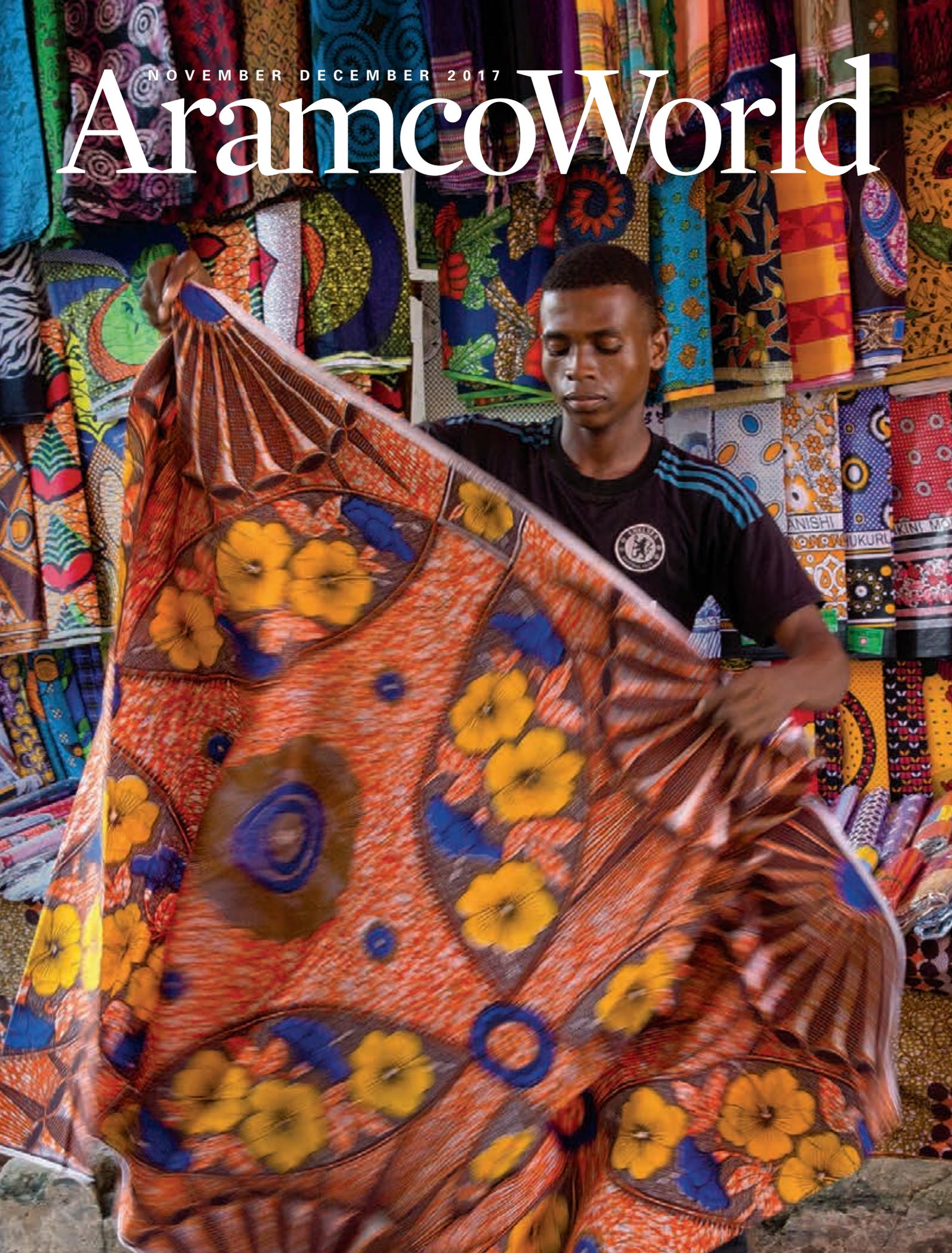


NOVEMBER DECEMBER 2017

AramcoWorld





4 Kanga's Woven Voices

Written by Amanda Lichtenstein
Photographed by Samantha Reinders

Skirt, scarf, or both; sling for a child, basket for shopping, or both; bought to honor a special occasion, to give as a gift, or just to feel good tomorrow; its distinctive, one-line *jina* a proverb, a plea, a proclamation or a sunny burst of whimsy; above all, a social statement on a colorful cotton cloth. From rural villages to city streets, women and girls along East Africa's coast do more than wear the popular rectangular *kanga*: They weave it into life, from birth to death, a "social medium" worn, traded and treasured, for designs, messages and memories.

16 Arab Translators of Egypt's Hieroglyphs

Written by Tom Verde

The translation of hieroglyphs in 1822 culminated more than 1,000 years of efforts by Romans, Arabs and Europeans. Insights from 10th-century Assyrian scholar Ibn Wahshiyya al-Nabati helped build the understanding that the Egyptian symbols worked in three distinct ways.

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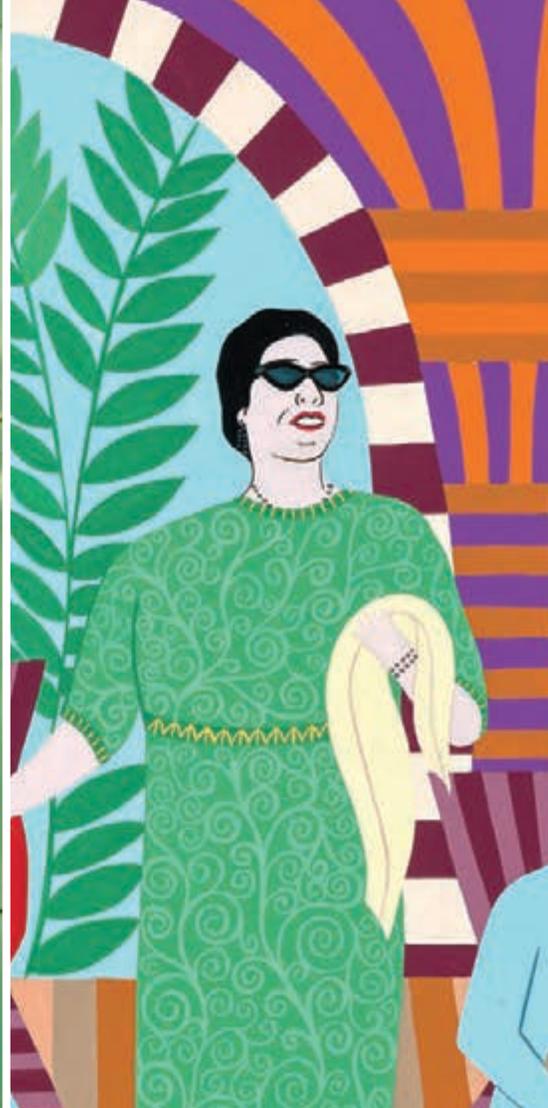
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We distribute *AramcoWorld* in digital and print editions to increase cross-cultural understanding by broadening knowledge of the histories, cultures and geography of the Arab and Muslim worlds and their global connections.

Cover: In Stone Town, Zanzibar, Kassim Gharib folds a *kanga* at his sales stand. Another vendor, Mohammed Abdullah Moody, explains that while color and design are part of a *kanga*'s appeal, "The message is everything." Photo by Samantha Reinders.

Back Cover: Among the most popular traditional Arab musical instruments is the *tar*, or large, hand-held frame drum. It is familiar across the Islamic world, and women especially have played the *tar* for centuries to accompany songs in celebration. Art by Marium Rana (detail).



16: JAN WLODARCZYK / ALAMY (DETAIL); 22: LOUVRE / BRIDGEMAN IMAGES (DETAIL); 32: MARK DUNN / ALAMY (DETAIL); CALIFORNIA - HELEN F. HIGHAIR (DETAIL)

22 12 Things Twitter Won't Tell You About Zodiacs

Written by Robert Lebling
Illustrations by Kitty Yin Ling Miao

Should the 13th constellation of the zodiac matter to you? (It's named Ophiuchus, and Babylonians wondered about it just as much as everyone who argues the point now on social media.)

32 The Amazigh Adventures of *Le Petit Prince*

Written by Louis Werner

One of the world's most beloved children's stories, *The Little Prince*—as it is titled in English—resonates especially in Morocco among Amazigh, or Berber, children and not just for its familiar desert setting. As one translator explains, "The plot has many similarities to our Amazigh oral tales."

CALENDAR INSERT

Tarab and the Art of Music

2018 Gregorian and 1439–40 Hijri Calendar

Introduction by Kay Hardy Campbell

Beyond virtuosity, Arab musical esthetics enjoin musicians to elicit an emotionally charged and frequently interactive relationship between musician and audience called *tarab*, using instruments from voices and hands to woodwinds, strings and percussion.

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FIRSTLOOK

State Highway 37, near Orchha, Madhya Pradesh, Central India

Photograph by David H. Wells

Driving north out of the historic town of Orchha in the morning, I spotted a roadside tea shop and, near it, this barber who had hung a large mirror to a tree, facing the road. It was a common enough scene: Tens of thousands of independent, casual tea shops serve travelers on India's highways and byways; outdoor barbers are less common, as they tend to work more often near marketplaces. As my wife and friends got tea, I stayed around chatting with the barber and his customer, showing them a few images on my camera, and then leaving them to their conversation and work. To make this image, I looked to the mirror for a secondary plane of activity, a kind of second narrative, to add depth and complexity. I took variations of this image from different positions, using different lens focal lengths as I tried to harmonize the primary and secondary scenes, looking for a moment when both the barber and the mirror offered elements that added to an overall narrative. For me, the mirror was not just a photographer's challenge. It was also a way to suggest subtly that despite my many months spent all around India over the past two decades, both on assignment and visiting my in-laws' family, I am forever looking from the outside in, working to distinguish one plane of experience and meaning from another.

www.davidhwells.com



KANGA'S WOVEN VOICES

Written by
AMANDA LEIGH LICHTENSTEIN

Photographed by
SAMANTHA REINDERS

“It opens the channels for women to express themselves, to clap back, to be heard, to love, to laugh, to pray, to return a gaze to the world. It becomes to a woman whatever she wants it to be: a voice that she wears around her, a message to the world, poetry, a shield.” —Ndinda Kioko

At dusk, the women of Sokomuhugo Street in Stone Town are finishing setting up their charcoal stoves to make fresh batches of buttery, flaky *chapati* for those who gather after evening prayer. Draped casually over their heads and around their hips are matching, intricately patterned fabrics, each further distinguished, along the bottom of each cloth, by its own Swahili proverb. They are wearing *kanga*, one of the most ubiquitous and popular fabrics in all of East Africa.

Multifunctional, vibrantly colorful and affordable, kanga permeates the fashion landscape, especially on the semi-

autonomous, predominantly Muslim island of Zanzibar, off the coast of Tanzania, where it is said to have originated. From sun-drenched rural fishing villages to the city streets of Stone Town, a historical district in Zanzibar City, Zanzibar's capital, women and girls do more than merely wear the kanga: They weave it into daily life, from birth to death and in between, as East Africa's original “social media,” worn and traded both for the dazzle of the designs and for the surprise of the messages.

By definition, a kanga is a rectangle of cotton cloth comprised of a *mji*, or central design motif; a *pindo*, or patterned border; and a *jina*, or “name,” which is a Swahili proverb,



In the Darajani textile market in Stone Town, the old historical district of Zanzibar City, the capital of Zanzibar, women shop amid dozens of vendors for *kanga*, above and opposite, which combine a vast variety of colors and patterns, from traditional to new-this-year. Uniquely, each *kanga* comes printed with words that carry many varieties of meaning, from well-known proverbs to popular song lyrics to poetry and personal statements.

aphorism or contemporary statement, usually printed in black bold capital letters against a white background along the edge between the motif and border. *Kanga* are machine-printed and sold in 1½ x 1-meter pairs. Women usually cut and separate the pair at the center, hemming the edges, and then they wear one piece as a head covering or shawl while the other cloth is wrapped around the waist.

From French actress Brigitte Bardot to Queen Rosalie Gicanda of Rwanda, notable women have also admired and

worn the *kanga*, but it's the everyday girls and women here who keep it alive every time they wrap it around their hips, swirl it up into a head scarf or gently tuck their babies into its folds. Women and children find many other practical uses for *kanga*, too: baby slings, rugs, curtains, head pads, mosquito nets, laundry baskets, ropes, blankets—the possibilities are endless depending on the need. In this way, *kanga* has been described as a living artifact of the experiences of women, each *kanga* holding the intimate memory of experiences of the



An early 20th-century photograph shows a market in Stone Town, a center for trade throughout the East African coast and Indian Ocean region since the 12th century, under Portugal, Oman, Britain and Tanzania. The Portuguese imported a printed Indian calico they called *leso*, which by the 19th century developed into the two-piece, block-printed cotton wrap that was named *kanga* in Swahili—a reference to the plumage of an eponymous guinea fowl.

woman who wore it. In a 2016 essay, “The Khanga Is Present,” Kenyan writer Ndinda Kioko describes the *kanga* as “postcards from the grave,” whispering centuries of women’s stories from all along the coast of East Africa, known also as the Swahili Coast.

Wrapped up in the *kanga* is

also the history of Zanzibar itself. As far back as the first century CE, Yemeni and Persian traders used monsoon winds to sail the Indian Ocean. By the 12th century, trading posts, villages and mosques became well established both on the islands as well as along the coast from as far north as Mogadishu, now in Somalia, to as far south as Kilwa, now in Tanzania. When the Portuguese arrived in the early 1500s, they forced colonial rule and influenced trade in the region for more than 200 years. Among their legacies: a colorful square kerchief, known as *leso*.

As Zanzibar grew, hundreds of lateen-sailed *dhows* connected it with the African coast, Arabia, India, Persia and China. Traders brought iron, sugar and cloth; they left with shells, cloves, coconuts, ivory—and slaves. In 1698 Saif bin Sultan, the Imam of Oman, defeated the Portuguese in Mombasa, Kenya, and established an Omani stronghold on the coast. By the 1830s, Omani Sultan Said bin Sultan had established Stone Town, Zanzibar, as the official seat of Omani power.

The sultans of Oman ruled in the region for more than two centuries, creating a complex and highly stratified social system, with positions signified in part by clothing. Legend has it that women who sought to elevate their status abandoned plain black cotton *kaniki* cloth in favor of looks that would distinguish themselves as both upwardly mobile and free. (Slavery ended in Zanzibar in 1897.) They purchased *leso* in lengths of six meters, and then cut the six into two lengths of three, breaking them down further into three square shapes of 3 x 2



meters. These squares were then mixed-and-matched and stitched together to form unique designs. Although this new style was also called *leso*, the most common cloth for it by that time was white calico from India.

Zanzibar fashion designer Farouque Abdela believes it likely that women who liked this new “linked *leso*” began using the larger bolts of calico as a base for woodblock-printed patterns made with indigo, henna and other tree dyes. Colorful and affordable, the style caught on. One of its more popular border patterns, white spots on a dark background, resembled the plumage of the noisy, sociable guinea fowl called *kanga*.

Thus *kanga*, hand-printed on Indian calico, became popular within an increasingly cosmopolitan social scene, as Stone Town became one of the wealthiest cities in all of East Africa. Its docks attracted ships from as far away as the newly independent United States, which in 1837 established a consulate in the region and, by the 1850s, had largely replaced Indian calico with unbleached American cotton referred to as *merikani* cloth. All the while, *kanga* continued to gain momentum among Zanzibari women establishing themselves in higher social strata.

