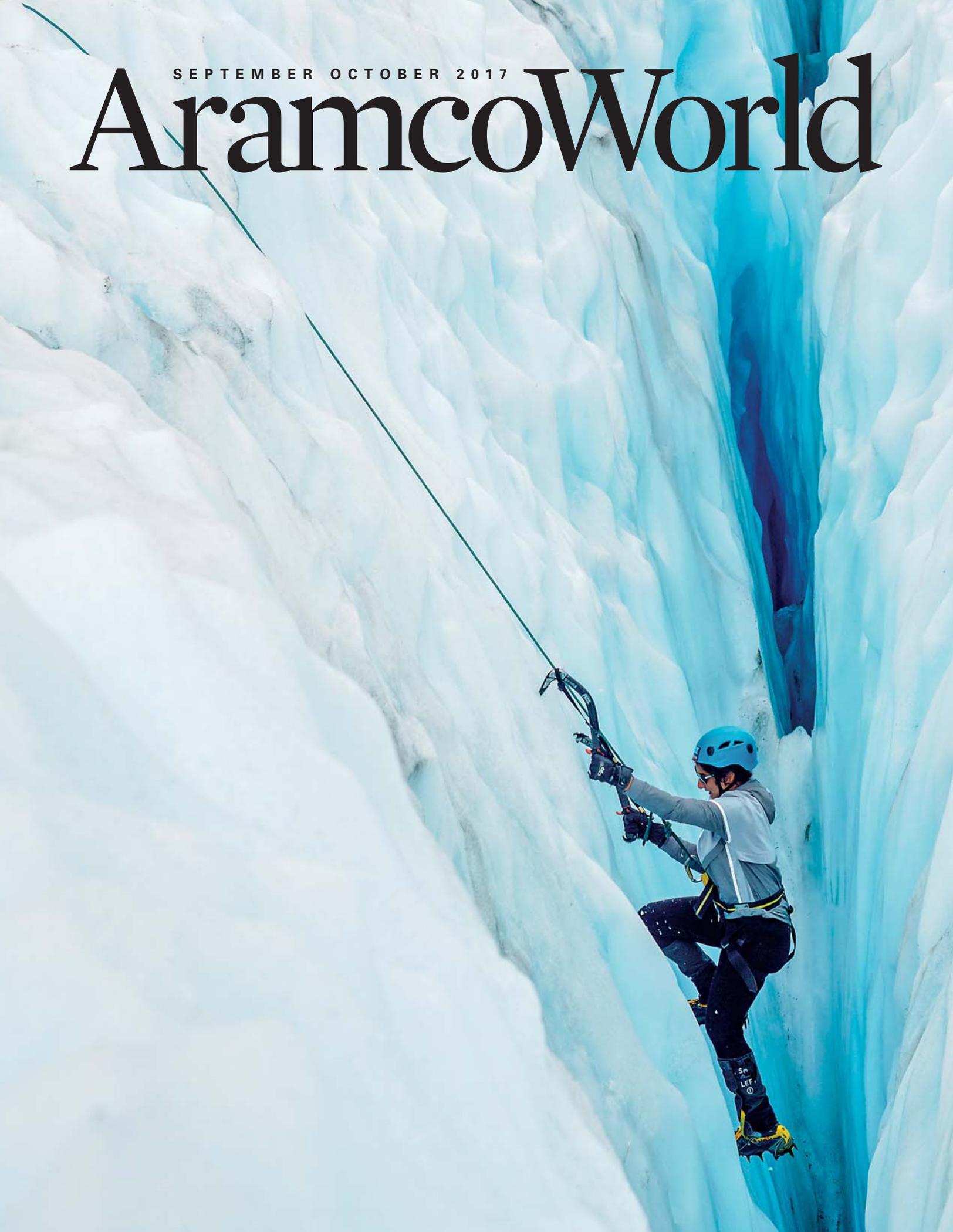


SEPTEMBER OCTOBER 2017

# AramcoWorld





## 4 The Seventh Summit

Written by Johnny Hanson

Photographs and video courtesy of Raha Moharrak

Students at the Girls Athletic Leadership School in Denver, Colorado, embrace Raha Moharrak, the first woman from Saudi Arabia to summit Mount Everest, who also, on July 2, climbed to another record: Standing atop North America's highest peak, Alaska's Denali, Moharrak became the first woman from her country to reach "the seven summits"—the highest peak on each continent. "You are capable of wonders," Moharrak says. "Feed your bravery, and it will overcome your fear; never feel that your dreams are too far from reach."

## 10 The Music Through the Window

Written by Matthew Teller

Photographed by Andrew Shaylor

London's biennial summer festival of Arab culture, Shubbak ("Window" in Arabic), staged 80 events with 150 artists, writers, dramatists—and musicians, all chosen for fusion-oriented creativity. We take in six outstanding new sounds.

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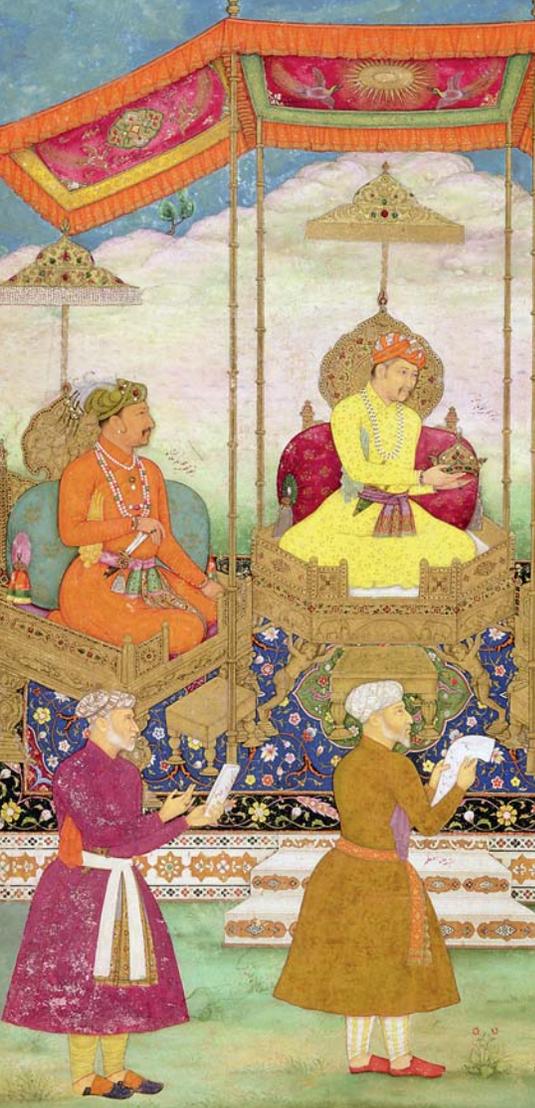
September/October 2017  
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We distribute *AramcoWorld* in print and online to increase cross-cultural understanding by broadening knowledge of the histories, cultures and geography of the Arab and Muslim worlds and their global connections.

