only one form, but can connect with the dark blue *ha* either from the right or from above, depending on which of the *ha*'s three forms comes next. The red *ta* can move leftward horizontally, with just a slight curve, or it can swoop downward at 45 degrees or even plunge to the vertical, again depending on the shape of the following letter, the green *ha*. That *ha* reveals a fourth form, not used by the dark blue *ha*, and the leftward end of its stroke, trending upward or curving downward, influences which of the two forms of the light blue *meem* is used, one more upright, and the other bowing to its partners in the dance.

typesetting technology developed by the German Linotype company in the 1920's. Arabic script was yoked by Linotype's restriction on the maximum vertical height of the letters, set too low for Arabic. The script was again forced into the square hole of a new technology as Arabic newspapers, especially, adopted the Linotype technology, primarily for economic reasons. Since then, generations of Arabs have become used to those flattened, denatured letterforms. Instead of a true Arabic script that sweeps the reader along into a dance that, for all its freedom, subtly follows the rules, the lively polonaise of the letters has been turned into a clog dance.

Using the calligraphy of Mustafa Izzet Effendi and other great calligraphers, the Milo–Somers team took the concept of script analysis further than either Müteferrika or Mühendisyan, making the basic unit they examined not the letter but the penstroke. That made it possible to derive the dancing, shifting letters, the tens of thousands of combinations, and the variable words all from a few hundred individual penstrokes and a clear and limited set of rules—just the sort of fundamental, tabular information that computers like to use. And with modern computers, it became possible finally to resolve the conflict that has blighted the relationship between Arabic script and book-printing technology for most of five centuries.

Tasmeem's typefaces can express the enormous variability of the individual Arabic letters as they dance through their various combinations. (Six of the more than 100 possible ways the five-letter word *tasmeem* can be written are on the cover of this issue.) Yet all these variations are functions of the almost subliminal rules of calligraphy, which still hold sway: They can be seen in action today wherever handwritten calligraphy is used, most visibly in banners and on shop windows across the Middle East.

And why was this breakthrough made by three foreigners, three non-native readers and speakers of Arabic, rather than by computer-savvy young Arabs? Arabs might have led the way, Milo believes, had the Lebanese civil war in the late 1970's and 1980's not coincided with the development of the computer capabilities needed to tackle so complex a project. Milo was in Lebanon during

THOMAS MILO; OPPOSITE: PATRICK POST / HOLLANDSE HOOGTE

Freehand calligraphy in Arabic, like the sign "big sale" on this shop window in Holland, follows tacit esthetic rules too complex for mechanical typesetting.

the 1980's. "The father-to-son knowledge of sophisticated typesetting still existed in Lebanon then," he says, "and it was a country with a rich book-production heritage and a diverse population—a little like the Ottoman Empire, in fact. But precisely that country was distracted by civil war during the years that computers were changing the world of typography in the West."

The Milo–Somers typefaces have not escaped criticism, of course. Young designers in Lebanon object precisely to the fact that the Tasmeem fonts draw on the golden age of calligraphy in Ottoman times, saying that a break with the old styles—not replication—is what's needed. Others object that only Ottoman calligraphy was used, pointing out that there was exquisite calligraphy in other styles done in other times and places. Neither criticism perturbs Milo: "The techniques on which Tasmeem is based can be used for other styles of Arabic script, including new styles that young designers are creating today. It's a matter of freedom: We are no longer bound by the technological limitations of old type-founding and printing methods. This new technology gives us the ability to keep the beauty and legibility of Arabic script even when it's computer-generated, and makes anything possible, including experimentation and innovation."

Mechanical typesetting turned the calligraphic polonaise into a clog dance.

Milo thinks, sometimes, of Müteferrika and Mühendisyan. "We see that they wrestled with the same problems we did, but we had better tools available to us. How wonderful it would be to meet them and to be able to show them proudly how we solved the problems we had in common. That would be so moving."

Arabist and journalist **Eildert Mulder** (e.mulder@trouw.nl) writes about Islam and the Middle East for the Dutch national daily newspaper *Trouw*. He served as a translator for the Dutch UNIFIL peacekeeping battalion in Lebanon in 1980 and 1981.

This article is translated and adapted from "Eindelijk terug naar het swingende schrift," which appeared in Trouw *on March 24, 2007. Used by permission.*

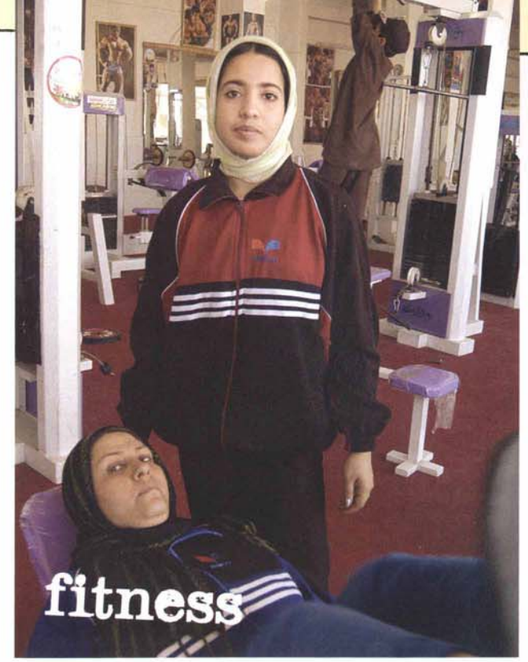
new voices | new afghanistan

Written by Fariba Nawa
Photographed by Massoud Hossaini and Farzana Wahidy

With the fall of the Taliban in 2001, many Afghans believed that, after 23 years of war, their country would be at peace again. Although recent increases in violence have dampened that spirit, there is nonetheless a small population of urban twenty-somethings who are resolutely —albeit not always successfully—working to build an Afghanistan where culture, art and entrepreneurship can flourish.

These young men and women have worked hard over six years, and it's their spirit that has paved the way for new television stations, sports clubs, art galleries, music schools and countless businesses to open and thrive, mainly in such urban centers as Kabul and Herat. Indeed, those at the forefront say that, since 2004, there's been a small cultural renaissance under way in Afghanistan.

Here are five people who are making a difference.



fitness

They arrive in *burqas* or *chadors* and, once inside, they change into workout sweats. Most of the women who come to Gold's Gym in Herat do so with their family's knowledge and support, but a few of the younger women bring their mothers to exercise with them, and a few say they are afraid to tell their parents, spouses or family elders what they're up to.

But Elham Pirooz, a professional trainer and founder of the two-year-old Gold's Gym (not affiliated with the US-based franchise), wants to see not just young women, but the entire female population of the city working out. So far, she has signed on 50 women—of all ages—as permanent members, for the equivalent of four dollars a month.

Although another woman previously operated a gym clandestinely in a private home, Pirooz's gym was the first to open publicly in Herat in 2005. Afghanistan's bodybuilding champion Khusrow Bashiri helped Pirooz, and the two brought in up-to-date hi-tech equipment from Dubai.

"In the beginning, women were very excited that they had this opportunity that they had only seen in movies. Some women came for physical therapy and others came to be fit. People are becoming more aware of their health now," Pirooz says.

Now, two years later, some of those members have become trainers and are participating in bodybuilding and weightlifting competitions with some of the 10 other gyms that have opened since. But Pirooz says Gold's keeps its members because it still boasts the best equipment in town, and it hosts some of the competitions. Prizes are such things as sports outfits or household items.

Pirooz says she trains members with breathing and weight-lifting exercises as well as aerobics. There is no air-conditioning, but ceiling fans fight the heat in the summer.