By the 1860s, the demand for *kanga* had grown all along the coast, from Lamu in Kenya to Madagascar. Early designs were inspired by nature, fertility symbols, geometric lines and shapes, as well as fruits and animals. Designs also incorporated cultural influences from the Rajasthani resist-dye technique called *bandhani* to Omani stripes to the Persian and Kashmiri teardrop-shaped *boteh*, and to Bantu-inspired motifs like the Siwa horn and the cashew nut. Still, some *kanga* have retained what became traditional, original color schemes: The *kanga ya kisutu*, or wedding *kanga*, for example, has been printed in red, black and white for

Messages written on *kanga* today often derive from Swahili *methali* (proverbs), *mafumbo* (ambiguous meanings) and *misemo* (popular sayings) inspired by folklore, riddles, children’s songs and quotes from the Qur’an as well as popular culture.

In 1833 Omani Sultan Barghash ibn Said created a *camera obscura* room in the high tower of his palace, inaugurating a tradition of portraiture in Zanzibar that carried through to the early 20th century, when this photo of two unidentified women was made. Their *kanga* designs testify to the enduring presence and—because they chose to wear it on the occasion of a portrait—high social status of *kanga* in Zanzibar and throughout the coast of East Africa, “the Swahili Coast.”



more than 150 years.

Although women created the first *kanga* patterns and designs, it didn’t take long before male traders commanded both production and trade. This roughly coincided with the Industrial Revolution, which radically shifted modes of textile production worldwide, and in the early 1900s *kanga*

designers began exporting their designs to India and Europe for mass production, taking advantage of advances in both weaving and printing technologies. Abdela believes that the first machine-printed *kanga* actually came out of Germany, thanks to Emily Ruete, who was born in Zanzibar as Sayyida Salme, the youngest of Sultan Said bin Sultan’s 36 children. Princess Salme fell in love with her neighbor, Rudolph Heinrich Ruete, a German merchant, and accompanied him to Hamburg, where she lived out her days. Others, he admits,

believe the first mass-produced *kanga* came from England, or perhaps India.

The text messages on *kanga* began to appear in the early 1900s. Kaderdina Hajee “Abdulla” Essak of Mombasa, Kenya, started the trend when his wife encouraged him to distinguish the *kanga* he designed by adding a clever inscription. The text, first written in Swahili with Arabic script, added another layer of interest to the *kanga*, and it was not long until textile merchants followed Abdulla’s lead with their own sayings. When political power shifted from Omani to British administrative rule in the early 20th century, the script switched as well, as the British demanded the use of Roman letters. In the long run, this proved popular, as it wasn’t common for those in lower social strata to read and write their Swahili in Arabic script, and merchants were often asked to read the *kanga* out loud to help women select the best message.

According to Fatma Soud Nassor, professor of Swahili language and



Long a form of social media, a kanga communicates through design, color and especially the *jina* (“message”) that generally appears at the bottom of each *mji*, or central panel. *Clockwise from top left*, and translated colloquially, these kanga say: “Don’t see [your beauty or success] as something achieved alone; it’s been made possible by others”; “A person doesn’t have this, but they have that”; “There is no one like mom”; “Better to be poor like me than to be rich like my friend”; “That which loves your heart is medicine”; and “May the best of all blessings come to you.”



Clockwise from top left: "A respectable person is not troubled"; "The one who plays at home is rewarded"; "A liar never takes a break; they're at work 24/7"; "Let them talk"; "A person is not their color; they are loved for their character"; and "I won't eat in the darkness for fear of my neighbor (I do what I want!)."



StoneTown journalist, musician and cultural advocate Mariam Hamdani has collected more than 100 kanga, each purchased for special occasions—weddings, funerals, musical events, family and personal milestones—making her kanga collection a kind of personal diary.

literature at the State University of Zanzibar, kanga messages speak to Swahili joy, love and sorrow. Messages today often derive from Swahili *methali* (proverbs), *mafumbo* (ambiguous meanings) and *misemo* (popular sayings) inspired by folklore, riddles, children’s songs and quotes from the Qur’an as well as popular culture. Still others come out of song lyrics from the coast’s unique *Taarab* style of music, inspired by Egyptian, Indian and Yemeni rhythms. Rooted in the long history of cultural exchange between Zanzibar and Egypt, it is said to

have began in the early 1900s when Sultan Barghash ibn Said invited an Egyptian ensemble to play at the palace in Zanzibar. Male musicians singing in Arabic dominated the form until the 1920s, when the talented and fearless Siti Binti Saad rose up from an impoverished childhood to stun audiences with her Swahili lyrics that ventured into social issues of class, domestic violence and women’s rights.

Mariam Hamdani, director of the Tausi Women’s Taarab group in Zanzibar, carries on Siti Binti Saad’s spirit, and now, as she has reached 70 years old, her kanga collection is a chronicle of her life as a journalist, cultural activist and women’s advocate. Hamdani remembers as a child in the 1950s purchasing kanga with her mother at Darajani Market, where the limited supply meant having to gather around a merchant displaying a sample and submitting a name to a list in the hope of securing one of the limited editions. Today Hamdani treasures hundreds of neatly folded kanga pairs in her closet, each marking a memory or moment, from weddings to funerals, political victories to tender personal experiences.

Some of her kanga carry Taarab songs, like “Mpenzi Nipepe” (“*Lover, Cool Me Down*”): “*Mpenzi nipepee / Nina usingizi*

Hidaya works as a teacher in the village of Bwejuu on Zanzibar’s east coast and says she likes wearing kanga not necessarily for the messages but more for their vibrant colors and designs.





Rabia Omar, a visitor to Zanzibar from the mainland, wears a kanga she purchased in Dar es Salaam, Tanzania, where the demand for kanga is no less than in Zanzibar. The mainland style favors heavier cotton with darker, deeper colors than the Zanzibari style.

nataka kulala / Mpenzi niḗoze kwa yako hisani / Na unibembeze niwe na furahani (“*Lover, cool me down / I’m tired and I want to sleep / Lover, heal me with your kindness / And soothe me so I can rejoice*”).

Others in her collection feature older designs, styles and names, and some have even become classics, making their way back to the market due to enduring popularity—for example, the *kanga ya mkeka* (kanga of the woven mat) features bold red, black and white stripes that resemble a traditional mat. The border boasts fat red and black droplets that are echoed as a pair dropped inside a large circle and placed in the kanga’s center. This kanga, printed using 100 percent soft cotton, might be valued for its quality and design alone, but a sharp message takes its intrigue to another level: “*Nashangaa kunichukia nimpata kwa juhudi zangu*” (“*I’m surprised you’re angry with me; I’ve gotten this using my own efforts*”).

Pointing to a green and orange kanga with two doves perched on branches facing each other, Hamdani explains that “you can tell from its pattern and its quality, this is a much older design, like this other one here.” Carefully unfolding the kanga,

Hamdani says, “This one, this one is also very old. *Kanga ya ndege wawili*, the kanga of the two birds. Ah! I remember this one from a long time ago. It’s very old, but it’s a design back again on the market. This one will never go out of fashion.” A dizzying mix of polka dots, hearts and flowers that has not changed since its original print, the “Two Birds” kanga carries a tender message of love and guards against jealousy: “*Wawili wakipendena adui hana nafasi*” (“*If two people love one another, enemies don’t have a chance*”).



Kanga serve both as fashion and utility: A mother swaddles and carries her baby in her kanga, which allows her hands to stay free and her baby to stay close.



Kanga vendor Mohammed Abdallah Moody works in Stone Town's textile market. He's been in the trade for years and he says the younger traders look to him for expertise. His stall is smaller than many others, but over the years he has befriended many "regulars"—including men who buy kanga for their wives and daughters.

In Hamdani's collection, threads from the Arab world, too, are woven into her kanga designs. *Kanga ya marashi* (rosewater kanga) features the symbol of a rosewater sprinkler, which was used to waft aromas of pressed rose oil as far back as the 10th century, and later wove its way from Yemen and Oman to Zanzibar. This particular kanga, in red and white, features a message warning against street gossip that threatens the love between two people: "*Wapenzi Hawagombani, pasi na fitina*

mtaani" ("It's not the lovers who quarrel; it's all that street gossip and negativity"). In this context, the rosewater image speaks to the notion it can help heal a lover's quarrel.

Hamdani also cherishes a red and yellow kanga whose Swahili is in Arabic script. It, too, warns against street gossip: "*Sitomwacha mume wangu kwa mn-go'ngo mtaani*" ("I won't leave my man for all that street gossip").

More simply, an Omani kanga with a floral design states, in Arabic, "*ward salalah*" ("Rose of Salalah").

And then there's the love kanga with three simple words written in Arabic:

"*Layla wa Majnun*" ("Layla and Majnun"), which refers to the classic 10th-century love story by poet Nizami Ganjavi.

While Hamdani says she no longer wears kanga in the traditional fashion—as both a head covering and wrapped around the waist—she stills wears kanga every day at home, and she follows the tradition of wearing kanga to weddings, funerals and special events. She says that what women throughout Zanzibar and the coast have in common is that whether they

Zanzibar's largest and oldest kanga dealership is Chavda, which also supplies wholesale kanga to other kanga retailers—possibly including this kanga stand just outside its doors.



Hidaya poses inside her small home in Bwejuu on Zanzibar's east coast in one of her favorite kanga.

live in cosmopolitan Stone Town or in small coastal fishing villages like Bwejuu, they cherish their kanga collections and use the kanga on a daily basis, one way or another.

In the small fishing village of Bwejuu, along Zanzibar's east coast, elder Mwanahamisi, known as "Bi. Kibao," asserts that "a Zanzibari woman is not a woman without her kanga." She goes on to explain, "We wear kanga to cover our hair and around our hips from the time we are small children until the time we die." Bi. Kibao insists that she loves her kanga for their patterns and designs and doesn't pay much attention to kanga sayings.

Hidaya, a teacher in Bwejuu and mother of four, agrees. "Many of us choose the kanga because we love their colors and designs. We don't care too much about the message. Maybe that's something the younger women are concerned with, but we don't have time to worry about the message. We love kanga because it is our traditional dress, and as Muslim women, we respect our culture by covering our hair when we're out."

Mohammed Abdallah Moody, a kanga merchant in his 40s, chuckles when he hears that women claim they don't pay attention to kanga sayings. With hundreds of kanga messages

memorized, Moody insists "the kanga is the message." He supports the common knowledge that Zanzibari women, steeped in gendered traditions of respectability, purchase, wear and exchange the kanga as a unique form of silent communication to relay messages that would not otherwise be socially acceptable.

"When women and even men come to me to purchase a kanga," he says, "the first thing they look at is the message."

Chavda designer Sabrina Ally, 24, has designed many of Zanzibar's boldest and most popular kanga. Surrounded by piles of kanga fabric, she draws and stencils new patterns.





Showing another of the many uses for kanga, girls in Bwejuu team up to use a kanga to catch small fish.

Even if the kanga has a nice design, they may not buy it if the message isn't right. When someone receives a kanga wrapped as a gift, what is the first thing they do when they open it? They read the message! If an elder can't read the message, the first thing she'll do is call someone over to read the message aloud.

"The message is everything. It has the power to increase the love and ease the pain of a broken heart. The message can ignite and provoke or soothe and heal."

Moody sells his kanga in the textile market on the same street as the shop and showroom of Chavda Textiles, Zanzibar's largest and oldest kanga dealership, shop and showroom. In the back office crammed with bits of old patterns and hand-drawn design boards, 24-year-old kanga designer Sabrina Ally sits with Chavda's owners to sketch designs and compose sayings that will appeal to Chavda's diverse market. Ally, who has worked with Chavda for three years and has designed some of the most popular kanga on the market right now, agrees that a powerful message is crucial to the overall success of the kanga.

"It really hurts my brain to come up with these sayings! My designs have been copied by other kanga dealerships," Ally says proudly. "For example, I'm the one who wrote the kanga that says, '*Huna presha, huna sukari, roho mbaya inakukondesha.*'" ("You don't have pressure or diabetes, your bad spirit has made you skinny.")

"These days in Zanzibar, there are many different kinds of people, and diversity brings differences of opinion that can sometimes lead to arguments, such as arguments about jealousy. So women these days love the kanga designs that can be exchanged to wake someone up, to surprise them and make them think."

The kanga, when exchanged or worn for an intended

audience, has the power to mediate conflict. Recently Ally composed the popular phrase, "*Mimi ni mwangana sina muda wa kugombana*" ("I am a peacemaker; I don't have time to fight"). This came to her, she says, while she was at home thinking about the way Zanzibari women tend to handle discord. She explains, "Women usually have their fights, but they fight in secret. They don't want others to know that there's any issue or concern. Whether it's about a man or a misunderstanding at work, women use kanga to make sure their position is heard while still maintaining their integrity and self-respect." There is even a phrase for this, she adds: "*Kupiga kanga*" means "to hit the kanga," by answering one kanga with another, communicating messages back and forth until the conflict is played out.

It's all good business, too. Chavda Textiles often provides wholesale kanga to other kanga dealers for about 4,400 shillings, or about us\$2.20 each. The firm sends up to 30 new designs to its factory in Mumbai each month and, at any given time, a kanga seller stocks 50 new designs and 50 designs from the past and an assortment of messages from blessings, prayers and wishes to the bolder ones. Governments, politicians and even nongovernmental organizations have also used the kanga as a messaging platform as far back as World War II, when a commemorative kanga featuring industrial machines and boats proclaimed: "*Ahsante bwana Churchill*" ("Thanks Boss [Winston] Churchill").

In contrast with Zanzibar, where women prefer very thin, light cotton kanga with Swahili proverbs, riddles and sayings, on the Tanzanian mainland women prefer kanga *nztio*, which is produced with heavier cotton featuring darker, deeper colors and messages related to faith and religion. On



A villager in Bwejuu hangs out a kanga to dry in the morning sun. *Right:* While some kanga are designed to make a statement, others, like this one in the home of Hidaya, a Bwejuu teacher, are used decoratively, adding color and warmth to the room.

Uhuru Street in Tanzania’s former capital, Dar Es Salaam, kanga dealerships with names like Morogoro, Nida, Urafiki and Karibu Textiles all sell out of their showrooms the heavy kanga pairs for 7,000 shillings a pair, or about us\$3.50. Fadhilia, a kanga seller on Uhuru Street, insists that “men and women both love to buy kanga. There’s not a man in Tanzania who has not purchased a kanga for his mother, grandmother or wife at least once in his life.”

Back in her office in the Swahili department at the State University of Zanzibar, professor Fatma Soud Nassor tears up as she recalls the day her mother passed away. “You know, we use the kanga to pray. For my mother’s funeral, her sisters looked through her collection to select a kanga to wash and wrap her body for burial.... I cried a lot to see my mother in this kanga because on it was written, ‘*Nimerhidikwa na hali yangu*’ [(‘I’ve been satisfied with my situation’)]. When I passed her body, what I saw was the name of her kanga, and it carried a huge and meaningful message to me, and so I wept.”

From the shores of history, echoing desires, dreams, worries, obsessions and passions of the Swahili coast, the kanga call out. From the newborn wrapped in kanga wisdom in her mother’s arms, to an anxious bride receiving her bridal kanga from her husband’s family, to an elder who rests in peace wrapped in kanga, its meaning and messages *hazife*—will not die. 🌐



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East Africa: M/A 15



On September 27, 1822, 31-year-old Egyptologist and philologist Jean-François Champollion stood before the members of Paris's *Académie des Inscriptions et Belles-Lettres* and proclaimed that "after 10 years of intensive research ... we can finally read the ancient monuments."

Written by TOM VERDE

Arab Translators of Egypt's Hieroglyphs

"I have ... a firm basis on which to assign a grammar and a dictionary for these inscriptions used on a large number of monuments and whose interpretation will shed so much light on the history of Egypt," Champollion informed his astonished audience.

Among those seated was Champollion's chief rival and former collaborator, English physician and polymath Thomas Young. Since parting company in 1815, Young and Champollion had engaged in a contentious race to unlock the tantalizing secrets of the hieroglyphs.

Yet the two linguists were competing in a race that had already been run by medieval Arab scholars and scientists.