**Front Cover:** Training for Raha Moharrak's ascents of the seven summits included technical ice climbing. "I'm always interested in new peaks, but I love ice climbing. I love the feeling of steel on ice," she says. Photo by Yap Zhi Yuen.

**Back Cover:** Egyptian progressive-rock band Cairokee helped lead off Shubbak's two-week program of 20 musicians. Formed in 2003, its name connotes, "Singing along with Cairo." Photo by Andrew Shaylor.



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Written by Alok Kumar and Scott L. Montgomery

Mutual belief in the idea of a universal order drew Muslim scholars to Indus Valley knowledge, and their translations advanced the trans-civilizational endeavor we today call science.

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Written by Tristan Rutherford  
Photographs and video by Rebecca Marshall

From *Lawrence of Arabia* in the '60s to *Star Wars* in the '70s to *Game of Thrones* last year, Ouarzazate is where it's at for film and TV shoots—more than 100 a year—and it's home to North Africa's newest film festival.

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Written by Sylvia Smith  
Photographs and video by Richard Duebel

Linking the waters once plied by pearl divers to the town their pickings paid for, the island of Muharraq's streets-and-alleys walking trail strings together some 17 restored buildings, bringing new life to Bahrain's most historic urban neighborhood.

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# FIRSTLOOK

## Qubbat al-Sakhra, ca. early 20th century

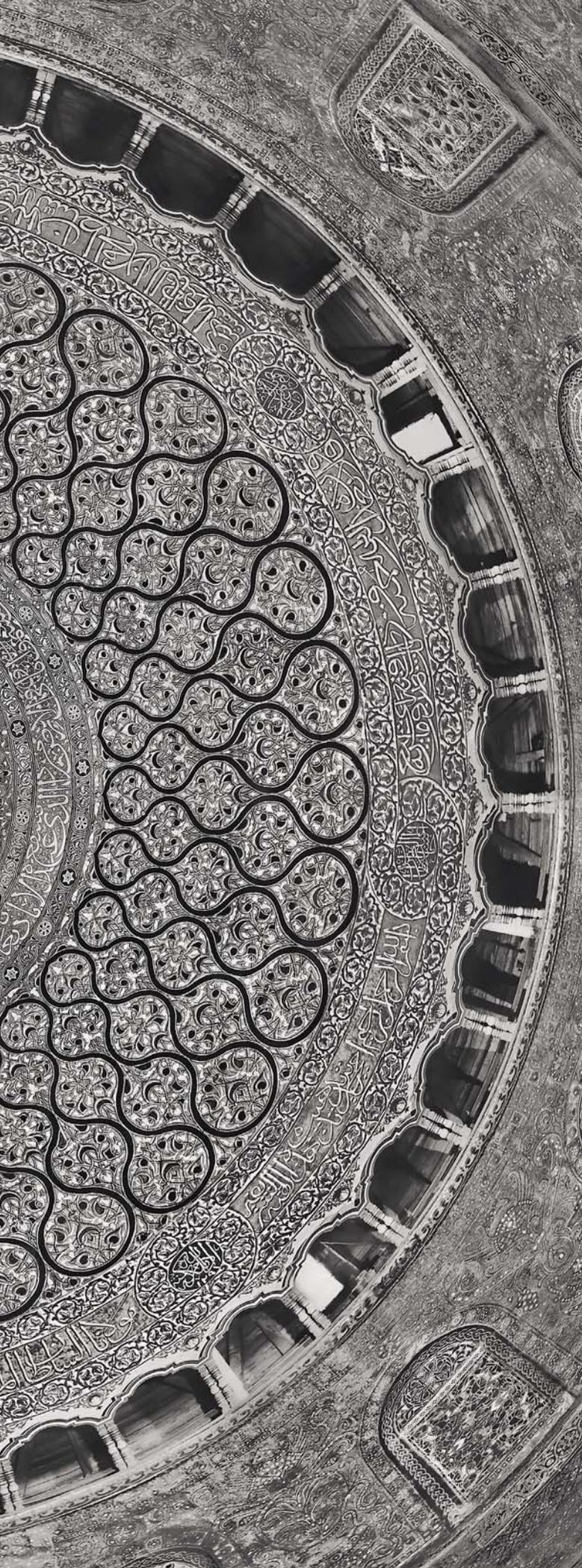
*Photograph by Kelvin Bown*

Considered one of the greatest achievements of early Islamic architects, craftsmen and artists, the magnificent interior of the Qubbat al-Sakhra (Dome of the Rock) was built between 688 and 691 CE on Jerusalem's Haram al-Sharif by order of Umayyad Caliph 'Abd al-Malik. Its intricate patterns reflect Hellenic, Roman, Byzantine and Sassanid influences, together with bands and medallions of Arabic calligraphy.

To create this unique symmetrical image of the hemispheric ceiling dome, photo restorer and artist Kelvin Bown painstakingly stitched together nine digital scans made from stereoscopic negatives originally taken between 1898 and 1920 by photographers commissioned by the American Colony of Jerusalem.

Produced as a limited edition print, this is one of many historical images of the Middle East that Bown has restored using modern techniques. The results bring renewed clarity, depth, detail and presence to early photographs, illuminating aspects of past ways of life that express the beauty, harmony, diversity and sustainability of the region.

Watch a video in which Bown explains how he made this image at [www.aramcoworld.com](http://www.aramcoworld.com), and see more of his work at [www.reawakeningthepast.com](http://www.reawakeningthepast.com).



# THE SEVENTH SUMMIT

Written by  
JOHNNY HANSON

Photographs and video courtesy of  
RAHA MOHARRAK



To the sounds of her teammates' cheers of "Seven! Seven!" and the clinking of their ice axes, Raha Moharrak topped Denali, North America's highest mountain, on July 2, making her the first woman from Saudi Arabia to summit the tallest peak on each of the seven continents.

The snowpack crunched as her feet hit the ground. The Arctic air needled her face. The bright red air taxi fitted with skis had just deposited Raha Moharrak and seven other climbers at base camp, 2,200 meters above sea level on the Kahiltna Glacier, amid the snowy massifs of the Alaska Range. That's when veteran climbing guide Dave Hahn walked up to the group and looked each of them in the eyes.