Chatty and friendly, Pirooz is one of six children in a family of athletes. Her sister is a karate champion, and her uncle was a bodybuilder. Pirooz's mother and father moved to Iran a week after their wedding 22 years ago, and the family returned to Herat from Tehran four years ago after the election of Muhammad Karzai as president of Afghanistan. Last year, Pirooz married a man who, like her, is an Afghan raised in Iran. He supports her athletic and business efforts, she says, and wants her to pursue her bigger dream: studying law.

Life in Tehran was easier, she says, but in Afghanistan she can be part of rebuilding a country.

"In sports alone you can see how much Herat has grown, and so has the rest of the city. I'm glad to be here," she says.

film

Roya Sadat thrives on intensity. She wakes up at four a.m. to discuss her latest film ideas with friends, and she can enjoy a three-hour discussion on the internal contradictions of modernity. A self-trained filmmaker, Sadat, 26, does not crack a smile. She has serious brown eyes. A sense of humor is not one of her traits.

Her first movie, *Ellipsis* or, translated literally from Persian, *Three Dots* (2003), was the subject of debate and discussion at film festivals around the world; inside Afghanistan it won her six of nine awards for filmmakers, including best director and best film. One of Afghanistan's handful of women filmmakers, she makes films that shed light on women's rights—a controversial subject.

Ellipsis is the story of a rural widow who, with her children, fights to survive in a region where the local warlord forces her to smuggle narcotics to Iran. "My goal was to show the voices of the forgotten people, those in the villages who tried to become urban but did not have the means. So they were forced to become armed commanders and thieves," she says in a telephone interview. Sadat's style is minimalist, and resembles the genre of independent Iranian films, some of which employ local amateurs as actors, as she does.

Ellipsis has been shown on television in Afghanistan, and Sadat says it was well received. The Afghan Independent Human Rights Commission bought the rights to the film, whose most controversial aspect is that some of the actors are Afghan women. In fact, it took Sadat more than a year to find women—all amateurs—to fill these parts. For shooting, Sadat took them and her film crew to the desert on the border of Iran and Afghanistan. In that remote region, local commanders threatened her. After six days of filming, Sadat and her crew hurried back to Herat, where she finished the film. Japanese investors and Siddiq Barmak, the creator of the award-winning 2003 movie *Osama*, helped fund the project.

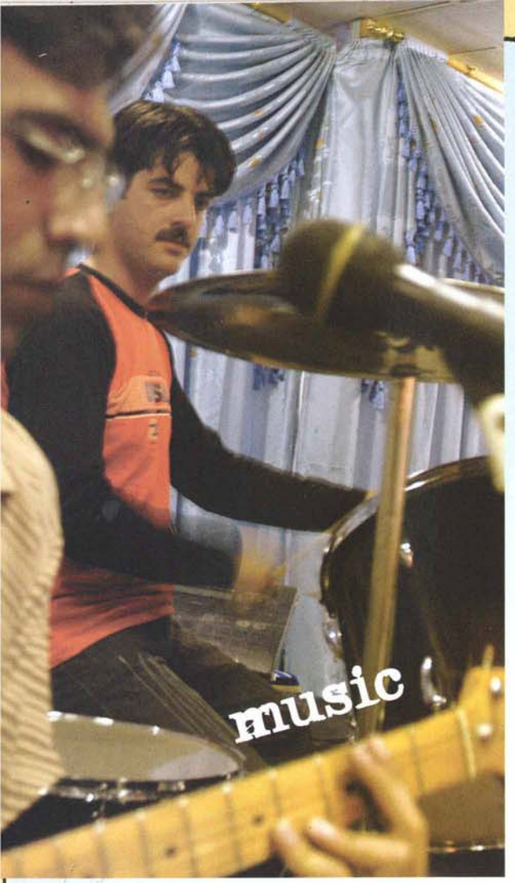
Born and raised in Herat, Sadat had not traveled outside the country until a few years ago, when her first film was released. She endured the Soviet invasion, the Mujahideen and the Taliban years, reading books at home to keep herself occupied. She recently received her bachelor's degree in political science and law from Herat University, training which helped her carry out research for *Three, Two, One*, a documentary about illiterate Afghan women produced by her sister Ilka. She plans to show the documentary to the Afghan parliament in the hope of influencing pending legislation.

In the last few years, Sadat has traveled to Germany, France, Singapore, India and South Korea, where she studied at the Asian Film Academy and made a short film with other students called *The Calling*.

Her next film, she says, will also focus on women, but her biggest challenge has been funding. To raise money for her next feature, she has signed with Tolo TV, Afghanistan's most-watched station, where she will direct a drama series called *Home*.

"I didn't wait for things to be safer and better because people can appreciate and differentiate between simple and complex ideas, but they're afraid," she says. "I worry about the consequences, but I'm still willing to make the sacrifice."

FARZANA WAHIDY (2)



Two brothers and three friends, wielding a keyboard, percussion, conga drums and two guitars, are the band called Mawj (Wave), so named to symbolize the "new wave" of Afghan music. Their smooth, heavily instrumental electric pop is a sort of Afghan Depeche Mode, a fusion of electronics and fresh rhythms that departs from older styles, often based on Indian film scores, without rejecting its roots.

In 2005, Mawj released their first album with 10 songs, and produced music videos for two of them that immediately hit the top of the charts in the country. (Yes, there are pop charts in Afghanistan.) Now, with a second album out —24 songs and five music videos—they are one of the most popular bands in the country. The brains and the leading voices of the band are brothers Ajmal and Aimal Omaid. Ajmal is the clean-cut lead vocalist, and Aimal, 26, is spokesman, percussionist, drummer and overall fusion genius.

Ironically, the group's biggest hit came before they formed as a formal band, when they wrote and composed a 2005 song called "Your Heart and Your Soul." Television and radio programs in Kabul played it on the hour. Aimal says that after the years of the Taliban, during which music was banned, there is a "musical renaissance" sweeping the country. Performers are returning from exile and new artists—like Mawj—are working hard to come up with new sounds.

"There is so much pressure to be original now. You can't just recycle songs from bygone artists anymore," Aimal says.

By profession Aimal is a graphic designer, and he uses his computer skills to research music mixing on the Internet. He has built a state-of-the-art home studio, where he spends much of his time blending what the band plays in their rehearsals, at weddings and in concerts. Although they began singing their songs in Dari, the Afghan dialect of Persian, they also want to reach listeners of other ethnicities, so they have recently incorporated Uzbek and Pashto into their lyrics and filmed two of their music videos in Tashkent, Uzbekistan.

Aimal says he has been on stage since he was 11, when he sang patriotic songs at his French-speaking school in Kabul. When the family moved to Pakistan in 1997, the brothers took solace in practicing music. A few friends who played instruments gathered, and before they knew it, they had a band. They all moved back to Afghanistan in 2001, and they have stayed together.

"We want to serve the new generation, who value music, but we also want to produce fast songs they can dance to," Aimal says. "We have made it this far because of the encouragement of this new generation."

MASSOUD HOSSAINI (3)

It was happening all the time, she says: Crossing a busy intersection in Kabul, men passed Rana Ahmadi, looked at her with a mixture of admiration and disapproval and, after she had passed, whispered mockingly, "Chai Arab! Chai Arab!" ("Arab Tea!") No matter how many times it happened, Ahmadi could not get used to people's negative reaction to her appearances in a dozen-odd Afghan television commercials—even though her dress on screen was always conservative.

She had wanted to be a film actor, but at 22, while attending university, she changed to making television commercials because it seemed less controversial. She became a familiar face in popular commercials for laundry detergent, mobile telephones—and tea. The tea advertisements had the most catchy speaking part.