While Champollion's discoveries were groundbreaking at the Académie, previous European scholars were familiar with a 10th-century Arabic work attributed to an alchemist and historian from what is now Iraq, Ibn Wahshiyya al-Nabati, titled *Kitab Shauq al-Mustaham fi Ma'irfat Rumuz al-Aqlam* (*Ancient Alphabets and Hieroglyphic Characters Explained*). In it, he exhorted, "Learn then, O reader! The secrets, mysteries and treasures of the hieroglyphics, not to be found and not to be discovered anywhere else ... now lo! These treasures are laid open for thy enjoyment."

Egyptologist Okasha El-Daly of the Institute of Archaeology at University College London (UCL) points out that

Opposite: Carved in the 13th century BCE, fine bas-reliefs on the walls of the tomb of Seti I in Egypt's Valley of the Kings show elaborately carved hieroglyphs, a term that comes from the Greek for "sacred writing." By the first century CE, the Romanization of Egyptian language led to the loss of knowledge of hieroglyphs and, from that time on, the pursuit of what had become their mysteries by Romans, Arabs and, later, Europeans.

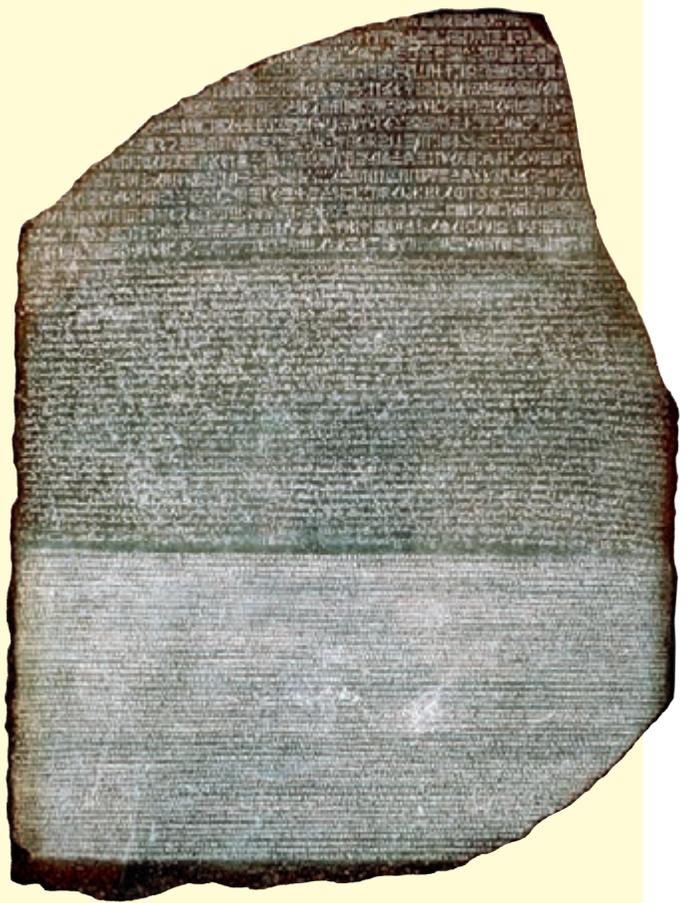
Joseph Hammer, an Austrian scholar who in 1806 translated Ibn Wahshiyya into English and published his work in London, mentioned in his introduction that French savants "were aware of the existence of Arabic manuscripts on the subject of decipherment." Champollion's own teacher, Baron Silvestre de Sacy, was a famed professor of Arabic who produced several Arabic grammars and was among the earliest French scholars to attempt to translate the hieroglyphs. While Ibn Wahshiyya's work was familiar to de Sacy, who reprinted an edition in 1810, it is uncertain if its contents were known to his famous student. However, as El-Daly points out: "In his own letters to his brother, Champollion complained about the pain of having to learn Arabic so he must have thought it was of value in his research."

Though pharaonic Egypt is one of history's most enduringly popular periods among scholars, study of medieval Arabic texts concerning what we now call "Egyptology"—including the hieroglyphs—remains sparse. This attracted El-Daly's curiosity.

"I read at a very young school age an encyclopedic work known as *Khitat* of the medieval Egyptian author al-Maqrizi, who died in 1440 CE, in which he displayed a great deal of interest and knowledge of ancient Egypt. Yet when I started my formal Egyptology studies at Cairo University in 1975, I didn't see any reference to medieval Arabic sources," El-Daly says, "and I began to make my own inquiries." His pursuit of early Arabic texts on Egyptian history—in both

public and private collections, over two decades and across several continents—culminated in his 2005 discourse, *Egyptology: The Missing Millennium: Ancient Egypt in Medieval Arabic Writings*, published by UCL Press.

El-Daly's research raises intriguing questions: Were 19th-century Western scholars indeed the first to unveil the



Discovered in the Nile Delta in the late 18th century near the town of Rosetta, "The Rosetta Stone," above, is inscribed with a decree issued in the third century BCE by Egyptian ruler Ptolemy V. It is written in three scripts: hieroglyphics appear at the top; Demotic in the middle; and Old Greek at the bottom. This allowed French Egyptologist and philologist Jean-François Champollion, depicted lower left in an 1831 portrait, to correlate hieroglyphs with the same text in two known languages.

"secrets" of the hieroglyphs, and to what extent were hieroglyphs already known to their medieval Arab counterparts?

The earliest hieroglyphs, dating to the end of the fourth millennium BCE, appear on pottery and ivory plaques from tombs. The last known inscriptions date from 394 CE, at the Temple of Isis on the island of Philae in southern Egypt. "But the glory of hieroglyphs," observed the late Michael Rice, author of *Egypt's Legacy: The Archetypes of Western Civilization: 3000 to 30 BC*, evolved during the Old Kingdom (2686–2181 BCE), achieving their highest level of development in the Middle Kingdom (2055–1650 BCE). This was a monumental age when the walls of Egypt's palaces, temples and tombs were awash in hieroglyphs rendered in the vibrant colors of the natural world: Nile blue, palm-frond green and the dusk-reddened sky of the western desert, where mummified pharaohs awaited their journeys into the afterlife.

"The beauty of the colouring of these intaglios no one can describe," observed Florence Nightingale on her visit to the richly decorated tomb of Seti I in 1850. "How anyone who has time and liberty, and has once begun the study of hieroglyphics, can leave it til he has made out every symbol ... I cannot conceive."





This page from an 18th-century copy of alchemist Abu al-Qasim al-Iraqi's 13th-century *Kitab al-Aqalim al-Sab'ah* (*Book of the Seven Climes*) reflects Arab interest in hieroglyphics, largely inspired by long-held beliefs that Egypt was a source of lost wisdom—a motive that was later shared by Europeans who sought to translate hieroglyphics.

Historians and philosophers of the Classical Era were among the first to take up the challenge, including first-century-BCE historian Diodorus Siculus. According to Maurice Pope, author of *The Story of Decipherment: From Egyptian Hieroglyphic to Linear B*, Diodorus was among the first “to suggest the ideographic nature of the hieroglyphs.” Diodorus’s supposition that hieroglyphs do “not work by putting syllables together ... but by drawing objects whose metaphorical meaning is impressed in the memory” was also suggested four centuries later by Egyptian-born Roman philosopher Plotinus, who marveled especially at the creativity and efficiency of Egyptian scribes:

[T]he wise men of Egypt ... did not go through the whole business of letters, words, and sentences. Instead, in their sacred writings they drew signs, a separate sign for each idea, so as to express its whole meaning at once.

By this time, there were fewer and fewer native-born Egyptians who could read the hieroglyphs. As Egypt became

What Ibn Wahshiyya’s classical predecessors did not grasp was that hieroglyphics are more than simple ideograms, that is, pictures representing concepts or ideas.

increasingly Romanized after the fall of Cleopatra in the first century BCE, hieroglyphs were gradually replaced by the Roman alphabet.

Still, what Plotinus and his classical predecessors did not grasp was that hieroglyphics are more than simple ideograms, that is, pictures representing concepts or ideas, much as a circle with a red bar across a smoldering cigarette indicates “No Smoking.” Rather, they build their meanings off three elements: logograms, representing words; phonograms, representing sounds or groups of sounds; and determinatives, marks or images placed at the end of a word to clarify its meaning.

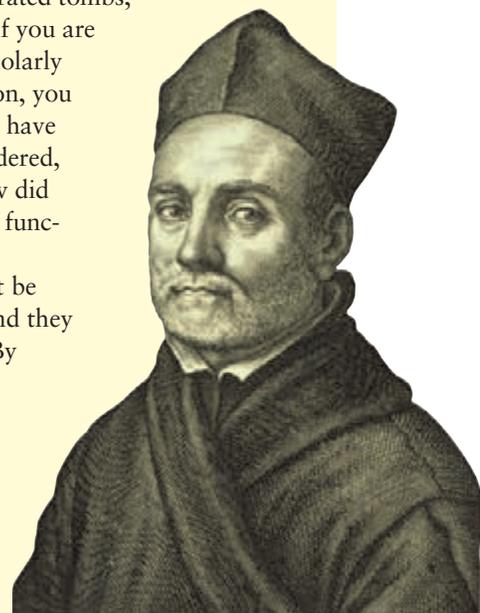
The key to Champollion’s understanding was his knowledge of Coptic, which is the linguistic descendent of the spoken Egyptian of the pharaonic era. Coptic uses Greek letters together with a handful of colloquial, or demotic, characters. Associating spoken Coptic with the written hieroglyphic script gave him his missing link. This was how Champollion deciphered the now-famous Rosetta Stone, a fragment of a second-century-BCE stele inscribed with a royal decree issued by Ptolemy V. The inscribed decree was written in each of hieroglyphic, Demotic (Coptic’s grammatical cousin) and Greek. Champollion’s breakthrough came by comparing the scripts and realizing that the hieroglyphs were phonetic.

Yet it was not long after Muslim expansion into Egypt in the seventh century that Muslim scholars began connecting many of these same dots. Like most first-time visitors, the Muslims were intrigued with what they saw before them.

“They wandered around, looking at the Pyramids, looking at the monuments, looking inside the beautifully decorated tombs, and if you are a scholarly person, you must have wondered, ‘How did they build them, what was their function?’” says El-Daly.

They also could not help but be intrigued by the hieroglyphs, and they speculated on their meanings. By

Ibn Wahshiyya’s contributions were well known among Arab Egyptologists and, in Europe, admired by 17th-century German Jesuit Athanasius Kircher, right, who built upon Ibn Wahshiyya’s findings.



inference, the first known Muslim scholar to pry into their mysteries was late eighth- and early ninth-century alchemist Jabir ibn Hayyan. Although nothing of his work on hieroglyphs is known to survive, we know of his interest through other, later alchemists who refer to it. Among them was his contemporary, Egyptian-born Dhul-Nun al-Misri. Al-Misri directed those interested in learning more about ancient alphabets to Ibn Hayyan's book *Solution of Secrets and Key of Treasures*.

El-Daly notes another early scholar, Ayub ibn Maslama, also had "knowledge of deciphering the letters of the hieroglyphs." This we know, he explains, through the writings of the 12th-century geographer Muhammad al-Idrisi, who had a deep interest in Egypt. Al-Idrisi recorded in his book *Secrets of the Pyramids* that during a visit in 831 to Egypt by Abbasid Caliph al-Mamun, Ibn Maslama "translated for Al-Ma'moun what was written on the Pyramids, the two obelisks of Heliopolis, a stela found in a village stable near Memphis, another stela from Memphis itself, [as well as writings found] in Bu Sir and Sammanud. Everything he translated is in a book called *al-Tilasmāt al-Kabiniya (Priestly Talismans)*."

Sadly this last book, like Ibn Hayyan's, is now lost. Yet texts attributed to al-Misri have survived, and they offer unique, insider perspectives on the composition of the hieroglyphs. A contemporary of Ibn Maslama, al-Misri spent most of his life living in or beside one of the temples at Akhmim in Upper Egypt, El-Daly points out. There, surrounded by hieroglyphs and Coptic-speaking priests, he would have been perfectly positioned to learn "the language of the walls of the temple, i.e., hieroglyphs," El-Daly says.

This is more than pure speculation, he adds, because al-Misri himself indicated as much in his attributed *al-Qasida fi al-San'ah al-Karimah (Poem on the Noble Craft)*, in which he stated he was a student of the priests and was aware of the knowledge they possessed, still visible on the walls of temples. He also recorded that he made a connection between the spoken Coptic of his day and the ancient



Hieroglyphics

Hieroglyphs are among the most recognizable and familiar cultural symbols of ancient Egypt. Composed of some 700-900 characters in the shapes of objects, animals, people and abstract symbols, they are a form of writing that, according to legend, was a gift from the god Thoth to grant the Egyptians wisdom and strengthen their memory. The word *hieroglyph*, in fact, means "sacred writing": *hierō*, "holy"; *glyphō*, "writing." As such, the derivative, cursive style of hieroglyphic writing, which emerged around 1100 BCE, was called "hieratic" after the Greek *hieratikos*, meaning "priestly," and it was used for recording sacred texts. The simpler and more secular "Demotic" comes from *demotikos*, "of the common people," and it developed several centuries later. Some historians speculate that the Egyptians may have borrowed the concept of pictographic writing from the Sumerians (in modern Iraq); others argue that Egypt developed the writing system independently.

Egyptian language, and recognized that the hieroglyphs had phonetic value—the same connection Champollion would make 10 centuries later. He left behind a record of his research, *Kitab Hall al-Rumuz (Book of Deciphering Symbols)*. Tellingly, al-Misri's book included a table of Arabic letters and their Coptic equivalents, which proved a valuable resource for later medieval Muslim scholars who sought to translate the hieroglyphs.

It was no coincidence that these scholars practiced alchemy, which at

The closest linguistic descendent of Pharaonic Egyptian is Coptic Egyptian, which appears on this parchment manuscript from the eighth or ninth century. This script combines elements of Old Greek and Demotic characters derived from hieroglyphs. Ibn Wahshiyya, Kircher and Champollion, as well as others, knew this and used it to achieve their understandings of both Demotic and hieroglyphs.



that time constituted a broad field of pursuits. “Egypt was the epicenter of ancient wisdom, magic, alchemy, mysterious scripts and astrology,” notes Isabel Toral-Niehoff, a scholar of Arabic Occult Sciences at Germany’s University of Göttingen. “Whoever was interested in magic, astrology, mysterious alphabets, etc., in medieval Islam came automatically in contact with *aegyptiaca* or pseudo-aegyptiaca. This connection, harmonized with the popular perception of Egypt as the epitome of miracles, ... inspired the everyday experience of inhabitants and visitors of Egypt.”

Foremost among these visitors was Ibn Wahshiyya al-Nabati. Born in the ninth century in Qusayn, near Kufa (now in Iraq), he was interested also in medicine, toxicology and agriculture.

His most important contribution is what El-Daly identifies as his tables of determinatives, the essential symbols that “determined” the meaning of words. For example, in an ancient Egyptian group of letters “p + r + t” can mean the infinitive of the verb “to go,” the winter season or the word for “fruit” or “seed”— depending on its accompanying determinative sign. If the scribe meant to communicate walking, running or movement, he added the determinative symbol of a pair of walking legs at the end of the word *prrt*. A sun disc (a dot inside a circle) indicated the season, while a pellet symbol (a small circle) identified the agricultural product. Thus, without an understanding of the role of determinatives, Egyptian hieroglyphs remain hopelessly muddled. Ibn Wahshiyya’s achievement rested in pulling all these threads together, distinguishing between hieroglyphic symbols that were phonetic and those that pictographically served as determinatives.

El-Daly himself was uncertain about Ibn Wahshiyya’s claims until he compared the alchemist’s tables of determinatives to those in “Gardiner’s Sign List,” the modern, standard guide to interpreting the

Ibn Wahshiyya’s achievement rested in distinguishing between hieroglyphic symbols that were phonetic and those that served as determinatives.

hieroglyphs, published in 1927 by renowned Egyptologist Sir Alain Gardiner.