"Okay, guys," Moharrak recalls him saying. "As you may have heard, a climber has lost his life. They are evacuating his body. I want you to know this because I want you to know what you are dealing with. I want you to understand where you are, the type of place you are, and the consequences."

Moharrak knew exactly where she was—4,000 meters

below the summit of Denali, the highest peak in North America. And she knew exactly the consequences of error or fate. Three years ago here, a blizzard had pinned Moharrak and her team down at 5,250 meters. They almost perished.

Moharrak recalls how Hahn's words made her uneasy. "It was a feeling I had to work through," she says.

It was June 13. Ahead lay 20 days of acclimating, trekking and climbing.

She was ready. In 2013 she had become the first Saudi woman and, at 28, the youngest Arab to summit Mount Everest. She had stood on the six highest peaks of six continents, and a goodly number of others. She was back at Denali because Denali had thwarted her goal to complete what alpinists call “The Seven Summits.” She was here to feed a passion that began six years ago. A passion that started, she says, with the word “no.”

Middle-school girls pour into the noisy gymnasium, some in groups, some arm-in-arm, talking, laughing, boisterous. Many wear sweatshirts printed with the bold-letter acronym of the Girls Athletic Leadership School in Denver, Colorado: “GALS.”

Few seem to notice four students near the wall whose attention is fixated on the tall, dark-haired woman in a peach-colored dress and heels.

“I can’t wait to hear you speak,” one says.

“Have you climbed in Colorado before?” another interrupts. Listening, Moharrak confesses she is nervous.

“This is my first time speaking out of my region,” she says.

“Ohhhh.” Sympathy, in unison.

“I was nervous about my English.”

“Nooo!”

“You’re wonderful,” one assures her.

“I love your accent,” says another.

It’s January 31, and this is Moharrak’s first stop on a three-day speaking tour in the Denver area. Her talk, titled “A View from the Top,” is less about climbing Mount Everest and more about one woman’s pursuit of her dreams. It’s a topic that captivates 300 girls at a school whose mission is the empowerment of young women.

As Moharrak walks to the front, students sitting on the floor begin shrieking.

She waves and smiles in acknowledgment as she takes the microphone.

“A lot of people ask me, ‘When did this crazy obsession with mountains start?’” she begins.

“It started with the word ‘no.’ A small, two-letter word that has the power to enrage the spirit and fuel the soul. I never thought such a negative comment could open so many positive doors.”

She tells her story.

How in her home in Jiddah, Saudi Arabia, her parents taught her and her brother and sister “to reach for the stars.”

How she knew she was different somehow, not fitting in all the

time, but blessed with parents who embraced her eccentricity.

How as she got older, she came to feel more deeply that she wasn’t meant to follow an expected path. “As fate might have it,” she says, “I was meant to climb one.”

And how one day in 2011, when she was by then living in Dubai, “I was in a group of people and this girl randomly said, ‘I’m going to climb Kilimanjaro this summer.’”

“Oh,” I said, “What’s Kilimanjaro?”

“She said, ‘It’s the highest peak in Africa.’”

“I’m like, ‘Okay, it’s a mountain you climb? It’s in a different country? It’s sporty? Dangerous? This is what I need to do.’”

Uncertain of her parents’ approval, Moharrak called her father.

“I’ve decided to climb the highest mountain in Africa,” she told him. “It’s this high, it takes seven days, and so on. I sounded like a broken Wikipedia page,” she says.

When she caught her breath and paused, there was silence.

“No,” he said.

They hung up.

That “no,” she says, “grew fangs, and it was clawing at my soul.”

She poured herself out in an email that took all night to write, asking her father’s blessing, reminding him how he raised her to reach for the stars and to be fearless, dream big and, most of all, never, ever give up.

She took a breath, hovering her cursor. And clicked “Send.” Silence.

“People always ask me, ‘What’s one of the scariest moments in your life?’ And I say Everest is number three. Number one is sending that email.”

Three days later he replied to her pages with eight words.

“You’re crazy. I love you. Go for it.”

Moharrak topped out on Mount Kilimanjaro on November 9, 2011. She remembers the last few steps to the 5,895-meter summit after the grueling eight-day trek and often freezing temperatures.

“Nothing prepared me for what I felt as I stood on Africa’s roof,” she says. “The feeling was intoxicating. I

knew it would not be the last time I stood on a summit.”

She reached down, picked up a rock and put it in her pocket. For

**Speaking at Denver’s Girls Athletic Leadership School, Moharrak shares how it felt on Mount Everest: “It didn’t matter where we were from, what gender, what color. We were standing there on top of the world. That windy day above the clouds forever proved that you are capable of wonders. You just really need to be brave enough to dream them.”**





Left to Right: Mount Kilimanjaro, Tanzania, November 9, 2011; Mount Elbrus, Russia, August 28, 2012; Vinson Massif, Antarctica, January 18, 2013.

her father. A tradition she would repeat.

Visiting home afterward, she couldn't stop talking about the experience. Both of her parents, Hassan Moharrak and Yasmine al-Alfie, saw the new sense of purpose in her eyes.

"At first we thought she went to Kilimanjaro and she will not want to do that again," he says. "But Kilimanjaro was only the start!"

"Deep inside I would encourage her," Yasmine says. "As a mom, I wasn't sure about the danger. But I always encouraged her."

"I was in love with mountains," Raha says.

Love turned to obsession. She began waking early to research mountains, gear, maps, guides and training.

At 16 meters above sea level, Dubai is a less-than-ideal place to learn how to climb mountains. But Moharrak didn't let elevation get in her way. What she did have was sand, garbage bags, a backpack and dunes.

"I would put sand in the garbage bag, weigh it, and then every week add two kilos until I reached 20," she says. "I'd start [hiking for] two hours, then four hours, six hours, until I reached 12. If I didn't have time to walk outside the city, I would literally go on the treadmill, put [the backpack] on, have an iPad, read books or listen to audiobooks."

As Moharrak logged more and more hours of climbing and training, she began to realize that she was capable of more than she ever imagined.

"Climbing teaches you how to manage yourself," she says.

She made trips to Ecuador, Peru, Mexico, Bolivia, Chile and the base camp of Everest.

"Raha will never, ever give up," says Hassan. "She will not tell you of her future plans unless it is the right time. If [we have] any hesitation about letting her go, she will say, 'okay,' and she will come back to us and pull the carpet from under our feet," he says, laughing.