Despite her desire to help change attitudes, she says she is not ready to do that at the expense of her security or her family name. Her bronze-skinned, pretty face has, she says, become too familiar.

Born to an Iranian mother and an Afghan father, she spent her first 17 years in Iran. Mixing the Kabul and Tehran dialects of Persian, she says she fantasized about returning to her father's homeland while she was growing up, and that it was she who convinced her family of seven to move to Kabul—a decision she now regrets.

Ahmadi points to the 2005 murder of Shaima Rezayee, a 24-year-old "veejay" on a popular music program, as justification for her departure from show business.

"My actions are a freedom that women could follow. Until when are they going to sit and wait to be saved?" she says. "But right now society has won, because a girl's family and security are more important."

In the 1970's, Kabul was called "the Paris of Central Asia." Arsalan Amini, a 26-year-old buyer and manager of four stores at the swanky Roshan City Tower mall, wants his capital to regain that title.

Sitting cross-legged in one of the stores he manages, Amini wears a pin-striped black suit with a deep blue shirt and a blue handkerchief tucked into the suit pocket. He arches his thick dark eyebrows and runs his fingers through his neatly combed hair.

Fashion in Kabul today, he explains, is largely "a mishmash" of Indian and western clothes "without any style." He's here to change that, he says.

For his stores, "I buy what I would look good in," he says with confidence. He is fairly free to choose designs and styles as long as they conform to some of the customers' expectations. Women, for example, like bright colors—hot pink and neon orange. Men are more subdued, but prefer light yellows and whites. Most Afghans, he explains, get fashion ideas from India's Bollywood movies.

This does not sit well with Amini, who has chosen to dictate styles that mostly come from Turkey. Male mannequins in his stores sport silk ties, colorful collared shirts and dark suits with price tags ranging from $50 to hundreds of dollars. The female mannequins show short-sleeved or sleeveless Indian *kurta*s and wide, sheer matching pants with sequins and glitter. There are both conservative long-sleeved outfits and off-the-shoulder shirts, as well as western clothes—mostly evening gowns with straps or long dress suits for older women.

"I'm not interested in getting men and women to show more skin," he says, "but to think about fashion with a little more edge."

Encouraging a "fashion sensibility" and a sense of hip style remains a challenge in a country where advertising is not yet common. Amini wants to have more fashion shows, and he's looking forward to ads on the country's few television programs, even though persuading women to model modern clothes is still contentious.

Amini, who spent 10 years in Moscow and Tashkent and speaks six languages, says his customers are mostly Afghan expatriates visiting from their homes in the West, and some wealthy in-country Afghans, often merchants and politicians. Sales in the shops can range from zero to $800 a day. Ordinary Afghans find the Roshan City Tower mall overpriced, and they may come to browse—and then copy the design for their neighborhood tailors to sew.

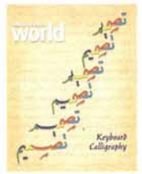
In the present deteriorating political situation, however, Amini is concerned. The rise in violence this spring has kept sales down, and a fear of suicide bombers has kept customers away from the shiny mall, forcing business to a post-2001 low. But despite the dangers and uncertainties, Amini is staying, determined to teach people to dress smartly.

Fariba Nawa (fnawa@hotmail.com) is an Afghan–American journalist who moves between Kabul and California. She has been writing about Afghanistan since 2000. Free-lance photojournalist **Massoud Hossaini** (massoud150@yahoo.com) shoots for Agence France-Presse, BBC and Getty Images in Kabul. Free-lance photojournalist **Farzana Wahidy** (farzana150@yahoo.com) specializes in stories about women's issues in Afghanistan.

***Mawj* Web site and downloads:** www.arman.fm/omaid.htm

ClassroomGuide

WRITTEN BY JULIE WEISS



For students: We hope this two-page guide will help sharpen your reading skills and deepen your understanding of this issue's articles.
For teachers: We encourage reproduction and adaptation of these ideas, freely and without further permission from *Saudi Aramco World*, by teachers at any level, whether working in a classroom or through home study.

—THE EDITORS

Class Activities

This issue's Classroom Guide is organized around two themes: ***The Arts*** *and* ***Putting the Puzzle Together.***

Theme: The Arts

What makes the arts valuable? Two articles in this issue of *Saudi Aramco World* address that question in different ways. The first, "new voices | new afghanistan," presents five profiles of young entrepreneurs (four of whom work in culture and the arts) in post-Taliban Afghanistan.

Start your work by thinking about the context. As a class, discuss and write down what you already know about Afghanistan. Use the introduction to "new voices | new afghanistan" to get you started. If your knowledge is thin, visit your library or do an Internet search to find out about Afghanistan since 1978. Before you go on with the activities, be sure you can answer these questions: What wars was the country involved in? What is the Taliban? How did it fall? What is the current political situation in the country?

What role can the arts play in rebuilding a country?
Think about what it would be like to live in a country that is rebuilding after decades of war. If you were a young entrepreneur, what kind of business would you want to start? Why? How would it help meet the needs of the people around you? Discuss your thoughts as a class.

Now think about "new voices | new afghanistan." What kinds of businesses does it focus on? How do they compare to your ideas? Why do you think the people interviewed for the article chose to focus on arts and culture? In other words, why do these five entrepreneurs think arts and culture are so important? Do you agree? Write your answers, and do it in the form of a letter to one of the five. In your letter, a) explain what you understand about why he or she chose that work; b) state whether you admire and/or would make that choice; and c) explain why you hold the opinion you do.

When is it worthwhile to take risks to make art?
The people profiled in "new voices | new afghanistan" all touch on the subject of the difficulties—and sometimes dangers—of working in Afghanistan. Highlight the places in the article that address these problems. Then divide the class into pairs. With your partner, focus on Roya Sadat and Rana Ahmadi. Both talk about the dangers they face, but each woman has reached a different conclusion about how to proceed. Take the role of one of these women; have your partner take the role of the other. Role-play a conversation about the risks involved in being a woman making films and commercials, and about how you've decided to deal with them. Can you understand each other's point of view?

Think about film- and commercial-making in most other countries. They are hardly dangerous occupations—at least not in the life-threatening way that they are in Afghanistan. What do you think motivates most actors and filmmakers to pursue the careers they've chosen? (Check out some of their Web sites, pick up a fan magazine, or watch "American Idol" if you're having trouble answering that question!) How would the motivation to make films—even documentary films—in most other places differ from Roya Sadat's motivation? How would the motivation to star in commercials elsewhere differ from Rana Ahmadi's motivation? Think about whether you would you be interested in film- or commercial-making if you lived in Afghanistan.

After you complete these activities, write a journal entry that answers this question: When is it worthwhile to take risks, and when isn't it worthwhile? In your writing, address the two Afghan women. Think, too, about what you might do if you were in their place, and why you might do it, or not.

What does art reveal about the people who created it and the times they lived in?
"Written on the Wind" also looks at the importance of the arts, but in a different way. Read the article, which examines works of art and the Southeast Asian Islamic context in which they were created. Using different colored highlighters, identify the following elements of that context: geography, economics, politics and, of course, religion. Write each at the top of a sheet of paper. On each page, identify how each context affected the artwork, and/or what the artwork reveals about each context area at the time the artwork was created. What concluding statement can you make about the relationship between art and its context?