“In every case I compared them, they were exactly the same,” said El-Daly.

However, Ibn Wahshiyya was not entirely consistent with his phonetic transliteration of the hieroglyphs into Arabic. Hence some scholars, Toral-Niehoff among them, remain skeptical about just how much Ibn Wahshiyya actually understood from what he was looking at. She contends this is because Ibn Wahshiyya never mentioned a connection between the language of the hieroglyphs and Coptic. This, in her view, led to many errors.

“Even though the signs of [his] list are actual hieroglyphs, the values of the Arabic letters bear no relationship to the actual phonetic values of the hieroglyphs depicted,” she asserts.

Yet El-Daly defends Ibn Wahshiyya’s work by pointing out that like

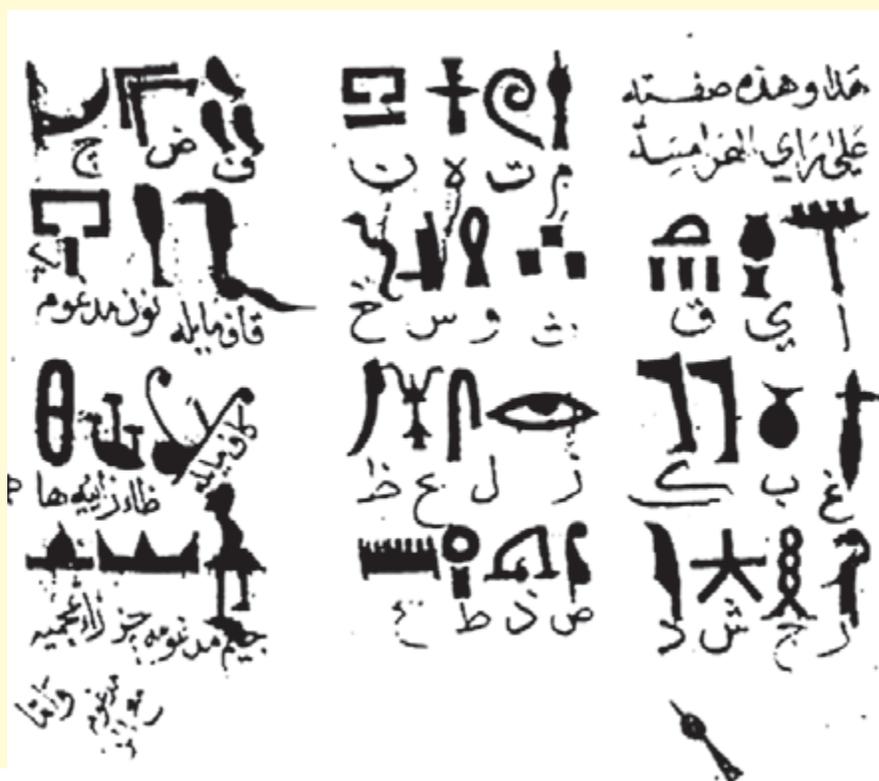
any language, hieroglyphic symbols changed over time. Those seen by the medieval alchemist during his sojourn in Egypt were likely from the Greco-Roman period, El-Daly says, and differed from earlier hieroglyphs. He also stresses that the number of hieroglyphs Ibn Wahshiyya correctly translated is not the issue: What matters is that he realized the hieroglyphs were phonetic and that determinatives governed their meaning. Considering that none of this began to dawn upon European scholars until the mid-17th century, El-Daly thinks Ibn Wahshiyya deserves more than passing credit for working out

as many symbols as he did.

“Do you know how many letters Champollion started with? Three letters. So, good for Ibn Wahshiyya, who had at least nine right,” remarks El-Daly.

Later, Ibn Wahshiyya had his own followers. The 13th-century alchemist Abu al-Qasim al-Iraqi produced *Kitab al-Aqalim al-Sab’ah* (*Book of the Seven Climes*), a visually striking manuscript that includes the

Egyptologist El-Daly maintains that Ibn Wahshiyya’s most important contribution came with his tables of “determinatives,” such as the one *lower*, which attempt to explain—with widely varying degrees of accuracy—how certain signs influence the meaning of a word. The tables were reproduced in Joseph Hammer’s English translation, *Ancient Alphabets and Hieroglyphic Characters Explained*.

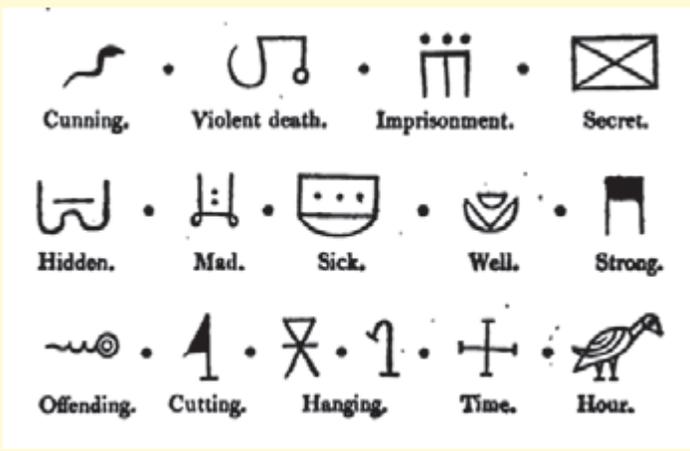
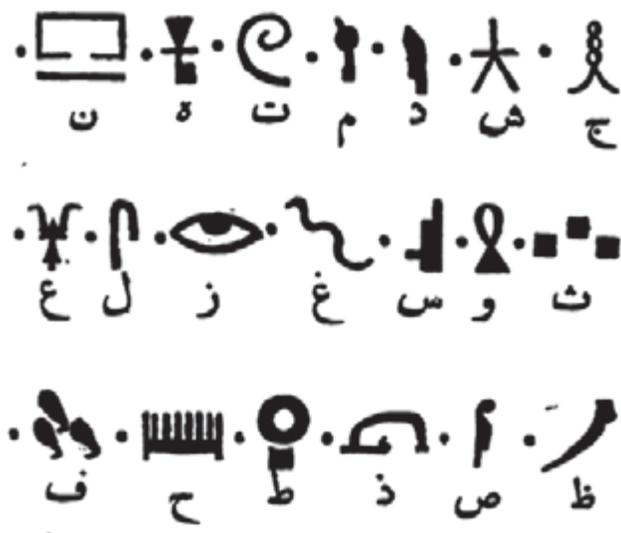


phonetic values of hieroglyphs (not always correctly) as well as colorful, at times fanciful, illustrations that combine hieroglyphs, Arabic and alchemical symbols.

In one such rendering, al-Iraqi apparently copied a now-missing stela dedicated to the 12th Dynasty (early second millennium BCE) pharaoh Amenemhat II. The top line of the illustration, written in Arabic, credits the content of the page to the “hidden book” of the mythological Hermes Trismegistus (Hermes of Triple Wisdom). Hermes was an amalgam of the Egyptian god Thoth and the Greek deity Hermes who, as a messenger of the gods, was associated with communication and the written word. Medieval Muslim alchemists equated him with the prophet Idris mentioned in the Qur’an (and in the Bible as Enoch), and they respected him as not only the first alchemist, but also the originator of the hieroglyphs as well as a source of ancient, hidden wisdom.

However, the copy of the Amenemhat stela reveals the limits of al-Iraqi’s knowledge as well as his drive to align them with his own alchemist’s agenda. He correctly places Amenemhat’s name in a cartouche, an oval surrounding a grouping of hieroglyphs that indicates a royal name. Yet he mistakes a geometric oval for a bain-marie (essentially a double boiler); and he interprets what was likely a falcon representing the god Horus as a “raven of intense blackness,” the alchemist’s symbol for iron and lead. These and other haphazard readings demonstrate that while medieval Muslim scholars were on track in their technical understanding of how the hieroglyphs worked, they were still often inaccurate in setting out their meanings.

Nonetheless, the trails they blazed were picked up by Renaissance European scholars who believed that Arabic manuscripts on Egypt might offer clues to deciphering hieroglyphs. Among the most influential was a 17th-century German Jesuit priest, Athanasius Kircher. In his seminal work, *Lingua Aegyptiaca Restituta* (*The Egyptian Language*



Excerpts from Hammer’s translation of Ibn Wahshiyya’s ninth-century manuscript also show the Assyrian scholar’s phonetic and ideographic translations of hieroglyphic characters. These Ibn Wahshiyya and other Arab scholars regarded as *qalam al-hakim hermes al-akbar* (script of the great savant [Hermes Trismegistus]). Ibn Wahshiyya divided hieroglyphs into four categories: celestial objects; figures of animals, actions and affections; trees, plants and produce; and words and ideas connected to minerals—an analysis that shows his alchemist’s orientation.

Restored), published in 1643, Kircher correctly hypothesized that the hieroglyphs recorded an earlier stage of Coptic and that the signs had phonetic values. His sources included Coptic grammars, translated from Arabic and Coptic-Arabic vocabularies brought back from the Middle East by contemporary Italian travelers. By El-Daly’s estimation, Kircher had access to some 40 medieval Arabic texts on ancient Egyptian culture, including Ibn Wahshiyya’s. Though the Jesuit only got one hieroglyph right, his contribution, too, pointed subsequent scholars in the right direction.

“Only with the work of Athanasius Kircher, in the mid-17th century, did scholars begin to think that hieroglyphs could represent sounds as well as ideas,” writes Brown University Egyptologist James P. Allen in *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*. “It was not until the discovery of the Rosetta Stone, in 1799, that scholars were

able make practical use of Kircher’s ideas.”

While some believe El-Daly overstates the importance of medieval Muslim scholarship on the hieroglyphs, and they are thus doubtful of its Egyptological value, El-Daly himself says that he never set out to unseat Champollion or credit medieval Muslim scholars with as deep an understanding of the hieroglyphs as the French savant or his successors. He merely wished to add to the conversation “over a thousand years of Arabic scholarship and inquiry” that modern Egyptology has largely overlooked. 🌐



Tom Verde (tomverde.pressfolios.com) is a regular contributor to *AramcoWorld*. His series on historical Muslim queens, “Malikas,” won “Best Series” awards this year from the National Federation of Press Women, the Connecticut Press Club, the Association of Women in Communications and *Folio*: magazine’s Eddie Awards.

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12 Things Twitter Won't Tell You about Zodiacs

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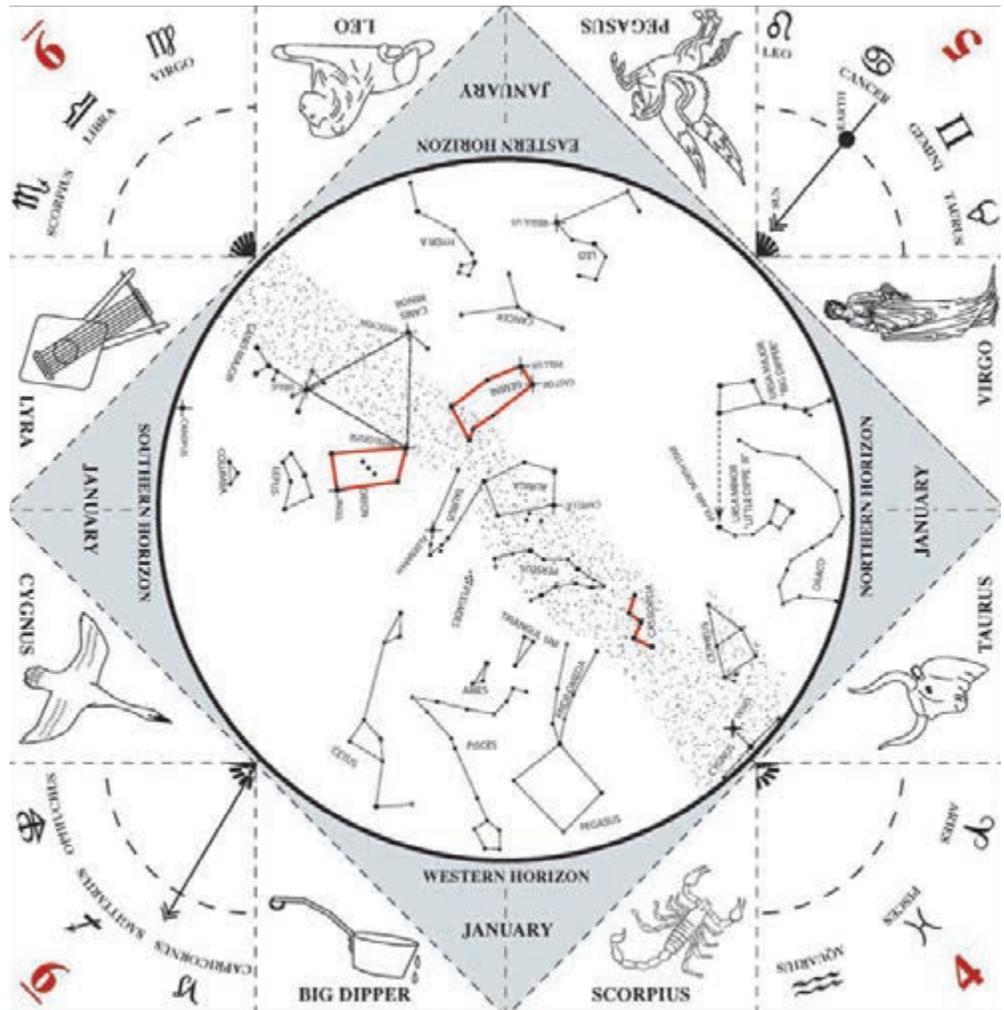


“So I’m
not a Leo
anymore?”

W

When *Cosmopolitan UK* erroneously asserted in September last year that the US National Aeronautics and Space Administration (NASA) had updated the Western zodiac to correct for 3,000 years of shifts in star positions, astrology fans went pretty much supernova on social media. According to the report, NASA shifted the dates of the 12 signs forward by almost a month and inserted the ancient, nearly forgotten 13th sign of the serpent handler Ophiuchus in between Scorpius and Sagittarius. In reality, NASA used observation and calculation to account for the nearly infinitesimal annual shifting of our planet's axis known technically as the precession of the equinoxes. The changes meant that for an estimated four out of five people, the sign toward which the sun was pointing at their birth was not the one they thought; rather, it was the previous one—except for Sagittarians, many of whom became Ophiucans. (This writer is now an ex-Pisces Aquarian.) Since popular astrology assigns personality traits to those born under each sign, and it predicts their future in daily, weekly and monthly horoscopes, NASA's science felt like cosmic chaos.

In a statement on its Tumblr website, NASA asserted that it was not trying to change the popular zodiac. Rather it was showing what it might look like if science and mathematics were rigorously applied. This ignited further debate about the differences between astronomy based on observable phenomena and astrology based on a mixture of observation and



Primer for January's night sky in the northern hemisphere, this NASA star chart shows constellations including those of the astronomical zodiac. (See sidebar, *opposite*.) Each corner names zodiac constellations: Notice at top right, four appear, which accounts for the addition of Ophiuchus, in the lower left corner. *Previous spread*: The "Horoscope of Prince Iskander," for the grandson of Central Asian ruler Amir Timur (known as Tamerlane), was produced to reflect the alignment of celestial figures upon his birth on April 25, 1384. Like NASA's modern chart as well as many other depictions of zodiacs through history, it uses a circular planisphere to represent the sky, but it divides it into 12 sections, following the Babylonian astrological zodiac. In Iskander's time, it was customary for leaders to have their birth charts and horoscopes mapped and preserved. Iskander later supported scholarship and showed particular interest in the sciences of the night sky.