On August 28, 2012, she reached the 5,642-meter summit of Russia's Mount Elbrus, the highest peak in Europe.

The following January Moharrak made what she calls her "first big mountain expedition."

She was wearing a crisp white shirt, she recalls, when she walked into the team briefing to prepare their ascent of Vinson Massif, the tallest peak in Antarctica.

She took notes as the team discussed plans. Then a tall, thick-

built man stood up.

"Are we not going to talk about literally the pink elephant in the room?" he said, looking at Moharrak. "Who is Barbie, and what is she doing on the mountain?"

"Excuse me," Moharrak recalls saying. "Don't let the Disney-princess hair fool you."

He responded, "I'm not going on a rope with you." And he didn't.

Moharrak remembers the fire his comments ignited in her. There was no way she wasn't going to make the top.

The team summited the 4,892-meter cone of rock and snow, but on the descent, altitude began to take a toll.

Next thing she knew, Moharrak was wedging her shoulder into the armpit of a large and ailing teammate. The same one.

"Big men with lots of muscles need lots of oxygen and can get sick very quickly," Moharrak says.

"It didn't smell very nice, and so 'princess' braced him down the whole thing," she says.

Moharrak won his respect, his friendship and a new nickname: "Tough Cookie."

Five weeks later, she climbed 6,961-meter Aconcagua, South America's highest.

Hassan says that more than anything, he wants his daughter to be safe. Trust had to be earned.

"Raha is a great planner," he says. "When she wants to do something, she will plan it very well, do training, whatever it takes to get herself ready."

With each expedition Moharrak



Crampons clamped to her boots help Moharrak and her teammates maintain footing on the route up Mount Everest. Moharrak became one of some 60 women who have reached the summit and, at age 28, one of the youngest.

would plan, she came to anticipate “no” from her father. But Moharrak would persist, convince and go.

But Hassan drew one firm line.

“Don’t ever ask for Everest,” he told her.

He was unaware that climbing Vinson and Aconcagua had inspired an even higher goal, that of membership in one of the world’s most exclusive clubs, with only some 500 members, fewer than 75 of whom are women. It is a club with one entrance requirement: Get to the top of the tallest mountain on each continent.

“At that point I had three down,” Moharrak says. “So I said, ‘Why not?’”

While still in Antarctica, Moharrak turned 25.

Her parents called and asked what she wanted for a gift.

“Everest,” she said.

“No.”

Quietly, she applied for an Everest climbing slot for the 2013 summer season.

She called home.

“I applied and I got accepted, and we have to pay the down payment now, and I believe I can do it,” she recalls saying.

But soon Moharrak began to have her own doubts. “I felt like, maybe I’m not ready, maybe it’s not the time. So I pulled my application. I canceled.”



Days later, Hassan and Yasmine came to her with a piece of paper.

“What’s this?” Moharrak said.

“I signed you up and I paid,” her father said. Moharrak was stunned.

“Do you believe you can climb this mountain?”

“Yes,” she said.

“Now I believe you can climb the mountain, but promise me two things: First, don’t push yourself beyond your capabilities. Second, you need to promise me that you will come back to me.”

On May 18, 2013, she stood on the roof of the world. She held a Saudi flag her father had given her.

She found him a rock.

Four years and one month later, led by Hahn and three other guides, Moharrak and her seven fellow climbers set out from Kahiltna Glacier base camp for Denali. Each

Left to Right: Aconcagua, Argentina, February 26, 2013; Mount Everest, Nepal-China border, May 18, 2013; Mount Kosciuszko, Australia, October 13, 2013.

OPPOSITE, CENTER: ELIA SAIKALY



climber carried a 25-kilogram pack and dragged another 25 kilograms of gear and food on a sled. The trek was hard. Long. As they trudged, the two Germans, five Americans and Moharrak got to know each other and their guides.

“We were like absolute misfits at the start,” Moharrak says. “You wouldn’t even imagine any of us would get along at all.”

The group laughed and struggled. Shared stories. “We became a team.”

Moharrak recalls the evening, at 4,330 meters at Camp 3, that turned into a poetry reading.

“One of the guys, who I called Mr. Music Man, because he always had music, was one of those social people. He always wanted us to do something together,” she says. “Whether it’s playing charades or storytelling, or whatever. One of the nights, it was poetry reading, and we all had to write a poem.”

One wrote a haiku about pasta. Moharrak wrote about the mountain and her father, who was recovering from a difficult heart surgery.

Denali, we dreamt of your summit for years.  
But only the brave and strong perseveres.  
Your beauty is only eclipsed by your might.  
And your weather, it would give me a fright.  
We ask for permission to reach your crown,  
Because without it, we’ll probably fall down.  
I have come a long way to live this dream.  
And I couldn’t have asked for a better team.  
From sand to ice, the contrast is clear.  
But I have never let that feed my fear.  
You are only as strong as the weakest link.  
But Dave Hahn will make sure there are no kinks.  
You are the last of my seven-summit quest.  
And also, my very sick father’s final request.  
I wish a second attempt you won’t deny.  
So please be merciful on my team and I.

As difficult as the ascent of Everest was, Moharrak knew most accidents happen on the way down. “I had to keep focused,” she says.



With fewer than 15 minutes to spend at the summit of Mount Everest, Moharrak sat down to absorb a view seen for the first time through the eyes of a woman from Saudi Arabia.

The weather held. The team continued up. Moharrak began to feel uneasy again.

Around 4,000 meters, where the oxygen level is half that of sea level, a team member became overwhelmed and decided to descend. Two of the guides went down with him. Soon afterward, another had to be cajoled and physically assisted to make it up to Camp 6 at 5,250 meters. They lost a precious day.

Seeing two strong people so affected by the mountain also began to play with her mind. Memories of her 2014 attempt flashed afresh. No wonder: It was in this exact spot where, that year, a snow slide had blocked her team’s path to the summit and, before they could turn back, the sudden blizzard forced Moharrak and her American and Russian teammates to shelter in a small tent for eight days of wind, snow, rationed food, weakening bodies and prayers just to make it down alive.

When the skies cleared, they made a break for it. It took them 20 hours.

On the flight back to Dubai, Moharrak felt claustrophobia. She developed ulcers. She lost toenails. Perhaps hardest of all, mentally, she felt beaten.

It would be a year before she put on hiking boots again.

When she unzipped the flap of her tent on July 2, she couldn’t believe it. No storms. No wind. Sun lit the slope to her seventh summit, now three kilometers away and 1,000 meters above.

Still she felt wary, she says. This day would be the hardest.