Which approach to the arts do you find more interesting? Why?
The two articles you've read are both based on the notion that the arts are very important. But each article views that importance differently. Which do you find more interesting? Why? Write your answer in response to this prompt: "I find the arts interesting because…"

Theme: Putting the Puzzle Together

"New Pieces of Mada'in Salih's Puzzle" describes how scholars are piecing together the history of a city in what is today Saudi Arabia. On one level, this article tells about the history of Mada'in Salih, the city known in ancient times as Hegra. But on another level, it shows you how scholars pool their efforts, gather data and put together a story about the past. As the title of the article says, it's a lot like putting together a puzzle—only, as you'll see, sometimes you don't know where the edges are!

Why do scholars want to know about Mada'in Salih's past?
Before looking at how scholars are piecing together the history of Mada'in Salih and its people, think about a more basic question: Why is it worthwhile to find out about that past? When scholars apply for funding to pursue their research, they must always answer

Class Activities (cont.)

that question. Glibly put, they must answer the big "So what?" Why should they spend years of their lives—and ask others to spend lots of money—to excavate the remains of this Saudi Arabian city? (Or any other one!) Write your class's answer to the question at the top of a piece of chart paper. You will be adding to the chart as you work through the following activities.

People with many different occupations are participating in the excavation at Mada'in Salih. What do they do?
Near the top of page 17, you will find a dizzying list of specialists who will be involved in the four-year excavation project at Mada'in Salih. They include: archeologists, epigraphers, numismatists, topographers, ceramicists, paleobotanists, anthropologists, geophysicists, and draftsmen. Divide the class into groups. Assign each group one of the occupations. Find out what your occupation involves. Get more than a dictionary definition. Do a little digging. (Yes, that pun was intended.) Find the parts of the article that describe work that someone with your group's occupation has done. Then expand your search. Find examples of your occupation in action in other settings. Report to the class on what you've found.

Each of the specialists provides pieces of the puzzle that's being put together at Mada'in Salih. What are those pieces? Make a jigsaw puzzle. Have a piece for the type of evidence that each scholar works with. What title would you give the puzzle?

How are scholars piecing together Mada'in Salih's past?
The story of the excavations at Mada'in Salih is a fascinating example of how scholars locate evidence, then use that evidence to piece together the puzzle of what an ancient civilization was like. Read the article again, looking specifically for mentions of the evidence that's been found at Mada'in Salih. On your chart, below your class's statement about the value of excavating the site, make a two-column chart. In the left-hand column, list each type of evidence. In the right-hand column, list what it might be evidence of. Remember that sometimes evidence lies in what's missing. When there is reason to expect something to be present but it's not there, that's a kind of evidence. Be sure to include that in your chart.

Gather your information not just from the text of the article, but from the photos that accompany it. Nearly every photograph presents a piece of the evidence being uncovered at Mada'in Salih. Study the photos and read the captions to find out what each shows you. Include the evidence from the photographs in your table.

What happens when new findings change the basic understanding of the history being studied?
In Mada'in Salih, something unexpected—and exciting—happened. Scholars found something that challenged their core ideas about Hegra (the name of the city in ancient times): A stone tablet whose writing showed them that the city they were studying actually lasted longer than they had thought. Think about how dramatic that finding is. Imagine that it's the year 4000, and the most recent artifacts from the United States come from 1907. Then suddenly archeologists find something from 2007. (Maybe it's a copy of this magazine that's been stored in a safe.) Their whole idea about the United States has to change. In Mada'in Salih, how has that one tablet changed not just the pieces of the puzzle they're constructing, but the puzzle itself?

LEILA NAHMÉ

Analyzing Visual Images

Consider the photograph on page 16. It looks, at first glance, like a simple desert landscape. But look more closely at the composition. Notice the different sections, which are defined by color variations, shapes and the textures of the objects in the photo. Before you read the caption, see if you can figure out what this is a photograph of, and how it relates to the excavation at Mada'in Salih. Then read the caption. Were you right?

Look at the focal point of the photo—the cuts in the ground. Look at a sidewalk in your community. It's probably flatter than the cut earth shown in the photo, but photographing its cracks or seams would present some of the same problems that the photographer faced here. Use a camera to take pictures of the sidewalk. Try different angles. You might take one looking straight down at it, another from near ground level. You might take a picture in which the blocks of sidewalk fill the frame completely, others with different backgrounds. You might try something more abstract, like a shot from the side, so that the lines separating the squares look vertical in your photo.

Which of your photos is most interesting to look at? What makes it most interesting? Which is least interesting? What makes it that way? Which draws attention to the cracks between the blocks? Which is the most informative? Which is most visually pleasing or artistic?

Julie Weiss is an education consultant based in Lowell, Massachusetts. She holds a Ph.D. in American studies. Her company, Unlimited Horizons, develops social studies, media literacy and English as a Second Language curricula and produces textbook materials.

Events&Exhibitions

Perpetual Glory: Medieval Islamic Ceramics from the Harvey B. Plotnick Collection shows some 100 treasures from one of the finest collections of early Islamic ceramics in the world, ranging from the early Abbasid caliphate in Iraq (ninth–10th century) and the Mongol Ilkhanid Dynasty in Iran (mid-13th–mid-14th century) to the Timurid Dynasty in eastern Central Asia (14th–15th century). The dramatic development of ceramics in the medieval Islamic period has been called nothing short of an industrial revolution. Glazed pottery—white wares painted in cobalt blue, luxurious lusterware and prized splashware—was produced in larger quantities and varieties than ever before and was traded widely along the Silk Roads. The exhibition closely examines the most important types of ceramics produced in Iraq and Iran during this time—lusterware, slip-painted ceramics, underglaze-painted wares and overglaze-painted wares known as *mina'i*—and features these objects with a number of contextual examples from Egypt, Syria, Afghanistan, and central Asia. Lusterware, a forte of the Plotnik Collection, was produced in an exacting process involving the application of metallic solutions—usually copper and silver oxides—and multiple firings. It was first developed in Iraq in the ninth century and was imitated and prized by the Fatimid rulers in Egypt starting in the mid-10th century before spreading to Syria, Anatolia and ultimately Iran, where it reached its technical and artistic peak in the late 12th and early 13th centuries. Art Institute of **Chicago,** through October 28.

This bowl from early 13th-century Iran shows a falconer on horseback.

<<< Last Call

Butabu: Adobe Architecture of West Africa: Photographs by James Morris presents 50 large-scale images of structures from monumental mosques to family homes. For centuries, complex adobe structures have been built in the Sahel region of western Africa. Made only of earth mixed with water, these buildings display a remarkable diversity of form. Morris, a British photographer whose work centers on the built environment, spent several months traveling to remote villages and desert communities to photograph these organically shaped, labor-intensive adobe structures, creating both a typological record of regional adobe construction as well as an artist's rendering of West African architecture that reflects the sensuous, surreal and sculptural quality of these distinctive buildings. Several ambitious religious buildings seem to push the physical limits of mud architecture. More humble structures, such as private homes or neighborhood mosques and churches, are highly expressive and stylish, and are often intricately decorated. These African adobe buildings share many of the qualities now much admired in the West: sustainability, sculptural form and the participation of the community in conception, fabrication and preservation. ⓘ (310) 825-4361, www.fowler.ucla.edu. UCLA Fowler Museum of Cultural History, **Los Angeles**, through July 15.

Nasir Nassan al-Agha mixes expressionist and realistic impulses, combining colors to produce subtle, elusive and emotional paintings. The Syrian artist's work is an homage to romanticism. Galerie O, **Riyadh**, through July 20.

Alex Webb: Istanbul displays color photographs of "the city with a hundred names" taken on his visits there since 1998. Webb, a Magnum photographer, conveys the densely layered complexity and energy of the bi-continental city. Sepia International, **New York**, through July 27.