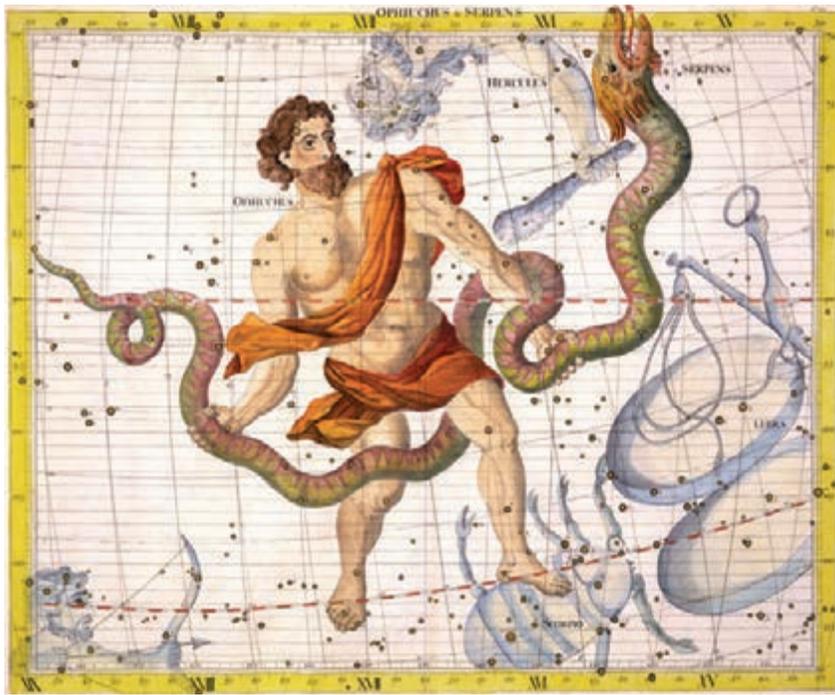
cultural mythology. As clear as this difference might seem, learning that one's birth sign might be different was (and remains) unsettling to many people. The science may argue it is irrelevant, but zodiac signs have shaped the thinking and even identities of people in many lands for thousands of years.

Here are 12 reasons why the zodiac's unique mix of myth and facts really does matter.

The 12-sign zodiac is part of the history of science—especially astronomy.

What NASA failed to clarify was the extent to which the 12-sign zodiac is an essential part of the historical





Published in 1729 from a hand-colored engraving by England's first Astronomer Royal, John Flamsteed, this plate from *Atlas Coelestis* depicts Ophiuchus ("The Serpent Handler"). Although one of the Babylonian zodiac's original 13 constellations, Ophiuchus was dropped for the convenience of synchronizing the number of zodiac signs to the 12-month calendar system.

development of the science of astronomy. Western astronomers used the zodiac to measure celestial positions up until the Renaissance, when scientists adopted the equatorial coordinate system, which measures positions of celestial bodies by right ascension and declination and moving beyond the zodiac's ecliptic-based celestial longitude and celestial latitude.

To explain: The ecliptic is the imagined track across the sky that traces the sun's apparent course through the heavens during the year. Of course, that's just how it seems from an earthly perspective. Here is what happens, in the words of EarthSky.org, website of the award-winning radio series *EarthSky*:

As the Earth orbits the sun, the sun appears to pass in front of different constellations. Much like the moon appears in a slightly different place in the sky each night, the location of the sun relative to distant background stars drifts in an easterly direction from day to day. It's not that the sun is actually moving. The motion is entirely an illusion caused by the Earth's own motion around our star.

Sky gazers noticed this relationship between the sun and the stars from the most ancient times, and many world cultures developed zodiacs based on constellations, often with pictures of people and animals as human minds seem to instinctively "connect the dots" to tease out meaning in the patterns of the stars. The constellations of the zodiac thus

are some of the earliest used markers for sailors and travelers. Even today both amateur and some professional sky-watchers rely on these constellations and others to help locate planets, comets and other celestial events.

The imagery of the zodiac still appears frequently in popular astronomy and science education materials, such as the "Star Finder," a foldup paper star locator on the NASA website that prominently features a circle of zodiac symbols.

That chart includes Ophiuchus, which astronomers have long known crosses the ecliptic just like the other 12 zodiac constellations. But Ophiuchus, as a sign, was dropped all the way back in Babylonian times because, scholars say, it is the most "squeezed" of the zodiacal constellations, and to better align the zodiac with the 12-month Babylonian solar calendar, it was the easiest constellation to drop.

The zodiac signs are part of world art and culture.

The 12-sign zodiac is a significant cultural artifact. Each sign represents a 30-degree swath of the heavens. Because these

Astronomical (sidereal) Zodiac

- Capricorn:* January 20–February 16
- Aquarius:* February 16–March 11
- Pisces:* March 11–April 18
- Aries:* April 18–May 13
- Taurus:* May 13–June 21
- Gemini:* June 21–July 20
- Cancer:* July 20–August 10
- Leo:* August 10–September 16
- Virgo:* September 16–October 30
- Libra:* October 30–November 23
- Scorpio:* November 23–29
- Ophiuchus:* November 29–December 17
- Sagittarius:* December 17–January 20

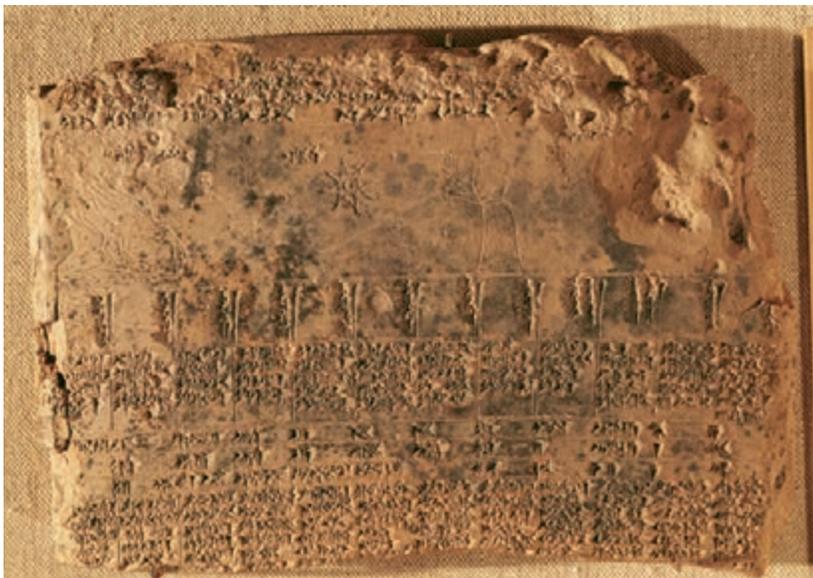
Astrological (tropical) Zodiac

- Capricorn:* December 22–January 19
- Aquarius:* January 20–February 18
- Pisces:* February 19–March 20
- Aries:* March 21–April 19
- Taurus:* April 20–May 20
- Gemini:* May 21–June 21
- Cancer:* June 22–July 22
- Leo:* July 23–August 22
- Virgo:* August 23–September 22
- Libra:* September 23–October 23
- Scorpio:* October 24–November 21
- Sagittarius:* November 22–December 21





The pattern of dots above the painting of the bull's head resembles the arrangement of stars in either the Pleiades or Taurus (the Bull), and four more dots below the bull could also be stars. This painting appears among others in the caves near Lascaux, in southwest France, and it is some 17,000 years old. The depiction of the bull itself reinforces the interpretation that this painting may be an early zodiacal representation. If so, it then hints that some zodiac signs may long predate the Babylonian zodiac and may have been shared across great distances. *Left:* Inscribed in cuneiform script on a clay tablet during the second millennium BCE, a Sumerian astrological calendar from Uruk (now Warka, Iraq) demonstrates the detail with which early astronomer-astrologers kept track of movements in the heavens.



Golden Fleece. The only inanimate object in the zodiac, the golden scales of Libra, is linked to the Greek underworld's lesser goddess of justice, Dike, and it dominates the sky during the autumn equinox, when day and night are of equal length—in balance.

signs are visual images, often with mythological stories underlying them, painters, engravers and other artists over the centuries have rendered them in art.

Much of the art surrounding the Western zodiac is based on another artifact of culture: Classical Greek mythology. For example, the bull Taurus is associated with the tale of mythical hero Theseus, king of Athens, and his slaying of the dreaded half-man, half-bull Minotaur. The twins Gemini recall the story of brothers Castor and Pollux, who joined Jason and the Argonauts in their quest for the

One of the great scientists of Greek antiquity is the “father of the Western zodiac.”

The development of the Greek zodiac shows us how early astronomy and astrology were joined at the hip. Many early astronomers were also astrologers—and none proved as influential as the second-century Greek polymath Claudius Ptolemy of Alexandria. Known also for his mathematical and astronomical opus the *Almagest* (or *Syntaxis Mathematica*), which inspired many early Arab and European scientists, his



With a scorpion at top-center marking the autumn equinox, this *kurdura*—stone document—was produced in the 14th century BCE, during the period of Kassite rule, the time scholars theorize may have birthed the Babylonian zodiac. *Lower:* On the ceiling of the Temple of Hathor in central Egypt appears “the Zodiac of Dendera,” a planisphere comprising 12 constellations that form a Babylonian-style circular representation of the zodiac. Typically Egyptian art represented zodiacs in rectangles.

most widely read book is his astrological work, the *Tetrabiblos* (*Four Books*). In fact, Ptolemy’s astrological writings were so highly regarded that they were taught in European universities well into the 17th century.

The *Tetrabiblos* laid the foundation for the Western astrological tradition. Ptolemy rationalized the planets, houses and signs of the Hellenistic zodiac and defined their functions in a way that has changed little to the present day.

Ptolemy’s Greek zodiac originated in Mesopotamia.

The Greek zodiac signs can be traced back to the Sumerians, who built the world’s first known civilization between the Tigris and Euphrates rivers in present-day Iraq. From the Sumerians, the evolving idea of a zodiac passed to the Akkadians, and then on to the Assyrians and, a bit later, to the Babylonians—all before it came to the Greeks. The zodiac achieved the form we know today under the Babylonians in the first millennium BCE, and its origins in the region, explains Lorenzo Verderame, Assyriologist at Sapienza Università di Roma, can be traced back to the third millennium BCE.

How did the Sumerians develop *their* zodiac signs? Did they invent them or did they, too, borrow them from still older sources? The answer is probably a bit of both. Certain examples of proto-zodiacal artwork, like the Bull and the Lion, are believed by some scholars to have come from Elam, a rival civilization to the east. Others propose that the zodiac, or at least part of it, had its origins in the early astronomy of Armenia, northwest of Mesopotamia, around 3000 BCE. Ruins at the northwestern Armenian town of Metsamor, the site of a trading civilization, include three observatory platforms with engravings that suggest “zodiacal creatures,” some of which may have influenced the Babylonians.

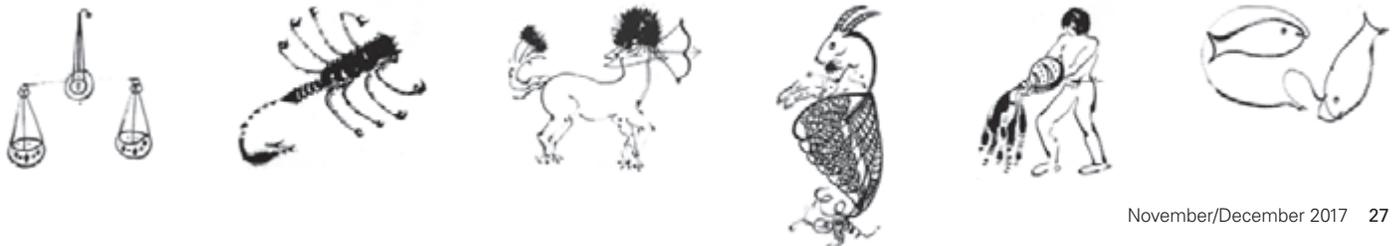
We do know that about 1000 BCE, Mesopotamian astronomers produced a star catalogue known as *MUL.APIN* (*The Plough*), named for its opening words. Essentially an astronomical textbook, it contains all 12 constellations of the Babylonian zodiac, along with many others. The oldest known copy of this compilation, inscribed in cuneiform on a pair of baked mud tablets, dates to the seventh century BCE.

The oldest zodiac imagery of all dates back to cave dwellers.

Other experts are convinced that some zodiac figures are even older than Elam or Metsamor. Recent studies of the Paleolithic cave paintings of bulls, horses and other animals at Lascaux, France, suggest the backgrounds of certain paintings



BRIDGEMAN IMAGES (4)





From left: This planisphere, drawn by Andreas Cellarius in 1660, depicts the solar system and zodiac in the style first promulgated by Greco-Roman astronomer and geographer Claudius Ptolemy; a Korean zodiac dates from the Koryo Dynasty period, 1100–1300 CE. Opposite, from top: In Aleppo, Syria, a mosaic floor of a sixth-century synagogue shows the zodiac centered around a Hellenistic sun god; a 14th-century CE miniature zodiac wheel from southern France; and the oldest known Islamic celestial globe, from the 13th century, which provided a 3-D model of the universe, complete with constellations, both of the zodiac and others.

may incorporate prehistoric star charts. If so, this puts the origin of some zodiac figures, especially Taurus, back some 10,000 to as much as 40,000 years.

The West inherited the Babylonian zodiac, thanks to Alexander the Great.

The Babylonian zodiac passed to the Greek-speaking world through the two Greek successor states of the empire built by Alexander the Great: the Seleucid empire of Mesopotamia and the Ptolemaic kingdom of Egypt, based in Alexandria.

This was the “Hellenistic” period, from 323 to 31 BCE, and it gives us the first surviving pictures of the Mesopotamian constellations: the Seleucid Zodiac from Mesopotamia itself and the Dendera Zodiac from Egypt. These two zodiacs, both part of a pictographic tradition, show the 12 zodiac figures plus four other animals in the zodiac style: crow, serpent, eagle and southern fish.

The Seleucid Zodiac was a set of 12 clay tablets displaying the zodiacal signs for astrological use. Examples of three of the tablets survive from the last few centuries BCE: Taurus with the Pleiades, Leo with Corvus the Crow standing on Hydra the Water Snake, and Virgo with her ear of corn.

The Zodiac of Dendera, from Egypt in the first century BCE, is “the only complete map that we have of an ancient sky,” says John H. Rogers of the British Astronomical Association. Preserved for us in a bas-relief on the ceiling of the

Hathor Temple at Dendera, Egypt, this zodiac shows the classical zodiac surrounded by popular Egyptian constellations for the rest of the sky. Some of the zodiac figures have Greco-Roman names, and others have Egyptian names. The shapes of the figures, although produced during Egypt’s Ptolemaic era that almost universally favored Greco-Roman styles, are actually almost identical to the Mesopotamian Seleucid Zodiac and also to various Babylonian boundary-stone pictographs from the second millennium BCE. Thus the Zodiac of Dendera, despite its Egyptian venue, “seems to be a complete copy of the Mesopotamian zodiac,” Rogers says.

Babylonians influenced Arabs...

Outside the Greek sphere, zodiac calendars were rather commonplace in the Near East from the third century BCE to the second century of our era, particularly among Nabataean Arabs and Aramaic-speaking peoples, including Assyrians and Hebrews.

In early Islamic history, the constellations of the Arab zodiac bore names translated from Greek or Aramaic, but Ahmed al-Jallad, a professor at Leiden University, explains that the ancient Arabian zodiac has roots extending back to Babylonia. Most knowledge of the Babylonian tradition, however, appears to have been lost by the time of the Classical Islamic period in the Middle Ages. For example, the 10th-century astronomer al-Sufi believed the pre-Islamic Arabs were entirely unaware of the zodiac.





Al-Jallad, however, studied the notoriously difficult Safaitic inscriptions—Bedouin graffiti carved on rocks in the basalt deserts of Syria, Jordan and Saudi Arabia—and identified all 12 zodiacal constellations, all traceable back to Babylonia. Al-Jallad showed that early Arabs did know about the zodiac, and that they had closer cultural ties with the civilizations of the Fertile Crescent than previously assumed. And the inscriptions he found were similar to those on tens of thousands of rocks amid the lava flows of present-day southern Syria, northeastern Jordan and adjoining areas of northern Saudi Arabia.