As they reached the first ridge, she coached herself. “You know what? Calm down, Raha.



One step at a time.” Their pace was steady, but she could feel forces outside of herself slowing her down.

For the first time on the climb, doubts entered her mind.

After cresting a rise, she stopped. She could see the summit.

It gave no relief. Her nerves began to take over. Thoughts ran through her head.

A storm could roll in. A teammate could slip and cause her to fall.

One of the guides noticed. She came down to Moharrak.

She set her hands on Moharrak’s shoulders and spoke to her, Moharrak recalls. “Listen, Raha. You earned this. You have every right to be here. You’ve gotta make it to the top, because you’re the type of person that does not give up. Calm down and relax. You are going there.”

Her clouds of doubt began to dissipate.

The team ascended the narrow summit ridge, where a step to the right or the left could mean your life would depend on the rope that linked you to your team.

Moharrak was last on the line.

“My eyes were just starting to tear up, because all I could think about was my parents, and my dad, and being here. When I finally got to the top, they all knew it was my seventh. They all started clanging their ice axes, like, clink, clink, clink, clink, clink, and they’re all like, ‘Seven! Seven! Woo!’ and screaming. I had a very amazing welcome at the top.

“In my mind, I said, ‘Thank you, God, for giving me a day like this.’”

Three weeks later, she says, her toes are still black and blue. Speaking from her parents’ home in Jiddah, Denali fresh in her mind, Moharrak says the walk she is most looking forward to next is down to a beach.

She’s unlikely to rest for long.

As she scaled mountain after mountain, the world has begun to take notice. Her face appeared on magazines. She had television interviews. Nike and Lipton Tea enlisted her for advertisements.

She won the 2014 Global Thinkers Forum Award for Excellence in Pioneering and the 2016 Emirates Woman Achiever award. On Instagram, she gathered more than 25,000 followers. She began writing a book.

To many, Moharrak has become a portrait in strength and perseverance, a role model in her country, the Arab world and beyond. It’s attention she isn’t always comfortable with. She told few people about her summit to Everest, despite global publicity. As for Denali, she waited weeks before posting her achievement on social media.

“Imagine that a scrawny tomboy from Jiddah, who’s severely dyslexic and did horrible in school, would ever be someone who’s quoted. In a way, I’m super proud. How

many people can say they have a chance to change mentalities and inspire others?”

In Denver, telling her story to the girls of GALS, she is doing just that. Her talk finished, she is swarmed by students who just want to get close, ask a question, share a hug or take a selfie with her.

“I really enjoyed your speech. It inspired me,” says one.

Finding a gap in the crowd, a short girl wearing a white headband and a red sweatshirt walks up and commands her



Students hang on her words as Moharrak, clad in a T-shirt from her newest fans, encourages them to “follow whatever dream you want. All I wanted was to prove to myself that I could attempt the impossible and maybe even achieve it.” See video at [www.aramcoworld.com](http://www.aramcoworld.com).

attention. Moharrak bends over, eye-to-eye, and smiles.

“You’re my shero,” the girl declares, deploying the feminized adaptation of “hero” that’s lingo at GALS.

“Aww, thank you so much,” Moharrak replies. “I really hope you guys end up where *you* want to be, and follow whatever dream *you* want. If I can live mine, a girl from the desert who climbed mountains, you can live yours, too.”



**Johnny Hanson** is the digital media editor for *AramcoWorld*. The tallest mountain he has climbed is 4,352-meter Gray’s Peak, Colorado.

@rahamoharrak

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THE  
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For two midsummer weeks, every two years, London becomes a global stage for Arab arts. The biennial Shubbak festival, subtitled “A Window on Contemporary Arab Culture”—a literal play on the Arabic word *shubbak*, which means window—gathers together writers, artists, performers, musicians and critics for dozens of events spread across the British capital, from film premieres and commissions of new dance works to debates, art installations and—almost every night—music.

*Opposite:* Beirut-born singer-songwriter Tania Saleh opened the first musical performance of the 2017 Shubbak festival on July 1 at London's Barbican Centre, weaving traditional Arab vocal styles with folk, indie rock, bossa nova and jazz. *Right:* London-based and Syria-born virtuoso Maya Youssef performed on her 78-stringed *qanun* July 2 on the main stage at Trafalgar Square, *opposite, lower.*



## MAYA YOUSSEF

Shubbak's music event on the main stage at Trafalgar Square opened with the zither-like *qanun*, played by London-based virtuoso Maya Youssef. Like a horizontal harp, its plucked strings haunt and hypnotize, all the more so when amplified before a standing audience of thousands amid the austere neo-classical architecture of central London.

Shubbak began in 2011 as part of a series of one-off events promoted by the mayor of London showcasing world cultures from India and China to Brazil. Shubbak, however, proved so popular, and so emblematic of the fresh cultural energy rippling across many Arab countries, that it was made an independent charity charged with staging biennial editions.

In 2015 Shubbak presented more than 70 events featuring 130 artists from 18 Arab countries that drew a total audience of more than 50,000 people. The 2017 festival, which finished July 16, encompassed some 80 events featuring 150 artists, and it drew similar numbers.

"Our purpose is to present Arab artists to the widest possible audience," says Shubbak's artistic director Eckhard Thiemann, who helped produce the cultural program for London's 2012 Summer Olympics and has worked with Arab artists in the UK over two decades.

This year, alongside Shubbak's programs in art, literature, drama and film, Thiemann oversaw a music program featuring more than 20 musicians and performers who emphasized the contemporary and the genre-busting.

"We look at a lot of work," Thiemann says. "We select artists because of their innovative approach and their creativity." Increasingly, like their audiences, he adds, the musicians selected "have grown up on social media and are unafraid to mix styles and platforms. We are always trying to curate synergies."

And that, said London Mayor Sadiq Khan, who opened the city's annual Eid Festival on July 2 at Trafalgar Square as part of Shubbak, is "the great joy of London," a "global city" where "our diversity is our strength."

*Rasha, born in Khartoum, Sudan, describes her genre as Sudanese jazz rooted in Arab and African music. In addition to vocals in Arabic as well as Spanish, English, Nubian and Creole, she plays 'ud and percussion.*



Accompanied by cello and percussion, Youssef bent closely over her instrument, laid flat on her lap, plectrums on each index finger, performing both traditional pieces and her own composition "Syrian Dreams," a fluid, elegiac solo she calls "a prayer for peace."

Her graceful, accomplished playing brought echoes of Syria to new ears.