The Emperor's Terrapin was carved around 1600 and found on the grounds of the fort at Allahabad in northern India in 1803. It is associated with Crown Prince Selim, later to be the Emperor Jahangir, son of the great Mughal emperor Akbar. "Turtles are marvelous sculptural pieces," said Sir David Attenborough, "and as such clearly inspired the Mughal artist working with a spectacular jade boulder." Horniman Museum, **London**, through July 29.

<<< Ongoing

Treasures of Ancient Egypt presents more than 200 artifacts, from statuary and relief to coffins, funerary art and everyday domestic objects, to shed light on the life of the ancient Egyptians. Art Gallery of **Nova Scotia, Halifax**, through August 19.

Architectural Textiles: Tent Bands of Central Asia highlights a unique and fundamental weaving: the tent band. The trellis tent has made nomadic life possible across Central Asia for at least 1500 years. An important component of its construction is a woven tent band which girdles and braces the lower part of the wooden roof struts against the heavy load of felts and the force of strong winds. Beyond that function, tent bands are often elaborately decorated. The exhibition includes approximately 40 tent bands made by different Central Asian ethnic groups, including Turkmen, Kyrgyz, Uzbek and Kazakh, and representing a wide range of structures, colors, designs and materials. Period photographs of nomadic life and weaving provide context and an educational gallery teaches visitors how to "read" a tent band. Textile Museum, **Washington, D.C.**, through August 19.

The Photography of Suleiman Al Awadi presents landscapes and architectural images by a Kuwaiti photographer, civil engineer and art collector. Arab American National Museum, **Dearborn, Michigan**, through August 19.

The Art of Integration, a photographic exhibition by Peter Sanders, explores the world of British Islam to discover what makes it British and what makes it unique. ⓘ +44-20-7613-7490, info@richmix.org.uk. Rich Mix, **London**, through August 22.

Architecture of the Veil: An Installation by Samta Benyahia—the first US museum exhibition by the Algerian artist—takes its theme from the *moucharabieh*, the openwork screens used in Mediterranean Islamic architecture to cover windows and balconies, allowing those inside—typically women—to view the outside world without being seen. The installation provides a beautiful and dynamic exploration of gender as well as the dialectic between interior and exterior, light and shadow, concealment and revelation, and private versus public space. Fowler Museum at UCLA, **Los Angeles**, through September 2.

The Jazira: A Cultural Landscape Between the Euphrates and the Tigris presents the art and culture of the petty princes of the region—the *jazira*, or "island"—in the 12th and 13th centuries. The medieval dynasties of the Zanjids, Artuqids and Ayyubids favored a courtly lifestyle that manifested itself in opulent libraries and artistic production and featured extensive figurative representation in objects of art and architectural design. Artisans were encouraged to study the symbols of the illustrious past, including astrological symbols, and to re-use them for the glorification of their princely patrons. The exhibition's 70 objects include masterpieces, never published or barely remembered, in their historical context; they exemplify one little-known but particularly interesting epoch in Islamic culture. Pergamonmuseum, Museum für Islamische Kunst, **Berlin**, through September 2.

Greeks on the Black Sea: Ancient Art from the Hermitage. At the end of the seventh century BC, Greek city-states created settlements in the northern Black Sea region, which produced such staples as fish, grain, olive oil and wine and shipped them back to Greece. They quickly became wealthy through trade with the metropole and with such indigenous tribes as the Scythians. Artisans working there produced objects that linked Greek artistic traditions with those of the cultures of the Eurasian steppes. In collaboration with the State Hermitage Museum in Saint Petersburg, this exhibition features approximately 175 objects of the Greek and Roman periods that demonstrate the opulence and high aesthetic quality of these unique works of art. Getty Villa, **Pacific Palisades, California**, through September 3.

Masters of the Plains: Ancient Nomads of Russia and Canada examines two of the world's great nomadic cultures side by side for the first time, providing a unique look at the bison hunters of the Great Plains of North America and the livestock herders of the Eurasian steppes. More than 400 artifacts from Canada and Russia permit exploration of food preparation, sacred ceremonies, art, trade, housing design, modes of travel and warfare in the two cultures, which each took shape some 5000 years ago and lasted into recent times—a longevity that compares favorably with history's greatest civilizations. Canadian Museum of Civilization, **Gatineau, Quebec**, through September 3.

Of Gold and Grass: Nomads of Kazakhstan provides a unique perspective on the history and culture of the peoples who lived on the territory of present-day Kazakhstan many centuries ago. The exhibition features outstanding archeological finds, including original pieces from the costume of the Golden Warrior and the most recent discoveries from Berel. **Houston** Museum of Natural Science, through September 9.

Blue & White: Objects in Blue & White from Egypt to China. Cobalt blue has been used to decorate ceramics since the 10th century. The earliest examples of the technique come from Egypt; it then spread to Persia and onward, from the 14th century, became the well known blue-and-white Chinese porcelain, which in turn influenced ceramics in Persia, Turkey and eventually Europe. While at first it was Persian and Arab merchants who dealt in cobalt blue ceramics, which were much in demand in the Islamic world, Europeans—especially the Portuguese and Dutch—took over the Asian trade in the 16th century. Chinese porcelain manufactories supplied, on their customers' request, decorations and shapes in European styles. In Europe and the Islamic world, the demand for blue-and-white ceramics remained strong for centuries, and was met not only by imports but also by domestic ceramic producers. China's neighbors, Vietnam, Korea, and Japan, were also big importers of Chinese porcelain until they built their own factories and became competitors. For centuries, "blue-and-white" remained a symbol of intercultural relations. Museum of Applied Arts/Contemporary Art, **Vienna**, through September 9.

ART INSTITUTE OF CHICAGO

Neither East nor West: Asia in the Age of Monochrome examines the exchange of cultures in the late 19th and 20th centuries. Photographs taken by the Lafayette Studio in London show the international nature of the ruling classes of Asia, as Lafayette's clientele included figures from Thailand, Japan, China, the Malay Peninsula and India. The exhibition's title comes from a poem by Rudyard Kipling, and points out that differences of geography and race are inconsequential when individuals of different classes work together. Portraits of Europeans relevant to Asia's development are also included. Islamic Arts Museum **Malaysia, Kuala Lumpur**, through September 10.

A Passport to the Egyptian Afterlife: The Book of the Dead of Ramose was discovered by Sir William Flinders Petrie in 1922 and is one of the finest such books in existence. Now conserved, it is on display for the first time at the Fitzwilliam Museum, **Cambridge [UK]**, through September 16.

Encompassing the Globe: Portugal and the World in the 16th and 17th Centuries brings together approximately 300 extraordinary objects reflecting the unprecedented cross-cultural dialogue that followed the establishment of Portugal's world trading network in the 16th and 17th centuries. Portugal was the first European nation to build an extensive commercial empire, which soon reached to Africa, India, China, Southeast Asia, Japan and Brazil. Portuguese contact with these regions, which had been virtually unknown to Europeans, led to the creation of highly original works of art, some intended for export and others for domestic consumption in their countries of origin. Initially displayed in princely "wonder cabinets"—the ancestors of the modern museum—and now scattered throughout the world, the paintings, sculptures, manuscripts, maps, early books and other objects assembled here provide a rich image of a "new world" during its formation. Sackler Gallery, **Washington, D.C.**, through September 16.