... and Hebrews.

The *mazzaroth* (“constellations”), or Hebrew zodiac, took its form between the Hellenistic and Islamic eras, and it shows a mix of influences, primarily from the Greek and Mesopotamian traditions. Its 12 representations match up with the Babylonian/Greek version in symbolism, starting point and sequence. Archeologist Rachel Hachlili, who has studied zodiac mosaics found on the floors of synagogues built in the fourth to sixth centuries, says these zodiacs, with their symbolic figures, served the local community as popular calendars that helped people remember the timing of seasonal events and rituals.

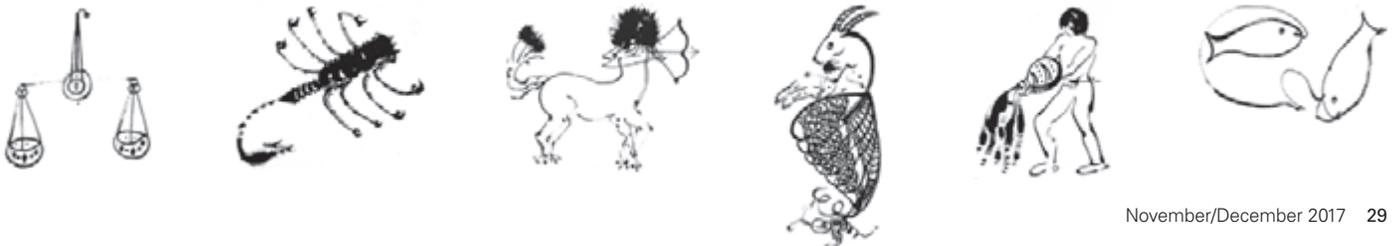
The Hindu zodiac synthesized local and Greek elements—and it is more accurate.

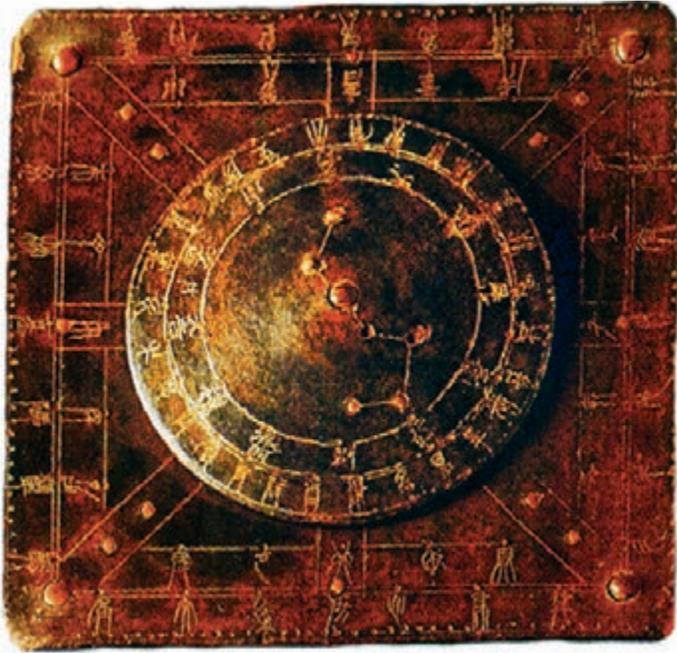
Dating to 1500 BCE or even earlier, the Hindu zodiac, too, shows Greek influences, but according to American historian of science David Pingree and others, some aspects are indigenous. The *Vedas*, the scriptures of Hinduism and India’s oldest literature, refer to the science *Jyotisha*, which involves tracking and predicting the movements of celestial bodies for time keeping.

Jyotisha came to encompass Hindu astrology as well, which developed through contact with Greek learning, centuries after Alexander the Great’s military campaign in northwestern India in the fourth century BCE. Science historian Michio Yano describes India’s absorption of the Greek system from the second to fifth centuries of our era as “the Sanskritization of Greek astrology.” India absorbed Greek astronomical science as well, including some elements that predated even Ptolemy.

Though written and vocalized in Sanskrit, they represent pictorial images associated with the Greek zodiac. For example, *dhanu* (“bow”) corresponds to Sagittarius the Archer, and *kumbha* (“water pitcher”) corresponds to Aquarius the Water Bearer. Where they differ most profoundly, however, is in their fundamental celestial referents: The Greek system uses the *tropical zodiac*, in which the motion of planets is measured against the position of the Sun on the spring equinox; the Hindu system, much like the Babylonian, uses the more stable *sidereal zodiac*, in which the stars are regarded as a fixed background against which the motion of planets is measured. The sidereal system thus adjusts for the slight wobble of the Earth’s axis, and its measurements are more accurate over centuries.

It was in about the second century that the Hindu sidereal zodiac began diverging from the Greek tropical zodiac, at the time India was absorbing Greek astronomical and astrological knowledge. Today Hindu astrology (sometimes called Vedic astrology) is alive and well, and advanced degrees in the discipline are still offered by some Indian universities.



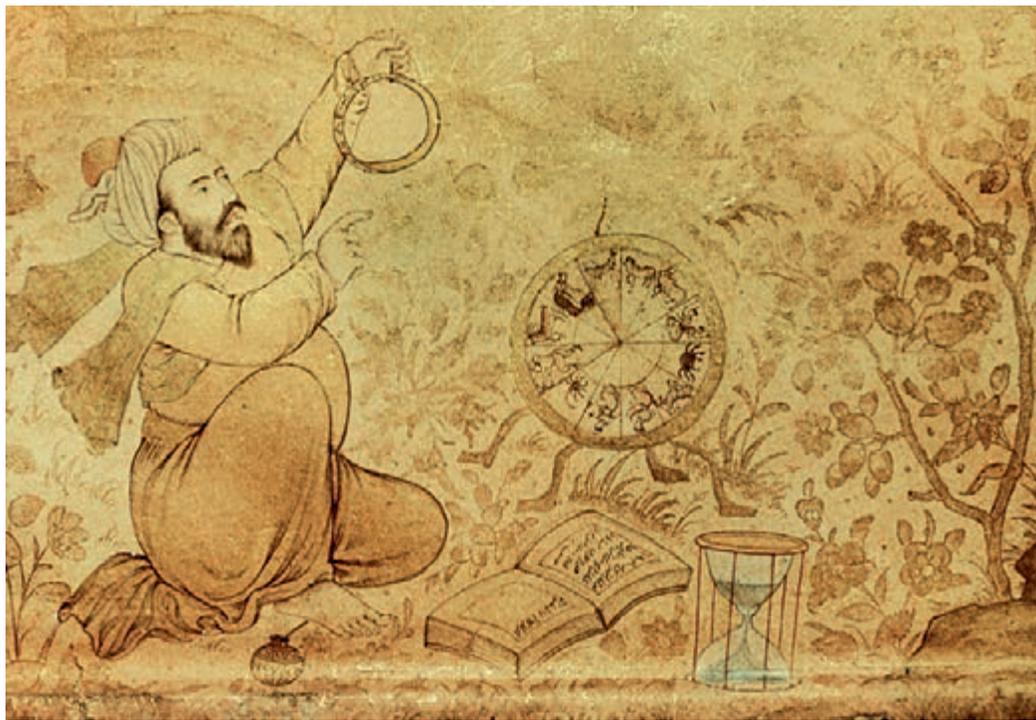


Left: This second-century-BCE wooden plaque from Gansu, China, presents an outline of the Big Dipper, surrounded by constellations. Chinese astrology is based on a cycle of 12 years, and scholars debate the extent of connection—if any—to Babylonian influences. Lower: An early 17th-century Mughal drawing shows an astrologer with an astrolabe, zodiac tables and hourglass.

than the Chinese, the experts don't believe the transmission was the other way around, from China to Babylonia.) Similarities include the use of 12 signs represented by animals. (Only the Dragon is mythical; the rest are real.)

At the same time, China's zodiac is unique because it covers 12 years rather than 12 months. The zodiac covers a 12-year span because of the special place that the planet Jupiter held among early Chinese astronomers, who called Jupiter the "Year Star" (*"Sui-xing"*). In about 2000 BCE, it was Chinese astronomers who first confirmed that Jupiter takes 12 Earth years, or one "Jupiter Year," to orbit the Sun. By the fourth century BCE, the Chinese divided the sky into 12 zodiacal regions, with Jupiter passing through one region each year.

In Chinese astrology, a zodiac sign is based on a lunar calendar and is determined by the year of birth. For example, someone born between February 7, 2008, and January 25, 2009, was born in the Year of the Rat. According to this system, the year begins under the influence of a zodiac sign, and depending on the characteristics of that sign, the fate written in the stars is the same for all born during that whole year. (Popular reputations of rats notwithstanding, people born under the Rat are said to be charming, intelligent, outgoing and hardworking.)



The Greek/Babylonian zodiac traveled the Silk Roads to China...

An ideal time for knowledge-sharing on zodiacs

and similar topics between Mesopotamia and China took place during the centuries of the Silk Roads, the intercontinental trade network across Central Asia that came into its own in the final decades of the second century BCE. From the Chinese side, the Silk Road was encouraged by Emperor Wu, who ruled the Western Han Dynasty. Wu dispatched a special envoy, Zhang Qian, to the countries to the west. Zhang visited the kingdoms of Fergana, Sogdiana and Bactria (formerly the post-Alexandrian

Chinese astrologers based their zodiac on the orbital intervals of Jupiter.

Sheng xiao ("birth likeness") is the name of the Chinese zodiac, popular also in Japan, Korea and Vietnam. It dates to the fourth century BCE and shows a few similarities to the Greek and Babylonian zodiacs. This has led scholars to explore the possibility of cultural transmission from Babylonia to China. (Because the Babylonian system is much older



Vaulting over the main concourse of New York's Grand Central Station, the mural of the Mediterranean winter zodiac has been restored several times since its original painting in 1913.

Greco-Bactrian Kingdom) and gathered information about the Indus River Valley of North India and the Parthian Empire. His reports encouraged China to continue its outreach in the West. Eventually the Silk Road stretched all the way to Rome, enabling Romans to buy silks and spices from China in exchange for Roman glass beads and other wares.

Two important examples of zodiacs dating from the seventh to the 13th centuries appear in northwestern China: the Xuanhua Tombs of Hebei Province and the Mogao Caves at Dunhuang in Gansu Province. Diana Y. Chou, associate curator of East Asian Art at the San Diego Museum of Art, studied them.

In mural paintings on the ceilings of the Xuanhua Tombs are Babylonian/Greek zodiacs that date to the 12th century. The zodiac symbols on these "celestial ceilings" are accompanied by traditional Chinese star representations, and according to Chou, they constitute "perhaps the earliest known complete zodiac in Chinese art."

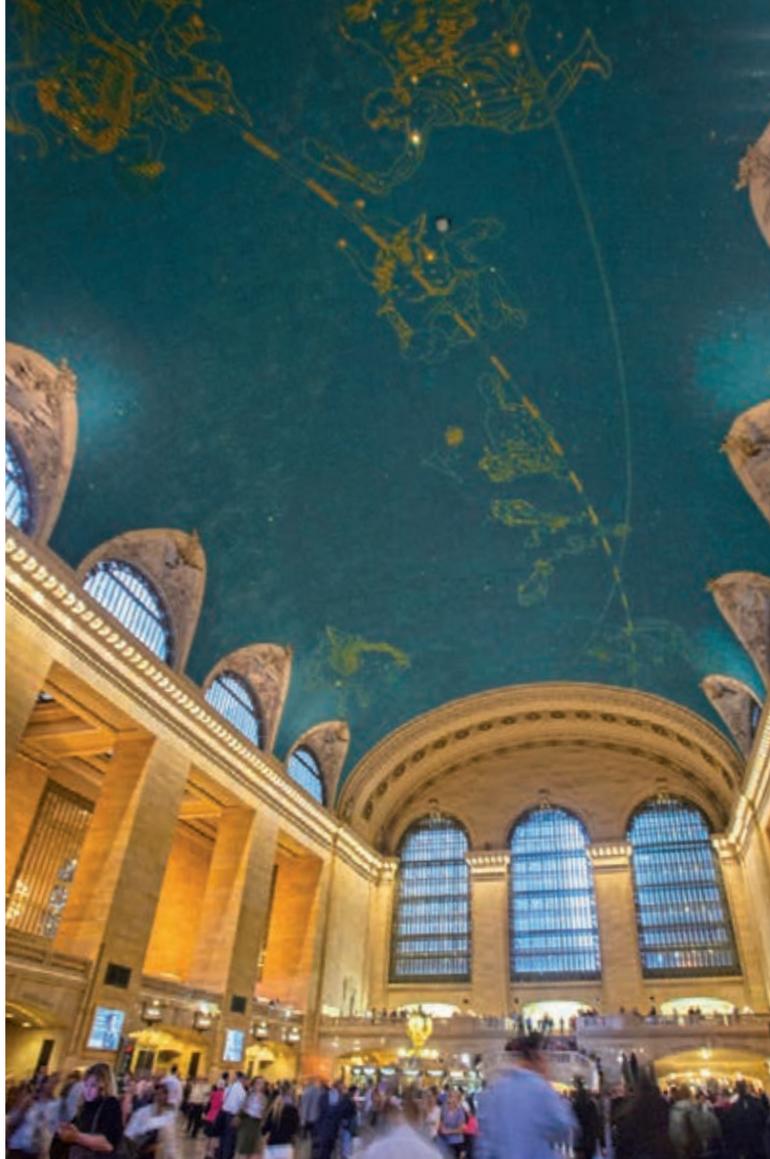
The Mogao Caves, not far from a Silk Road outpost near the Gobi Desert, were dug in the fourth century by Buddhist monks for the purpose of meditation. Created over the course of a millennium, the caves today number about 1,000, and many feature painted murals that are some of the finest of their kind in China.

In Cave 61, there appears a *Buddha Tejaprabha* ("Buddha of the Blazing Lights") and, in the background, the Chinese 28 astrological stars together with Babylonian astrological signs.

... but there is little evidence of more than incidental influence.

Although images of the Babylonian zodiac came to China in the forms of diagrams, sketches, personal accessories, vessels and other items, and even considering Chinese astrologers were doubtless familiar with the Babylonian zodiac, scholars today believe that Chinese astrology was largely immune to outside influence. Yet the similarities are too intriguing to ignore. For example, both Western and Chinese zodiac signs are ruled by elements. The Western zodiac divides its signs according to the four classical Greek elements of fire, earth, air and water, and the Chinese zodiac divides its signs into five elements of fire, earth, water, wood and metal. There are also some similarities in the roles the zodiacs play in developing personal astrology charts.

Western scholars long asserted that these and other commonalities demonstrated Babylonian/Greek influence in



Chinese astrology, but 21st-century scholars, led by David Pankenier, maintain Chinese astrology remained "essentially impervious to external influences."

Coincidence or influence? That's a subject for future scholars. 🌐



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THE AMAZIGH ADVENTURES OF Le Petit Prince



WRITTEN BY LOUIS WERNER

A fennec fox, the sand and stars, a baobab tree and a lad whose scarf unwinds to the length of a *tagelmust*, the face-covering turban worn by the nomads in the Sahara, are just some of the images that readers hold dear after finishing *The Little Prince* by Antoine de Saint-Exupéry. The reach of the beloved children's classic—about a pilot who crash-lands in the world's largest sand desert and meets a small boy from a far-off asteroid—is as vast as the Sahara itself.

This year the story was translated for the 300th time since it was first published in French as *Le Petit Prince* in 1943. The North African languages it appears in include the *darija* (colloquial Arabic) dialects of Morocco, Tunisia and Algeria, as well as the Algerian Kabyle and Tuareg Tamasheq languages. In the last decade alone, there have been two different translations into Tamazight, the language of the Moroccan Amazighs, or Berbers, one in 2005 using the indigenous Tifinagh script and the other transliterated into Latin letters in 2007 with the title *Amnukal MeZZiyin*.