"I grew up in Damascus in a house full of music, and I started learning [qanun] when I was nine. It's been a life companion," she says.

After leaving Syria in 2007 for Dubai and then Oman, in 2012 Youssef settled in the UK. She now researches ethnomusicology at the University of London and the role of music in healing post-traumatic stress among children.

"I see myself as a tree rooted in the ancient tradition of Syrian music, but from there I can go wherever I want. Being in the UK means I can deliver my music to people who would not normally hear it, and also collaborate with musicians from all sorts of backgrounds, to expand musical horizons."

## RASHA

Born into a prolifically artistic family in Khartoum, Sudan, Rasha began singing professionally in 1991 after she moved to Spain, where she still lives.

For her first record, *Sudaniyat*, released in 1997, she says she felt a calling to help introduce Sudanese music to a global audience by adapting tradition to her own personal vision of the style.

"Sudanese music is a mix of Arabic and African music. Our melodies are so melancholic, and our rhythms are complex. We have this desert land, with really dark nights and really hot weather. It's hard but beautiful, [with] the wisdom of being old. And the wiser you are, the more melancholic you are."



Wael Alkak, a former member of the Syrian National Orchestra, left his country for Jordan, Turkey, Lebanon, Egypt and the us, recording folk musicians as he went. The project took the name *Neshama* and became a band, whose musicians drove fusions of house loops and beats with the sounds of traditional instruments at the Rich Mix venue.

Wearing cowrie shells in her hair and elaborate, patterned hoops in her ears, Rasha—she tends to drop her family name Sheikh Eldin—performed twice in one day for Shubbak: first on the main stage in Trafalgar Square and then later that evening in the intimate, historic setting of Bush Hall.

Fronting a four-piece band of electric bass, saxophone, cello, and her brother Wafir on ‘ud, while accompanying herself on a stand-mounted *tabla* drum, Rasha sang fluid, irresistibly danceable songs of emotion and freedom that have created their own genre, which she describes as Sudanese jazz.

“No music and no people are pure,” she says. “We all influence each other, and music—especially music—is the easiest language for everyone. Musical styles come and go, and they’re not the same when they come back.”

## NESHAMA

One thread running through almost all of Shubbak 2017’s music was the unusual, even startling, often exhilarating, experience of hearing young, intensely dynamic musicians build shattering innovations on one of the oldest foundations: Arabic popular song. As Shubbak unfolded over two weeks, I kept hearing traditional folk themes and snatches of popular melodies reinvented—none more dramatically than by classically trained, Damascus-born Wael Alkak.

“I used to play the national anthem in school when I was five or six years old, on the accordion,” he remembers.

Alkak, 35, sighs, pushing his unkempt hair back off his face as he tells of his recent anguish: six years of self-imposed exile from his homeland.

What has sustained him are his musical roots.

“My story with traditional music started in 2008, with my first recordings. I still use some of them now. Wedding songs, songs at popular events. Before 2011 this kind of music didn’t interest anybody. For my first project, in 2012 in Beirut, the

idea was to collect seven songs and rearrange them with popular and ethnic elements, plus fusion with a string section or a brass section.”

That first album broke many molds. Sampled clips from popular Syrian songs—some recorded shakily on mobile phones inside war-besieged cities—became the basis for wildly innovative digital reimaginations, driven by Syrian musicians recorded in Jordan on traditional instruments such as the *rababa*, a one-stringed Arab violin, all enhanced by Alkak’s synthesizers. Alkak directed the whole project from afar, often over video-call apps from a studio in Istanbul, Turkey.

They named the project *Neshama*, which in Arabic “has the meaning of someone who is good just for being good, without expecting anything back,” Alkak says.

*Neshama* earned Alkak a music residency in Paris and became the name of his band, a shifting group of musicians that now recreate Syrian popular songs for a new generation in exile.

“Digital music is what we do. It includes some elements from acid house music and techno-trance music, but we build it on our recordings that we made with our musicians,” says Alkak.





At the Rich Mix music and arts venue in London's hipster neighborhood of Shoreditch, Alkak was joined by his brother Yazan on 'ud and three London-based Syrian musicians, including Jammal al-Sakka, Alkak's own percussion teacher from Damascus Conservatory. They played from Neshama's newly released second album, *Men Zaman* (*Long Ago*).

It was a wild show. Alkak—thin, blazing-eyed, shaggy-haired—worked his decks, live-mixing beats and samples. He

left showmanship to al-Sakka, whose party piece was deftly flipping his tabla drum through 360 degrees midair during the most ferocious of solos without missing a beat, drawing yelps of delight from onlookers who crowded the stage and seemed to know every song intimately. Intense amplification turned traditional wedding melodies such as “*Dabrij Ya Hamam*” (“Dance, Pigeon!”) into desperate, swirling, rough-edged dance beats that rattled the ribcage, driven by urgent bass lines and drenched in dry-ice smoke and mood lighting.

Is Alkak a DJ?

“I'm a musician, definitely, but sometimes I need to DJ

because digital is popular,” he says. “I don't like borders in music or in life.”

## OXFORD MAQAM

Egypt in the late 19th and early 20th centuries went through a cultural renaissance of homegrown reforms and innovation known as *al-Nahda* (The Awakening). It energized everything from art and music to philosophy and journalism. It's this “Nahda era” that captivates Oxford Maqam, which formed in 2008 in the city of Oxford and whose name references the melodic system of classical Arab music, explains vocalist Yara Salahiddeen.

“Nahda music became marginalized in the 1950s and looked upon as old-fashioned, and I think that was unfair,” says 'ud player Tarek Beshir.

“So we went back and studied it, and found that it's actually very rich—full of room to grow and improvise. So we rework these earlier songs into our own point of view.”

Their Trafalgar Square set, which evoked much clapping and hip-shaking, showed how skillfully they look both back and forward, with Beshir and Salahiddeen dueling on vocals accompanied by an eclectic mix of 'ud and *nay* (end-blown flute) alongside acoustic double-bass.

It was also during al-Nahda that the first method of recording developed, and Oxford Maqam's debut album features new versions of al-Nahda era songs that it recorded using 100-year-old wax cylinder technology, the group first then digitized. “Most of our repertoire we know from old recordings—and the oldest of them are recorded on wax cylinders,” says qanun player and King's College London music professor Martin Stokes.

“They impose a lot of demands on musicians because you've got a very short time, two minutes and 20 seconds, to get the whole thing in. The wax cylinder changed the [music]

Yara Salahiddeen, *left*, performs vocals for Oxford Maqam, whose Trafalgar Square set, *right*, revived songs of 19th- and early 20th-century Egypt, evoking a lively response in the audience. The band's repertoire stems from some of the first recordings ever made in Egypt, on wax cylinders.