Persia: 30 Centuries of Arts and Culture presents nearly 200 works from Persia's antiquity to the end of the Qajar Dynasty in 1925. The exhibition begins with the Achaemenids, who built roads, canals, splendid palaces and temples adorned with sculptures and bas-reliefs. At the edges of their empire, nomadic peoples also left traces: Nomads from the Scythian Empire built monumental burial mounds. First excavated in the time of Peter the Great, these *kurgans* yielded spectacular gold objects. In the second half of the fourth century BC, the Achaemenids' weakened state was conquered by Alexander the Great, and Greek influence is clearly visible in the great cultures of the Parthians and the Sassanids. The latter excelled at making elaborately worked silver objects, often decorated with hunting scenes. With the advent of Islam, the vocabulary of art changed. The exhibition displays bronzes, such as a remarkable incense burner in the shape of a cock, and earthenware, including a suite of 22 frieze tiles from the 13th-century mausoleum of Pir Husayn. Persian miniatures flowered in the 15th and 16th centuries, and nearly 40 miniatures and book manuscripts are included in the exhibition. Two rooms are devoted to other Persian art between the 15th and the 18th centuries, including ceramic dishes—some of whose forms and cobalt decoration show Chinese influence—and glass, much of it produced in Shiraz. Among costly and fragile Persian textiles are two striking 16th-century fragments, both showing a prince at a banquet in a blossoming garden. Persian envoys often took valuable fabrics such as these with them as diplomatic gifts. The exhibition ends with a survey of the art of the Qajars, marked by great splendor, luxury and opulence. Hermitage **Amsterdam**, through September 16.

From Soho Road to the Punjab documents the contribution of *bhangra* and its cultural relevance in Britain today. SOAS Brunei Gallery, **London**, through September 22.

Sacred brings together rare examples of Muslim, Christian and Jewish sacred texts and treats them thematically, exploring commonalities and differences among the faiths and examining the ways the texts have been produced, interpreted and used throughout history and in the present. British Library, **London**, through September 23.

Islam: Treasures From the Collection of Nasser D. Khalili presents 300 objects that provide a comprehensive survey of the arts of Islam from the eighth to the late 19th century. Art Gallery of **New South Wales, Sydney**, through September 23.

Tutankhamun and the Golden Age of the Pharaohs includes 130 works from the Egyptian National Museum and presents a selection of 50 spectacular objects excavated from the tomb of Tutankhamun, including one of the canopic coffinettes, inlaid with gold and precious stones, that contained his mummified internal organs. Additional pieces in the exhibition derive from the tombs of royalty and high officials of the 18th Dynasty, primarily from the Valley of the Kings. These additional works place the unique finds from the tomb of Tutankhamun into context and illustrate the wealth and development of Egyptian burial practice during the New Kingdom. The exhibition, more than twice the size of the 1979 "King Tut" exhibition, marks the first time treasures of Tutankhamun have visited America in 26 years. Franklin Institute, **Philadelphia**, through September 30; Millennium Dome/O2, **London**, November 15 through September 1, 2008.

A Saint in the City: Sufi Arts of Urban Senegal refers to the ubiquitous images of poet and mystic Shaykh Amadou Bamba (1853–1927), spiritual leader of some four million Senegalese, on vehicles, on the walls of homes and businesses and in workplaces in cities throughout Senegal. The exhibition, which includes images in lithographs, posters, banners, plaques, photocopies, sand paintings and even on cuttlefish bone, reveals their power in people's everyday lives and demonstrates how they are reshaping urban environments. Museum of International Folk Art, **Santa Fe, New Mexico**, through September 30.

Art and Empire: Assyrian Treasures From the British Museum presents more than 200 artifacts from a fascinating and powerful ancient civilization. Museo Arqueologico Provincial de **Alicante, Spain**, through September 30.

Gaza at the Crossroads of Civilizations presents 121 objects, most excavated by joint Palestinian–French rescue digs since 1994, that underline the city's archeological importance and testify to the great variety of national and ethnic groups that have lived here. The finds include Egyptian, Hellenistic and Roman pottery, Byzantine mosaics, Egyptian alabaster, a Greek helmet and Ottoman architectural fragments, here supplemented by photographs of the sites where they were found. Musée d'Art et d'Histoire, **Geneva**, through October 7.

Daily Life Ornamented: The Medieval Persian City of Rayy examines the distinctive artistic traditions of this great Islamic city, predecessor of modern Tehran. Rayy was a center of politics and sciences between the ninth and 13th centuries, renowned for its glazed ceramics and its prominent position on the Silk Roads. While documents reveal the personalities and events in the history of Rayy, patterns of its society and culture are brought to life through archeological materials. The city's unique ceramic heritage is revealed through excavations of the 1930's. The exhibition approaches more than 50 objects from this collection as an archeologist would, investigating both ceramic innovations and traditions. The theme of ornamentation acts as a guide toward understanding the city of Rayy as both the source and consumer of beauty in everyday life—illuminating the lifestyles, resources, and values of its people. Catalog. Oriental Institute Museum, **Chicago**, through October 14.

Horsemanship: The Art of the Knight in the Lands of Islam demonstrates the role played by arms, armor and chivalric equipment among the arts of Islam and the cultural space they occupied. The exhibit presents thematic groupings of objects related to their forms and the means of their production, to the knight's clothing in battle and on parade, to his invocation of divine protection, to archery, tack and riding skills, and to daggers as male jewelry, among other themes. Enlarged images from manuscript miniatures show many of the exhibited objects, which come from the period between the eighth and the 18th centuries, were used. Institut du Monde Arabe, **Paris**, through October 21.

Amarna: Ancient Egypt's Place in the Sun offers a rare look at the unique royal center of Amarna, the ancient city of Akhetaten, which grew, flourished and vanished in hardly more than a generation's time. The exhibition features more than 100 artifacts, including statuary of gods, goddesses and royalty, monumental reliefs, golden jewelry, personal items of the royal family and artists' materials from the royal workshops. University of **Pennsylvania** Museum of Archaeology and Anthropology, **Philadelphia**, through October.

Daily Magic in Ancient Egypt features 46 amulets, scarabs, figurines and ritual objects associated with the belief in the power of magic in ancient Egypt—a force that played an important role in religions of the ancient world. Amulets in particular were believed to possess great power to protect their owners and guarantee health, luck and even immortality through their images and symbols, and were also used in rituals. Some were available to everyone, while others were restricted to the elite or to special groups of initiated men or women. Walters Art Museum, **Baltimore, Maryland**, through November 18.

Threads of Pride: Palestinian Traditional Costumes presents more than 40 magnificent embroidered dresses and ceremonial costumes from the Munayyer Collection, including costumes from Ramallah, Jerusalem, Bethlehem, Haifa and Jaffa. Embroidery patterns, some traceable back to pre-Islamic and pre-Christian times, were incorporated into the rich designs and brilliant colors that identify the specific village or town in Palestine, and have become an artful expression of Palestinian identity. Arab American National Museum, **Dearborn, Michigan**, through November 25.

Indigo: A Blue to Dye For spans indigo's rich history, from linen and wool burial cloths dyed in Roman Egypt to domestic textiles and clothing dyed in India and exported to Europe by the East India Company in the 16th through 18th centuries. More recent history is traced through the rediscovery of indigo discharge techniques by William Morris, the manufacture of synthetic indigo in the later 19th century and the growing popularity of denim jeans. The exhibition also features the work of present-day craftspeople in the UK, Japan, India, Bangladesh, Indonesia, West Africa and South America, which illustrate indigo's survival and adaptation to contemporary fashion. The portion of the exhibition on the process of working with indigo includes dye blocks and balls, botanical drawings and videos of cloth being dyed in different parts of the world—as well as the oldest known indigo recipe written in cuneiform on a Babylonian clay tablet. **Plymouth [UK]** City Museum and Art Gallery, through September 1; **Brighton [UK]** Museum and Art Gallery, September 29 through January 6.