New adaptations for the stage and screen are still frequent, some 75 years after the book appeared. An animated movie version won a 2015 César, the French equivalent of an Oscar.

Saint-Exupéry, known to his friends as “Saint Ex,” did not come upon those desert images solely from his own imagination. Between 1926 and 1929, he flew single-engine, two-seater planes on various North African legs of the 2,900-kilometer mail route linking Dakar, Senegal, to Toulouse in southern France. Based for years in small coastal posts along the way, he flew over and lived among many earthly manifestations of the images for which *The Little Prince* is famous. So impressed by what he saw, some 15 years later he recalled them when he sat down to write and illustrate his book.

Readers bring their own interpretations to *The Little Prince*. This is especially true for Moroccans, who see much of their homeland in the book. Not just that sand and those stars, but that landscape viewed through the lens of a downed aviator awestruck at the sight of an uncommonly dressed stranger.

“Don’t forget that its story was inspired or perhaps even narrated to the author by a nomad whom he had met during his desert voyages,” says Larbi Moumouch, a Moroccan cultural activist and one of its two translators into Tamazight. Although it is unlikely that a Tuareg literally dictated the little prince’s story to Saint Ex, many teachers and parents in Morocco read the book to children, just as they do in countries around the world. But Moumouch believes that Amazigh children are the ones who find themselves closest to home in its pages.

“Yes, the story itself may be universal, but one thing is sure: We Amazigh feel closest to its plot,” says the translator, noting that he and his people have heard such tales in their

own homes, told by their own grandfathers. “The plot has many similarities to our Amazigh oral tales. And the word I used to translate ‘little prince’—*amnukal*—has an exact meaning that corresponds to a tribal chieftain.”

As *The Little Prince*’s aviator-narrator, a stand-in for Saint Ex himself, writes of his friend’s many questions upon their first meeting: “The first time he saw my plane, he asked, ‘Did you come in that thing? How? Did you fall from the sky?’ ‘Yes,’ I said modestly. ‘How funny,’ he answered. ‘You couldn’t have come from very far then.’” For the planet-hop-

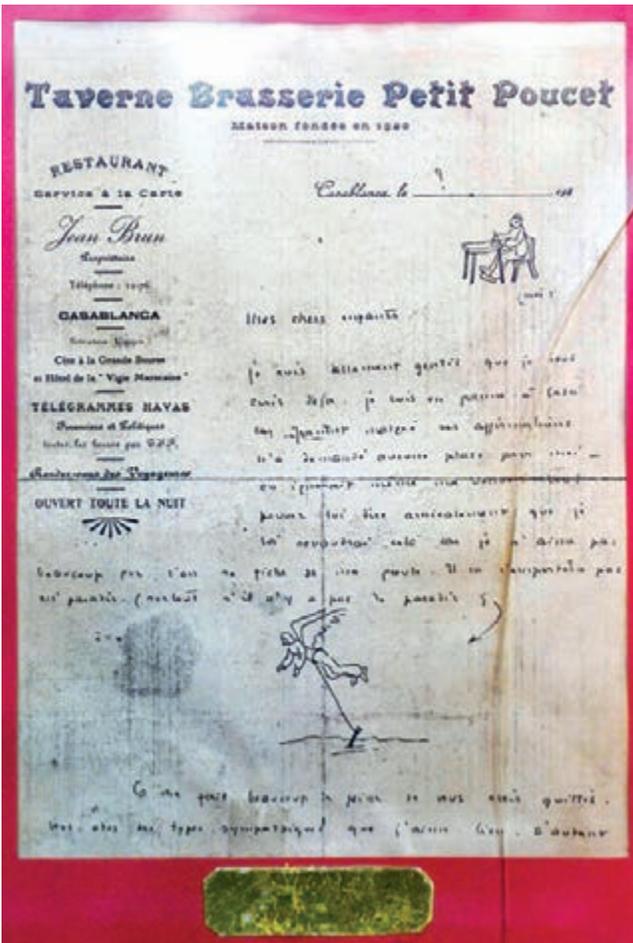


“I fell for the desert the minute I saw it, and I saw it almost as soon as I got my pilot’s wings,” wrote Antoine de Saint Exupéry, whose views of the Sahara from above began in the mid-1920s with North African legs of the mail route linking France and Senegal.

ping prince, just as for the Moors, a broken-down plane was as unimpressive a means of transport as the slowest camel.

It is a fennec fox, not a camel, that Moumouch points to as the quintessential Amazigh symbol of the desert. He notes that the kind of circular, paradoxical conversation that the fox has with the prince—it complains that he hunts chickens while men hunt him, and says that one can see only with the heart, not with the eyes—is typical of the Amazigh style of storytelling.

Lahbib Fouad, who translated *The Little Prince* using Tifinagh script, agrees. The fact that the little visitor speaks



“Saint Ex,” as he was called, was known to doodle, as he did here, *left*, while writing an illustrated letter on the stationery of a restaurant in Casablanca, Morocco. *Above*: In southwest Morocco, the town of Tarfaya hosts the Musée Antoine de Saint-Exupéry. *Below*: Saint Ex appears at far left in an undated photograph of a meeting with fellow airmen.

“sometimes with a snake, a fox, a flower, a star [and] a volcano ... coincides perfectly with the mythology and the cosmogony of the Amazigh,” he said when the book was published as *Ageldun Amezzan*.

Ghita El Khayat, a widely published Moroccan ethnopsychiatrist and anthropologist, has her own perspective on the *marocanité*, or “Morocco-ness,” of *The Little Prince*. As the founder of Editions Aïni Bennai, one of Morocco’s leading publishers, she has brought out both its modern standard (classical) Arabic and its Moroccan darija translations.



“I consider it the most important book to be translated into dialectical Arabic, a book of special note because such a story is a gift from mother to child and should be read in what I call the ‘milk language,’” El Khayat says. Yet it is telling that her financial backers wanted it to be published first in classical Arabic. “Even for those who say they believe in its value for children, many wanted it to be written in the language of formal discourse, as if delivered to and for adults,” she explains.

“In fact, I would have preferred it to be translated in my own mother tongue, the darija of Rabat,” she continues, “a language spoken only in the city of my birth, with as many Spanish as French loan words, rather than in a national darija that smooths away all of our particular vernaculars.”

A mail pilot’s forced desert landing could also be either smooth or rough, depending on—as the little prince often said—“*On ne sait jamais*,” (“one never knows”), until it is perhaps too late. Or in the words of Saint Ex, “The miracle of flight is that it merges man directly into the heart of mystery.” But to penetrate that mystery, one first had to survive the nosedive. As Saint Ex wrote in his memoirs:

I fell for the desert the minute I saw it, and I saw it almost as soon as I got my pilot’s wings.... The nomads will defend until death their great warehouse of sand as if it were a treasure of gold dust. And we, my comrades and I, also loved the desert because it was there that we lived the best years of our lives.

The pilot’s first professional job was flying over the Sahara in a Breguet 14 biplane with an open cockpit and top speed of 130 kilometers per hour. Most of the time he was accompanied by a Tuareg assistant carrying a sword who would serve as bodyguard if they ever came down in the sparsely inhabited mountains.



In Toulouse, where his first mail route originated, a mural along Avenue Saint-Exupéry commemorates his life. Below: In an aircraft museum in Le Bourget, in the north part of Paris, Saint Ex’s “curb chain” sits on display.



France then was still extending its colonial power throughout North Africa and meeting the resistance of Berber and Tuareg leaders in Morocco, Niger and Algeria. News of these rebellions filtered into English in the 1924 novel *Beau Geste* about the French Foreign Legion’s desert warfare. In this historical setting, *The Little Prince* might be read as a pacific counter-narrative to such stories of battle and bloodshed.

For two years in the late 1920s, Saint Ex made the desert his home, posted variously at Port Etienne (now Nouadibou) in Mauritania, and Villa Cisneros (today’s Dakhla) and Cape Juby (now Tarfaya) in southern Morocco where he served as station chief for 18 months.

He returned to Morocco in the early 1930s, reconnoitering a direct air route to Timbuktu in Mali and flying the night legs of the Casablanca-Port Etienne line. The pencil sketches he made while waiting for dinner at the Petit Poucet restaurant after touching down in Casablanca still hang on its walls.

In the outstations, Saint Ex wrote that he felt “like a prisoner of the sands, going from stockade to stockade without ever once venturing into the zone of silence ... this isolation provoked a strange feeling. I still know this feeling. The three years I spent in the desert taught it to me.”

Saint Ex’s first crash experience came in 1926 on his very first flight across the desert while a passenger en route to his posting in Río de Oro, west of Villa Cisneros. No one was hurt, and a support plane landed safely at the site to take aboard the pilot. Saint Ex was assigned to stay behind to guard the wreck until relief could arrive. “Only two nights previously I was eating dinner in a restaurant in Toulouse,” Saint Ex wrote in his memoirs.

But what I felt here nonetheless was immense pride. For the first time since birth my life belonged to me.... The sand sea was captivating. No doubt it was full of mystery and danger. Its



Lahbib Fouad, researcher at the Royal Institute of the Amazigh Culture in Rabat, Morocco, holds a copy of *Le Petit Prince* that he translated into Amazigh, the language spoken by the ethnic Berbers living in many of Morocco's rural areas. Below: In May this original drawing by Saint Ex sold for €133,200 at the Artcurial Auction House in Paris.

silence came not from emptiness but rather intrigue, from the imminence of adventure. Night approached. Something slowly being revealed bewitched me—the love of the Sahara, like love itself.

In the book, Saint Ex's narrator agrees when the little prince says that silence is beautiful. "It's true," he says, "I've always loved the desert. One can sit atop a dune, seeing nothing, hearing nothing, but something still stirs and glitters in the void." Among the many oddballs the prince meets in his intergalactic travels is a geographer, bound to his atlas-piled desk waiting for a real adventurer to tell him where to find the oceans and deserts. "One requires an explorer to furnish proofs," the geographer says. "It is very rarely that an ocean empties itself of water."

Saint Ex must have been remembering the times he walked across the bleached oyster shells strewn about what had once been the Sahara's prehistoric inland sea.

Two days before New Year's Eve in 1935, Saint Ex was

attempting to set a new Paris-to-Saigon airspeed record when he crashed again, this time in Egypt's Wadi Natrun. This experience likely impressed on him the idea of the prince as a sort of lifesaver. After four days, nearing death and fighting thirst-induced hal-

lucinations, he and his copilot were rescued by a lone Bedouin.

"*Tayara* [airplane] *boum boum!*" was all he could say through parched lips. After taking a sip from a proffered goatskin but still delirious, he wrote a note for the Bedouin to take to the mine he had flown over just before crashing: "We ask that you come by car or boat as soon as possible."

This was only the first of the day's surreal moments. The rescue vehicle ran out of petrol not far from the Great Pyramid, where the Khufu solar ship would be found buried in sand 20 years later. When Saint Ex telephoned the French Embassy from the Mena House Hotel at Giza, the secretary warned the ambassador to discount the incoming call because it had been dialed from a bar after midnight. *The Little Prince* begins with a similar scene:

I had an accident with my plane in the Desert of Sahara six years ago. Something was broken in my engine ... I had scarcely enough drinking water to last a week....

The first night, then, I went to sleep on the sand, a thousand miles from any human habitation. I was more isolated than a shipwrecked sailor on a raft in the middle of the ocean.

Saint Ex had been based near the Banc d'Arguin





In 1997 the bank of France honored Saint Ex on a 50-franc note whose watermark is a portrait of the aviator, author and illustrator. At top left appears a simple drawing of an elephant inside a boa constrictor, taken from *Le Petit Prince*; in the background appears a map of Europe and Africa and one of Saint Ex's aircraft, a Latécoère 28. Below: In Bellecour Square, Lyon—the city where Saint Ex was born—a statue shows him together with *Le Petit Prince*.

on the coast of Mauritania, and the nearby site of the famous shipwreck depicted in the Louvre's painting "The Raft



of the Medusa" by Théodore Géricault was certainly known to him. He would have dipped low over those very waters many times while flying the mail south to Dakar.

It was his third crash, while flying reconnaissance over the Mediterranean in July 1944, near the end of World War II, that proved fatal. No cause was ever determined, but he perished in the same way he lived the best moments of his life—although he always said he preferred sand over sea. (Once after takeoff from a coastal airstrip, engine trouble forced him to fly dangerously low over the water. His passenger later reported that instead of looking at the control panel, Saint Ex had pulled out a sketchpad and was drawing the two of them as deep-sea divers.)

At least, as he explained later, when you crash on sand you never run the risk of drowning. Any Tuareg of the desert, or even a little visitor from a waterless asteroid, would understand that perfectly well. ☺



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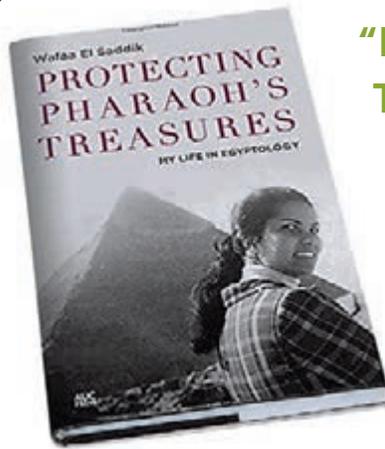
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“I couldn’t believe my good fortune. The entrance was sealed with an intact layer of clay! ... At that moment I knew how Howard Carter must have felt when he knelt in front of the sealed door of Tutankhamun’s tomb.”

Protecting Pharaoh's Treasures: My Life in Egyptology

Wafaa El Saddik with Rüdiger Heimlich. Russell Stockman, trans. 2017, AUC Press, 978-9-77416-825-3, \$24.95 hb. In this delightful memoir archeologist Wafaa El Saddik deftly weaves the story of her life into the story of her country, going back to the time of the pharaohs. She writes with sensitivity about a career that has taken her to Europe and America and, more importantly, to a deep understanding of her beloved Egypt. Beginning with her childhood in the Nile Delta, she sweeps us through her years of study in Cairo and Vienna and into a profession that initially placed barriers to her advancement, yet ultimately fulfilled her dreams. El Saddik's story is about more than herself, however. It is also about the turmoil of Egypt, from the Suez Crisis of 1956, through the Israeli occupation of the Sinai in 1967, to the demonstrations in Tahir Square in 2011 and beyond. She not only offers new insights into her country's past glories, but provides a deeper understanding of contemporary Egypt as well. —JANE WALDRON GRUTZ



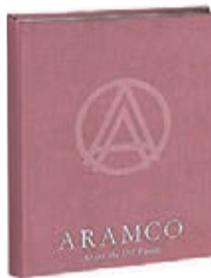
Arabia Felix: The Danish Expedition 1761-1767

Thorkild Hansen. James and Kathleen McFarlane, trans. Colin Thubron, intro. 2017, New York Review of Books, 978-1-68137-072-9, \$17.95 pb.