Debating in the UK at Shubbak, Hawidro introduced audiences to an Afro-Egyptian sound that mixed historical regional influences with contemporary styling that all flowed in a smooth, jazzy style, led by rhythmic percussion and dashed with funk. “We wanted the return of our heritage, particularly our African side that has long been left behind,” the band says on its Facebook page.

in some important ways,” Stokes says, before describing the band’s recent recording sessions as a “fascinating experiment.” But then, he adds, “We thought, ‘This doesn’t sound too bad!’ So we made it our first CD.”

## HAWIDRO

Hawidro is a band on a mission, “trying to represent the African Egypt in a contemporary feel,” says lead singer Ahmed Abayazeid, known to all as Zizo.

“That’s what the name stands for: *hawidro* means ‘the return’ in Nubian. We need to return to our African culture that’s been forgotten.”

Nubia is a territory along the River Nile that straddles the border between Sudan and Egypt. Nubians, Abayazeid explains, have their own cultures and languages. They are part of wider Arab and North African cultures but also distinct enough that “that’s how this music survived,” says bass player Ahmed Nazmi. “It’s more close to West African styles than to the rest of Egyptian music.”

On their first-ever visit to London, Hawidro played three gigs in two days under the Shubbak banner, their eight-piece ensemble driving loping, clattering percussive rhythms that blended with the fluidity of saxophone, synthesizer and electric guitar.

There were few signs of nerves. Zizo’s vibrant energy and permanent grin under long dreadlocks was contagious, and

an on-stage “selfie moment” at Bush Hall drew sustained cheers and laughs.

What did they make of playing in London? Nazmi was pumped.

“London is really important, and Shubbak is such an incredible event. I really like the audiences. They are really interested in [world] cultures. They praise it and give a lot of credit to the bands that play, which is something we really appreciate.”

## TAREK YAMANI

You could miss award-winning jazz pianist Tarek Yamani in the street. His figure is slight, and he wears clothes that are only remarkable for being unremarkable—plain designs in plain colors. His hair is tousled. He moves lightly, uncertainly.

The fingers are a clue, if you happen to notice them: They move a lot. Spider-like.

When you sit down opposite him to talk and suddenly pitch headfirst into his eyes and then find yourself scrabbling backward up a slope to keep contact with the world before he’s even said a word—that’s when you realize there is far more to this man.

Yamani, 37, was born and grew up in Beirut.

“When I was six, my parents discovered that I had some talent for music,” he says.

“[I was] hearing music from TV and trying to replicate it on this little keyboard—that’s how my father made the connection. So he got me a piano teacher.”

Later, Yamani was enrolled in the Lebanese National Higher Conservatory of Music, but he hated it.

“I was lucky I had this instinct to stop,” he reflects. “What I wanted from music was something else—not classical training. When my teacher told me, ‘Do this,’ I would go home and do something else. She tells me right hand, I want to do left hand. I had the jazz spirit without knowing it.”

As a teenager Yamani lost himself in rock.

“I was exposed to Pink Floyd since I was four. My father used to listen to them all the time, and the Beatles, Jimi Hendrix, Led Zeppelin. I went through heavy metal, all the way to death metal. I taught myself guitar, learned solos, made a band. And then, at 19, I discovered jazz, and that’s where this illumination happened in my life. Everything changed.

“Jazz has everything I like: the spirit of improvisation; rhythmic sophistication; harmonic technicality. So I left the guitar, back to the piano and went on this adventure.”

For his 2017 Shubbak show, Yamani worked with long-time collaborators Elie Afif on acoustic bass and Khaled Yassine on drums—but he has not always followed convention. In 2010 he won the Thelonius Monk Institute of Jazz Composer’s Competition for *Sama’i Yamani*, his startlingly original rework of a traditional Arab musical form in contemporary jazz style that featured Syrian vocalist Rasha Rizk. This set the frame for exploring musical boundaries among Arab, African and African-American traditions.

“Jazz has the secret. It has the secret of groove. It carries African DNA in rhythm, and we all carry this somehow. Learning this language, the jazz language, for me had a mystical significance. Jazz was born in the United States but it spoke to me so much. I felt it was a duty to be able to understand it and speak it fluently.”

On his first album, *Ashur* (2012), Yamani fearlessly reshaped the jazz trio itself by substituting tuba for bass,

bringing a unique sound while revisiting *Sama’i Yamani* and reimagining a traditional Arab dance form, *dabke*, for solo jazz piano.

By then living in New York, he went deeper into Arab music for his 2014 album *Lisan Al Tarab*, developing classical music from Egypt, Lebanon and Iraq in a jazz trio setting.

“I consider myself a scientist in a very modest way: I like to make experiments, mix things, try stuff out.”

The *Lisan Al Tarab* track listing—*lisan* is an Arabic word for language and *tarab* refers to the trance-like atmosphere shared by performers and listeners—formed the basis of Yamani’s show at upmarket Kings Place.

The trio’s effortless communication over fiendishly tricky syncopated rhythms mesmerized the crowd. Unprepossessing in a simple T-shirt, quietly spoken at the mic, Yamani created chromatic keyboard runs that felt like sweeps of bright paint across a canvas, punctuated by Yassine’s plunging off-beats and Afif’s architectural bass. *Sama’i Yamani* was like a call from the 19th century to the 21st, its rare 10/8 time signature and minor resolutions breaking down dizzyingly amidst chords and unpredictable beat drops over Yamani’s left-hand drone.

“The sound was immense,” says Alise Kirtley, a singer-songwriter from London who heard the sold-out show. “Passion without theatrics. Tarek’s left-hand work was exquisite, at speed and perfectly placed, with insane time signatures that they all nailed. This was original music—not just another night of standards—and each with a story.”

Characteristically, Yamani is not standing still. His album this year, *Peninsular*, draws jazz improvisations out of the traditional *khaleeji* (gulf) music of the eastern Arabian Peninsula.

“There’s something special about khaleeji music,” says Yamani. “The main characteristic of khaleeji rhythm is the swing, and these rhythms are all so African.”

“This strong need [to cling onto cultural roots] is everywhere,” he adds.

“There are two kinds of musicians: traditionalists and explorers. I am the latter, but both are needed. If it weren’t for

the traditionalists, we wouldn’t know what was going on before. Then you get people who make new traditions. Everything we do echoes something old. No music comes out of nothing.”