Continued from previous page

Persian Visions: Contemporary Photography From Iran presents more than 80 images that provide a revealing view of Iranian life and experience. The 20 artists featured are among Iran's most celebrated and include Esmail Abbasi (references to Persian literature), Bahman Jalali, Shariyar Tavakoli (family histories), Mehran Mohajer, Shoukoufeh Alidousti (self-portraits and family photographs) and Ebrahim Kahdem-Bayatvin. Some have lived abroad and returned to view their homeland from a changed perspective. Anti-exotic and specific, these images make up the first survey of contemporary Iranian photography to be presented in the United States. Pacific Asia Museum, **Pasadena, California**, through September 9; University of **Michigan** Museum of Art, **Ann Arbor**, October 6 through January 8.

Pharaohs, Queens and Goddesses is presented in tandem with *The Dinner Party* by Judy Chicago and dedicated to powerful female pharaohs, queens and goddesses of Egyptian history. The central object of the exhibition is a granite head of Hatshepsut, the fifth pharaoh of the 18th Dynasty (1539–1292 BC) and one of the 39 women represented with a plate at *The Dinner Party*. Hatshepsut is featured alongside other women and goddesses from Egyptian history, including queens Cleopatra, Nefertiti and Tiye, and the goddesses Sakhmet, Mut, Neith, Wadjet, Bastet, Satis and Nephthys—many of whom appear on *The Dinner Party*'s tiles. **Brooklyn** Museum, **New York**, through January 20.

Art of Being Tuareg: Sahara Nomads in a Modern World. The elegance and beauty of the Tuareg peoples—their dress and ornament, their large white riding camels, their refined song, speech and dance—have all been rhapsodically described by travelers in Niger, Mali and Nigeria. This exhibition explores the history and culture of the Tuareg through their silver jewelry, clothing, leather purses, bags and saddles, and other highly decorated items. Cantor Center, Stanford University, **Palo Alto, California**, through September 2; National Museum of African Art, **Washington, D.C.**, October 10 through January 27.

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Discover Islamic Art is the theme of the world's largest virtual museum, in which 18 on-line exhibitions are dedicated to Islamic art in the Mediterranean region. In addition, a permanent collection offers 1,235 artifacts, monuments and sites from 14 countries, all with thematic links and cross-referencing to historical events from the periods of their creation. Descriptions for non-specialist visitors are available in eight languages. Zooming in on any of the images makes it possible to discover details that often cannot be seen otherwise. The exhibition pools the resources of 40 museums from 14 countries of North Africa, the Middle East and the European Union, along with the skills of more than 100 experts. The exhibit focuses on diversity and enables discovery of the expressions of the Islamic dynasties in the Mediterranean since the establishment of the Umayyad caliphate in Damascus in the seventh century until the end of the Ottoman Empire in the early 20th century. For example, Syria is represented by 35 monuments and 50 artifacts from the National Museums of Damascus and Aleppo; the British Museum took part in curating on-line exhibitions dedicated to *Water* and *The Atabegs and Ayyubids*. The national museums of Scotland and the Egyptian team produced *The Mamluks* and *Pilgrimage*, while the V&A Museum collaborated with Turkish partners on *The Ottomans* and *Echos of Paradise*. Throughout, Islamic heritage is presented as a unifying element along the shores of the Mediterranean, inviting the visitor to discover the cultural heritage of Islamic civilization as an integral part of European cultural identities. Museum With No Frontiers, www.discoverislamicart.org, permanent.

Egypt's Sunken Treasures presents a spectacular collection of artifacts recovered from the seabed off the coast of Alexandria and in Aboukir Bay. Lost from view for more than 1000 years, they were brought to light by an ongoing series of expeditions first launched in 1992 by the European Institute of Underwater Archaeology, headed by Franck Goddio. Thanks to these excavations, important parts of a lost world have resurfaced, among them the ancient city of Thonis-Heracleion, the eastern reaches of Canopus, the sunken part of the Great Port of Alexandria and the city's legendary royal quarter. The finds shed new light on the history of those cities and of Egypt as a whole over a period of almost 1500 years, from the last pharaonic dynasties to the dawn of the Islamic era. In Roman times the port city was notorious for its dissolution and debauchery; in the Christian era an important monastery was erected on the site of the ancient temples. Canopus was claimed by the sea at some point in the eighth century, and there are no finds that can be dated any later than the eighth-century Umayyad coins recovered from the seabed at the site of the vanished city. Art and Exhibition Hall, **Bonn, Germany**, through January 27.

Magic in Ancient Egypt: Image, Word, and Reality explores how the Egyptians, known throughout the ancient world for their expertise in magic, addressed the unknown forces of the universe. Ancient Egyptians did not distinguish between religion and magic, and believed that the manipulation of written words, images, and ritual could influence the world through a divinely created force known as Heqa, personified as the eldest son of the solar creator Atum. The exhibition also examines connections between magic and medicine, including the consumption of liquids imbued with magical powers, and the use of magic after death, displaying funerary figurines created to carry out any work the gods might require of the deceased in the afterlife. **Brooklyn** Museum, **New York**, through September 28, 2008.

<<July

Egyptian Antiquities From the Louvre: Journey to the Afterlife includes stone and bronze sculpture, illustrated manuscripts, painted chests and mummy cases, *ushabti* figures, reliefs, jewelry, ceramics and fine wood carvings. All of the more than 200 objects illuminate the ancient Egyptians' concern with the afterlife, for which mortal existence was only a preparation, and of whose delights it was a mere shadow. A life lived morally and in accord with the commandments would allow a soul to pass through the final gate from the underworld into the paradise of the Field of Reeds. Art Gallery of Western **Australia, Perth**, July 21 through October 28.

<<August

Splendor and Intimacy: Mughal and Rajput Courtly Life shows miniature paintings and decorative arts, in celebration of the 60th year of India's and Pakistan's independence. The exhibition features jades, jewelry and weapons, illustrating the courtly life of the Imperial Mughals and the different Rajput dynasties that reigned in northern India during the 16th to 18th centuries. Art Institute of **Chicago**, August 4 through December 30.

MuslimFest 2007 features more than 50 local and international artists who present concerts, a comedy show, a kids' carnival, a puppet show, a film festival, art and media workshops and classes. A multicultural bazaar is also featured. Living Arts Center, **Toronto**, August 11.

<<September

Portugal, the Persian Gulf, and Safavid Persia is a conference that focuses on 500 years of exchanges between Portugal and Safavid Persia, particularly their activities in the Gulf between 1500 and 1700. Topics include sources and historiography, mutual perceptions, trade, diplomacy, politics, missionary activity and cross-cultural exchanges. ⓘ www.iranheritage.org/portugal conference/. Freer Gallery, **Washington, D.C.**, September 7–9.

Wondrous Words: The Poetic Mastery of Jalal al-Din Rumi is a conference organized by the Iran Heritage Foundation and the British Museum to mark the 800th anniversary of Rumi's birth. ⓘ +44-20-7493-4766, info@iranheritage.org, www.iranheritage.com/rumiconference. **London**, September 20–22.

Impressed by Light: Photographs From Paper Negatives, 1840–1860 demonstrates that calotypes—photographs from paper negatives—flourished rather than failed in Britain after the introduction of glass negatives in 1851. Artists who used the paper negative process did so because they preferred its esthetic qualities, because it offered practical advantages for travel photography in hot climates, or because it helped to distinguish gentleman-amateur photographers from tradesmen. The exhibition is divided into four sections: The Rise of the Calotype, 1839–1851; The Calotype in Great Britain; British Calotypists Abroad; and The Calotype in British India. Metropolitan Museum of Art, **New York**, September 25 through December 31.