In 1761 a half-dozen adventurers sponsored by Denmark's King Frederick v left Copenhagen bound for the Arabian Peninsula—*terra incognita* to most Europeans—on a scientific expedition doomed to failure. From the outset, writes Hansen, the “vain” Danish philologist Friedrich Christian van Haven butted heads with the “belligerent Swedish natural scientist Peter Forsskål,” while the “hardheaded” German cartographer Carsten Niebuhr had little use for either. A German artist, a Danish physician (disdained by Forsskål) and a Swedish orderly rounded out the crew. Robbed in Egypt (where they spent a year) and plagued by malaria in Yemen, one by one the crew perished. Only Niebuhr returned, six years later, via Bombay,

Muscat and Persia, by which time the expedition had been forgotten. Yet it made significant discoveries. Niebuhr's copies of inscriptions at Persepolis ultimately unlocked the mystery of cuneiform. Forsskål's “herbarium” of 1,300 exotic plants informed later botanists. This narrative of the journey—originally published in 1962 and translated into English in 1964—draws on Niebuhr's account and other period sources and includes a new introduction. —TOM VERDE

dependents who were her childhood community. Her pictures show a town resembling an almost prototypical us suburb, but with traces that set it apart from any other place on the globe. Malik, who was born and raised in Dhahran, relies on well-composed, undramatic images to tell most of her story, but tucks in documentary evidence from everyday activities both to further personalize the book and to imbue it more deeply with the spirit of the place. A clipping from the community newspaper; copies of ID cards; a fan letter to Leonardo DiCaprio—these complement images of Scout troops and soccer games, and moms in Western dress and in Saudi *abayas* shepherding their kids. Quiet, personal and visually poetic, *ARAMCO* drills deeply into the heart of an exceptional—but not exotic—place. —JANE WALDRON GRUTZ



ARAMCO: Above the Oil Fields

Ayesha Malik. 2017, Daylight Books, 978-1-94208-436-5, \$50 hb.

As photographer Ayesha Malik makes clear in this handsome volume of photographs

and snippets of personal documentation, Dhahran, Saudi Arabia—headquarters of the energy enterprise known as Aramco—is more than simply an oil-company town in the Arabian Desert. Malik, now 28, portrays it as home to the 10,000 employees and



Babylonia: A Very Short Introduction

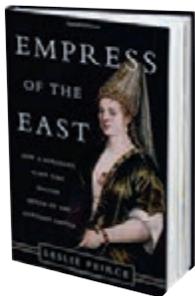
Trevor Bryce. 2016, Oxford UP, 978-0-19872-647-0, \$11.95. pb

The “Very Short Introductions” series, begun in 1995, now has more than 450 volumes on a wide range of subjects.



In this title Trevor Bryce, a leading scholar of ancient Middle Eastern civilizations, makes Babylonia come alive for modern readers, emphasizing personalities, cultural trends and recent findings of archeologists. His main focus is on history's high points, such as the Old Babylonian dynasty of Hammurabi, the lawmaker, and the Neo-Babylonian empire of Nebuchadnezzar with its spectacular building projects. We learn about the crucial intervening centuries of Kassite rule (ca. 1570-1155 BCE), when Babylonian culture truly came into its own. Immigrants from the north, the Kassites assimilated peacefully into Babylonian society and became great admirers of its customs and traditions. Under Kassite kings, Babylonian became the international diplomatic language of the region, and Babylonia evolved from a collection of independent city-states into a coherent nation. The book concludes with a brief, useful evaluation of the Babylonian legacy: advances in language, literature (*Gilgamesh* and other epics), mathematics, medicine and astronomy that had a lasting effect on humanity.

—ROBERT W. LEBLING



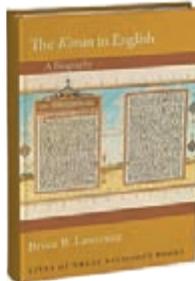
Empress of the East

Leslie Pierce. 2017, Basic Books, 978-0-46503-251-8, \$28 hb.

The story of how a slave girl who “was neither Turkish nor Muslim by birth” became

the most powerful woman in the Ottoman Empire during the 16th century rivals that of any soap opera. Jealousy, power grabs, palace intrigue and money all drive the narrative of this biography of the Ukrainian-born Roxelana, favored concubine and eventual wife of Suleyman I, “the Magnificent.” Outmaneuvering her rivals in the harem and at court, Roxelana—or Haseki Hürrem Sultan, as she was formally known—“transformed the imperial harem from a residence for women of the dynasty into an institution that wielded political influence,” a shift that endured for generations under the ensuing “Sultanate of Women.”

—TOM VERDE



The Koran in English: A Biography

Bruce B. Lawrence. 2017, Princeton UP, 978-0-69115-558-6, \$26.95 hb.

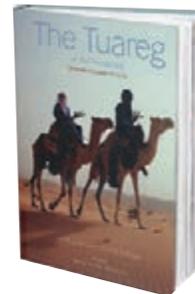
Theologically, Arabic is the only true language of the Qur’an. Yet as Islam spread throughout the world among many non-Arabic speakers,

translations were made, including English versions, which are among the most recent. This comprehensive volume examines the ongoing story of English translations of the “Koran” (as it was Anglicized), beginning with the 1649 edition by Alexander Ross, chaplain to England’s King Charles I. George Sale’s 1734 translation was the next, “most popular, and influential” English-language edition (Thomas Jefferson owned a copy) and remained so for nearly two centuries. Modern editions range from the widely known Yusuf Ali annotated translation (early 1930s) to online versions to Sandow Birk’s 2015 “American Qur’an,” which—like a medieval illuminated Islamic manuscript—“combines a transcription, an adaptation and an illumination into one, large, luxuriant book,” writes Lawrence, who also examines the finer details of the linguistic and theological challenges faced by translators of an “untranslatable text.”

—TOM VERDE

the largely unknown and essential roles Muslims have played in almost every aspect of American history. Well before 1776, the first Muslims were brought over as slaves from West Africa, notes Hussain, asserting that “the fabric of America is woven, in part, with Muslim thread.” President Thomas Jefferson’s interest in Islam inspired him to learn Arabic after purchasing a translation of the Qur’an—the same Qur’an Keith Ellison used when he was sworn in as the first Muslim member of Congress in 2007. America’s first mosque was built in 1915 in Maine; and in 1952 the first International Muslim Conference, held in Cedar Rapids, Iowa, drew more than 400 attendees from across the us and Canada. Hussain’s book is replete with fascinating historical tidbits, along with sketches of famous American Muslim musicians, academics, artists and athletes, among others, whose contributions challenge stereotypes about the origins of America’s Islamic heritage.

—PINEY KESTING



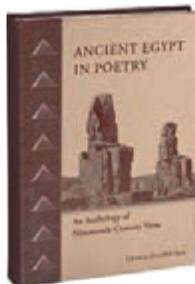
The Tuareg, or Kel Tamasheq: The People Who Speak Tamasheq and a History of the Sahara

Henrietta Butler, ed. 2015, Unicorn Press, 978-1-90650-930-9, \$45 pb.

The Tuareg are an ethnic Berber

people. Spread across many African desert countries as an often oppressed, seminomadic and highly mobile minority—lately caught in the crosshairs of heavily armed insurgents and government troops from outside their home territory—they do not make an easy subject to capture within the pages of a book or even in a museum exhibition, where this book’s contents originated. That Henrietta Butler succeeded so well is testimony to her deep care for the Tuareg and her remarkable dexterity. She not only assimilates French-language ethnographic literature, colonial-era exploration accounts, oral histories and songs, in-person field reportage, and contemporary Tuareg painting and prehistoric rock drawings alike, but also focuses her candid photography on everyone from tour guides, guitarists and music festival attendees to isolated women and children in their distant encampments.

—LOUIS WERNER

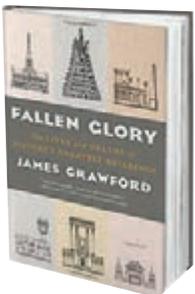


Ancient Egypt in Poetry: An Anthology of Nineteenth-Century Verse

Donald P. Ryan, ed. AUC Press, 978-9-77416-783-6, \$18.95 hb.

The editor is an American

archeologist/Egyptologist known for his work in the Valley of the Kings. He offers a literary gift, a collection of 19th-century English poetry inspired by the rich legacy of ancient Egypt. The Victorian-era poets number more than 50, and come from Great Britain, Ireland, the us and Canada. Some you probably know well: Browning, Byron, Keats, Longfellow, Melville, Ruskin, Shelley, Tennyson. Others are less well known today, such as Philadelphia physician Silas Weir Mitchell, said to be the father of neurology; New York socialite Anne Lynch Botta, who hosted such luminaries as Edgar Allan Poe and Ralph Waldo Emerson; and English vicar Hardwicke Rawnsley, a founder of the UK’s National Trust. The anthology captures the Victorian fascination with pharaonic

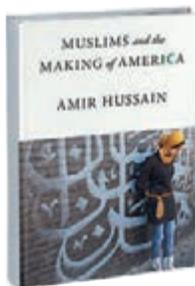


Fallen Glory: The Lives and Deaths of History's Greatest Buildings

James Crawford. 2017, Picador, 978-1-25011-829-5, \$35 hb.

As human beings, we “invest our greatest structures and constructions with personalities,”

writes James Crawford. Cordoba’s once-fabulous Madinat al-Zahra palace stands out as an example. Commenced in 936 CE, the building (now in ruins), with its jewel-encrusted walls, was ruler Abd al-Rahman III’s effort to “indulge in some myth-making” for his nascent caliphate. This vaguely psychoanalytical review of some of the world’s most famous structures opens with ruminations on the architectural legacy of Eridu in Iraq (c. 5400 BCE), just south of the fabled ziggurat of Ur (the



Muslims and the Making of America

Amir Hussain. 2017, Baylor UP, 978-1-48130-6232, \$24.95 pb.

“There has never been an America without Muslims,” writes Amir Hussain in his exploration of



EVENTS & EXHIBITIONS

Highlights from our searchable listings at aramcoworld.com



CURRENT / DECEMBER

China and Egypt: Cradles of the World. The early cultures of Egypt and China are distinguished by histories spanning several millennia. This exhibition presents treasures of Egyptian and Chinese art side by side, featuring scores of artifacts from China that have never been seen in Europe before. The items on display cover a period from 4500 BCE to the Greco-Roman era (332–313 BCE), showing the enduring impact of these high cultures. Despite the enormous distance between the two cultures, both developed similar structures that are still recognizable today. Neues Museum, **Berlin**, through December 3.

CURRENT / JANUARY

After Darkness: Southeast Asian Art in the Wake of History. At a time of social and political tension, how should art and artists respond to the challenges of the moment? Does art have the power to change the world, or does the world

shape the evolution of art? This exhibit considers these questions through the work of seven contemporary artists and one group of artists from Indonesia, Myanmar and Vietnam, whose lives and practices have intersected with defining periods of socio-political transition in their respective societies. The title of the exhibition originates in the phrase “after darkness comes the light,” from the writings of late 18th-century Raden Adjeng Kartini, the daughter of the regent of Jepara in Java and an icon and champion of women’s emancipation in Indonesia, echoing the desire of artists to give a voice to the disenfranchised and those on the margins of society. Asia Society, **New York**, through January 2.

Cities of Conviction, in partnership with the King Abdulaziz Center for World Culture and CULTURUNNERS, is an exhibition of contemporary art from Saudi Arabia. While the artworks have been curated by Utah Museum of Contemporary Art

(UMOCA), this exhibition and program are part of a 10-city cultural tour of the United States. The exhibition presents works from artists who are engaged in looking at the struggle and transformations of Saudi society, and who delve into complex issues linking Utah and Saudi Arabia, such as natural resources, pilgrimage and tension surrounding commercial development around cultural heritage sites. UMOCA, **Salt Lake City**, through January 6.

Oriental Christians: 2,000 Years of History sheds light on the history of a diverse community and the role it has played in the political, cultural, social and religious arenas of the Near East. The exhibit places emphasis on the diversity of Oriental Christianity—its Coptic, Greek, Assyro-Chaldean, Syriac, Armenian, Maronite, Latin and Protestant churches—addressing each facet also in its Orthodox and Catholic dimensions. Maps, models, documentaries

Sama Alshaibi: *Silsila*

This solo exhibition consists of photographic series and videos by Iraqi artist Sama Alshaibi. Named for the

Arabic word *silsila*, or “link,” the exhibition represents the joining of individuals to one another and the natural world and the self to the divine.



Inspired by 14th-century explorer and scholar Ibn Battuta, Alshaibi retraces his journeys through the Middle East, North Africa and the Maldives. Recording the sublime desert terrains and vast skies of places such as Egypt, Morocco and Palestine, Alshaibi presents the feminine form— isolated among these spare landscapes—as a metaphor for humanity and the natural world in jewel-like colors and geometric patterning that mirror and reference the symmetries of Islamic art traditions. Herbert F. Johnson Museum of Art, Cornell University, **Ithaca, NY**, through December 24.

“*Ma Lam Tabki (Unless Weeping)*,” 2014, from the series *Silsila*. Chromogenic print mounted on Diasec.

COURTESY OF THE ARTIST AND ANYAM GALLERY



and diplomatic archives put these artifacts into perspective, providing visitors with an overview of the role Oriental Christians played in the cultural, political and intellectual life of the Arab world. Institut du Monde Arabe, Paris, through January 14.

Scythians: Warriors of Ancient Siberia. Groups of formidable warriors roamed the vast open plains of Siberia 2,500 years ago. Feared, loathed, admired—but over time forgotten ... until now. This major exhibition explores the story of the Scythians, the nomadic tribes and masters of mounted warfare who flourished between 900 and 200 BCE. Their encounters with the Greeks, Assyrians and Persians were recorded, but for centuries all trace of their culture was lost—buried beneath the ice. Discoveries of ancient tombs have unearthed a wealth of Scythian treasures. Many of the objects are on loan from the State Hermitage Museum, St. Petersburg. The British Museum, London, through January 14.

Soulful Creatures: Animal Mummies in Ancient Egypt. In the burial ground at Saqqara, one animal cemetery has yielded more than four million ibis mummies. The nearby dog cemetery contained more than seven million mummies, with countless others with a variety of mummified animals found throughout Egypt. This aspect of Egyptian culture and religion has remained largely a mystery. This exhibition explores the religious purpose of these mummies, how they were

made and why there are so many. Drawn from the museum's renowned collection, the exhibition features choice examples of birds, cats, dogs, snakes and other animals preserved from at least 31 cemeteries throughout Egypt. Brooklyn [New York] Museum, through January 21.

Pictures of Comfort and Design: Carpets in Indian Miniature Painting. In a region where furniture was little-known for centuries, carpets allowed for relaxed sitting and sleeping. At the same time, they served as an important representational element and created an impressive ambiance at courtly events. This exhibition presents 22 Indo-Islamic paintings from the Mughal era that demonstrate the use of carpets in the courtly context. In addition to miniature paintings, some fragments of Mughal Indian carpets from the collection of the Staatliche Museen's Museum für Islamische Kunst are exhibited, demonstrating the connection between the representations and the real, preserved objects. Pergamonmuseum, Berlin, through January 26.

CURRENT / FEBRUARY

We Are Football: In the elite neighborhoods of Paris and the low-income housing estates of Marseille, in the ports of Istanbul and Athens, in the suburbs of Algiers and on the beaches of Málaga, football—with its unparalleled popularity—has the ability to bring all Mediterranean residents together. Conversely, the sport also reflects the image of a

Mediterranean Basin affected by social divisions, violence, racism and fanaticism. Although it remains the embodiment of a meritocratic ideal, football also reveals economic imbalances. Museum of European and Mediterranean Civilizations, Marseille, France, through February 4.

CURRENT / APRIL

Trade Cloth from the Coromandel Coast. For centuries the Indian subcontinent was renowned as a center for the production of cotton textiles. The earliest archeological fragments, from the Indus Valley of Pakistan, date to 3200 BCE. The related industries of cotton processing—including spinning, weaving, bleaching, dyeing, printing or painting—would soon become well-established unrivaled specializations and traditions. By the 16th century, Indian cottons were in high demand

around the world. Trade with Southeast Asia was spurred by the hunger for spices, namely pepper, cloves, nutmeg and mace. Painted cloths from the Coromandel Coast, manufactured in the vicinity of Masulipatam and Pulicat, were considered especially refined and esthetically pleasing, and commanded a technical understanding of colorfast dyes through the use of mordants (dye fixatives). Central to rites of passage ceremonies, these fabrics doubled as canopies, backdrops, awnings and floor coverings. Honolulu Museum of Art, through April 8.

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