Mummies: The Dream of Eternal Life combines natural history and anthropology to take the visitor on a trip to the various regions, cultures and continents where mummification —of humans or animals—is practiced or natural mummification is used. The exhibition includes the Ice-Age "Windeby Girl," a complete Egyptian mummy with sarcophagus, a child mummy from Peru and mummified animals; the oldest exhibit is from the age of the dinosaurs and the most recent from the second half of the 20th century. The use of "mummy" as a medicine and the role of cryogenics in future "mummification" are also discussed. Reiss-Engelhorn Museums, **Mannheim, Germany**, September 30 through March 24.

<<October

Edge of Arabia: Art and Identity in the Land of the Prophet explores the individual expression of values and beliefs in a climate of change, and features works by 10 leading artists including Ahmed Mater al-Ziad Aseeri, Abdulaziz Ashour, Manal Al-Dowayan, Yosef Jafa, Khalid Yosseff, Ayman Yosry Daydban and Lulwah Al-Homoud. SOAS Brunei Gallery, **London**, through December.

Egyptian Mummies: Immortality in the Land of the Pharaohs traces the origins of mummification, exploring the cultural background of the practice, ancient Egyptians' concept of the afterlife and their religious beliefs. It also tracks the development of mummification techniques over time. The exhibition includes more than 300 objects, not only human and animal mummies but also mummy masks, sarcophagi, protective amulets and statuettes of deities, as well as textiles, jewelry and tools. A reconstruction of a burial site shows the use of colorful grave decorations. A separate exhibition is provided for children. Landesmuseum Württemberg, **Stuttgart, Germany**, October 6 through February.

Nawal el Saadawi, Egyptian physician, author and feminist, will take part in public "conversations" in England and Scotland. She will be at the Times Cheltenham Literature Festival, Cheltenham, **London**, October 14; the Human Rights Action Center, **London**, October 15; the School of Oriental and African Studies, **London**, October 19; and the **Edinburgh** Independent Radical Book Fair October 24. ⓘ rosemary.taylorson@zedbooks.net.

Gifts for the Gods: Images from Egyptian Temples. Throughout their long history, the ancient Egyptians used copper, bronze, gold and silver to create lustrous, graceful statuary that, most characteristically, stood at the crux of their interactions with their gods, from ritual dramas that took place within the temples and chapels that dotted the landscape everywhere, to the festival processions through the towns and countryside that were thronged by believers. This is the first exhibition to focus on the art and significance of Egyptian metal statuary; it presents a new understanding of this type of statuary, its influences and its meaning. On view from domestic and international collections will be some 70 superb statues and statuettes created in precious metals and copper alloys over more than two millennia, including several of the extremely rare inlaid and decorated large bronzes, between 60 and 110 centimeters tall, from the Third Intermediate Period (1070–664 BC), which represents the apogee of Egyptian metalwork. Catalogue. Metropolitan Museum of Art, **New York**, October 16 through February 18.

The Phoenicians and the Mediterranean presents aspects of the culture of these famed navigators and merchants, beginning with their origins around the city-states of Byblos, Sidon and Tyre. Known primarily for their diffusion of the alphabet and their remarkable sculpture, the Phoenicians were also creators of household objects and furnishings of great refinement. The exhibition deals with Phoenicians' writing—on coins, seals, clay tablets and stone stelae—their religion—represented by stone and metal statues of their pantheon and commemorative plaques—their commerce—responsible for the pan-Mediterranean diffusion of purple cloth and cedar wood—and their craftsmanship in glass, pottery, ivory and precious metals. Institut du Monde Arabe, **Paris**, October 16 through March 30.

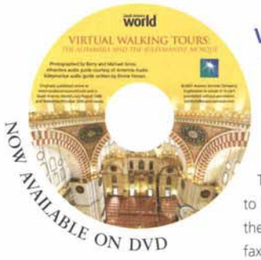
<<November

European Cartographers and the Ottoman World 1500–1750: Maps From the Collection of O. J. Sopranos. This exhibition of maps, sea-charts and atlases begins with the intellectual and geographical discoveries of the 15th century that undermined the medieval view of the cosmos and illustrates how cartographers reconciled classical ideas and theories with the information collected and brought back by travelers and voyagers. Oriental Institute Museum, **Chicago**, November 2 through March 2.

The Legacy of Timbuktu: Wonders of the Written Word centers on manuscripts from the Mamma Haidara Memorial Library in Timbuktu, examples of a local book-production industry that was one aspect of the city's role as a celebrated center of learning that attracted scholars, teachers and students from many countries and cultures of the Muslim world. The city's role as a caravan crossroads complemented its book industry, facilitating the importation of books as well as students. Teaching, learning, researching, writing, transcribing, adorning, binding and trading in books connected Timbuktu to the global Islamic knowledge industry and culminated in a complex, viable socioeconomic model. International Museum of Muslim Cultures, **Jackson, Mississippi**, November and December.

<<Permanent

The Saudi Aramco Exhibit relates the heritage of Arab-Islamic scientists and scholars of the past to the technology of today's petroleum exploration, production and transportation, set against the background of the natural history of Saudi Arabia. **Dhahran, Saudi Arabia.**



Virtual Walking Tours: The Alhambra and the Süleymaniye Mosque

Our panoramic interactive virtual tours of these two great architectural landmarks are now available without charge, upon request, on one digital video disc.* Each Virtual Walking Tour—the same ones published in the July/August 2006 and September/October 2006 issues of *Saudi Aramco World*—includes high-resolution spherical panoramic photographs with audio narration, preceded by a brief historical introduction and supplemented with still photographs and video clips. On each Virtual Walking Tour, you can go through the building in any sequence, at any pace, turning 360 degrees in any direction to look at whatever you want from a distance or close-up. If you would like to receive a single copy of the disk for classroom or home use, please email your request to saworld@saudiaramcoworld.com, or fax it to +1-713-432-5536. *Disc requires Quicktime 7.1.3 or earlier but is not compatible with Quicktime 7.1.5.

Corrections: As the result of an editing error, we referred to Copernicus on page 2 of our May/June 2007 issue as "the Polish astronomer" and on page 10 as "the Danish astronomer." Copernicus was in fact born in Torun, Poland; studied at Krakow, Bologna, Padua and Ferrara; lived and worked for some 40 years at Frombork, Poland; and died there in 1543. There is no record of his ever visiting Denmark, and he was not Danish. In another editing error, Fermat's last theorem was stated incorrectly on page 14. It should have read "there are no non-zero integers x, y and z such that $x^n + y^n = z^n$ where n is an integer greater than 2." Third, we wrote "longitude" instead of "latitude" in three places in the paragraph on page 6 that begins "Arab astronomers and cartographers...." A change in the elevation of the pole star means the scientific team walked in a north-south direction, and latitude is defined as position north or south of the equator. Finally, we wrote on page 11 that King Roger II of Sicily was the father of Frederick II, king of Sicily and Holy Roman Emperor. In fact, Roger was Frederick's grandfather, by way of Roger's daughter Constance of Sicily and her marriage to the future Emperor Henry VI. Frederick II was the issue of that marriage. We very much regret these errors, and are grateful to the readers who drew them to our attention. —THE EDITORS

Information is correct at press time, but please reconfirm dates and times before traveling. Most institutions listed have further information available on the World Wide Web, and our Web site, saudiaramcoworld.com, contains more extensive listings. Readers are welcome to submit information for possible inclusion in this listing. **Some listings have been kindly provided by *Canvas*, the art and culture magazine for the Middle East and the Arab world, on the Web at www.canvasonline.com.**

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