## MISSY NESS

The last night of the Shubbak Festival was given over to Kahareb (Electrified), a five-hour deep dive into Arab contemporary underground electronica

Plain dress belies Tarek Yamani’s magisterial command of his instrument. The 37-year-old jazz pianist, born in Lebanon and now living in New York, played intricate, fast-fingered grooves at Kings Place together with bass and drums. Jazz, he says, “has the secret of groove.” His latest work draws on traditional melodies and rhythms of the eastern Arabian Peninsula.



Closing out Shubbak's musical program of more than 20 total artists was the aptly named Kahareb (Electrified), which featured five electronic artists, including Missy Ness, which is the DJ name of Paris-born Tunisian Inès Abichou. *Right and lower*, she concentrates on her syntheses of traditional instruments, contemporary beats, global hip-hop and soothing Arabic vocals, all to keep the Rich Mix audience dancing.

with multiple DJs and musicians. Each performer brought a fresh perspective, from the danceability of Beirut World Beat to French-Palestinian DJ Sotusura and Jordanian guitar legend El Jehaz.

Anchoring the first half of the show was Inès Abichou, known by her DJ name Missy Ness, who fused pounding British drum & bass with American rap and the hardest of Arab hip-hop.

Born and brought up in Paris, Abichou became the first Tunisian female DJ after hearing cult Palestinian hip-hop collective Ramallah Underground in high school.

"They showed me that you can totally do this contemporary underground urban sound and mix it with Arab music without being kitschy," she says.

"I admired the way they did this synergy between all their influences without being orientalist. I started listening to French hip-hop, talking about our reality—the reality for



people living in outer Paris."

Inspired by the urban underground in both Paris and London, Abichou also draws on wider musical currents.

Though her focus is on Arab and North African influences, she says, "I have huge interest in Latin American hip-hop, and recently I've been digging into the Senegalese hip-hop scene. In Tunisia I love the rapper Klay BBJ. He's very interesting in the way he uses language."

So, with such vibrant contemporary sources to draw on,



why does she, like so many of Shubbak 2017's artists, look back to traditional or classical Arab music?

"I can't really answer you. I have this double culture, French and Tunisian Arab. Young [French] people my age have absolutely no idea about their music from the last century. But we [Arabs] know our musical history. We all have a story with Fairouz or Um Kulthum or Abdel Halim Hafez or Sayed Darwish."

Missy Ness played loud. She blended heavy Arabic hip-hop with all sorts of percussion and chants and snatches of American rap or bits of Egyptian song. Her hands, in constant motion over her laptop and twin turntables, swapped vinyl while her sneakers tapped along at the end of her skinny jeans and the audience danced and danced.

"It's very easy for people to have this preconception of who I am. Some people are very surprised when they hear me play. 'This is not at all what we expected!' they say. My main challenge is always related to getting outside of these boxes."

## MAURICE LOUCA

Headlining Kahareb, Cairo-born composer and musician Maurice Louca played from his 2014 album *Benhayyi al-Baghbaghan* (*Salute the Parrot*), a swirling, surrealist journey into what he calls Egyptian psychedelia, although that label "is not very accurate," he admits. "It's hard to describe music now, with all the genres melting."

Consciously unshowy, unassuming, Louca hesitates before telling how he picked up guitars as a teenager before he switched to keyboards and samplers in his early 20s.

"I couldn't have imagined having musicians play my work when I started," he says. "The technology helped a lot, experimenting with sampling and drum machines. You'd use it to compensate for not having access to musicians. But when my first record [*Garraya*, 2011] did okay, I immediately invited musicians over. It's a pleasure to work with people on realizing ideas."

Something of a cult figure on the European alternative music circuit for his uncompromising sound, Louca has toured festivals and club venues there and across the Arab world for several years, but his home city remains key to his musical vision.

A fan photographs Kahareb headliner Maurice Louca, one of Cairo's pioneering electronic musicians, as he takes his audience into what he calls Egyptian psychedelia, a genre-blending journey rooted in the country's instrumental heritage, accompanied by his own electronic beats and a trio of fellow live musicians. Though he draws much from Cairo's vibrant music scene, he says no label is very accurate. "It's hard to describe music now, with all the genres melting."



"At the beginning I felt isolated [in Cairo]. It was very hard to find places to play. That changed in the 2000s, and now it's the contrary: I feel very inspired in Cairo. There's a massive audience base, a lot of music coming out. Cairo is vibrant."

As well as his own work, Louca plays in several bands and composes for arts, theater and film projects. For *Benhayyi al-Baghbaghan*, he drew on Egyptian *shaabi* (peoples') pop, warping and distorting it into new forms—darker, wilder,

stranger—then testing out the results with friends.

"People talk a lot about the folklore element, which I can't understand. It's a very contemporary record for me. There's no sampling of any old music."

Yet several tracks feature deeply traditional instruments, such as the rababa or *buzuq* (a kind of lute). Doesn't that show a nod towards musical heritage?

"I never thought of them as old," he says. "The rababa and buzuq are very

much alive in contemporary music. For me it's not about nostalgia at all."

And there was precious little nostalgia in evidence on stage. Louca evoked the density and complexity of his music with beats and samples and live electronica, the hammer of Massimo Trisotto's bass and Tommaso Cappellato's relentless drums spinning a whirl of sound to knock you sideways.

But despite headlining a bill of DJs, Louca draws a firm line.

"I'm in no way a DJ," he declares. "This is composed music." 🌐



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ISLAMIC SCIENCE'S

# India

CONNECTION

Written by

ALOK KUMAR and SCOTT L. MONTGOMERY



This detail from a 17th-century painting by Mughal court painter Bichtir shows one of the court's many chroniclers, who helped the Mughal elite advance an imperial culture that included scientific concepts developed locally and afar.

**From the mid-10th century CE, one of history's great scientific eras began to flourish across Islamic lands.**

Like the European Renaissance, it was marked as much by cultural exchange, synthesis and dialog as it was by individual discovery. Connections forged among scholars and scientists of Islamic lands with contemporaries and predecessors beyond their own borders led to an unprecedented pooling of knowledge over generations and continents. The Indus Valley and the wider Indian subcontinent proved to be deep wells of the scholarship that gradually came to be known westward via translation into Arabic as well as Persian. From the observations of philosophers to the calculations of mathematicians, from the models of astronomers to the treatises of physicians, these works helped shape the era that became known as "the golden age of Islamic science" and—much later—our own.



In this detail of another 17th-century painting by Bichtir, a devout Muslim practitioner receives the Qu'ran, Islam's holy book, from a seated Jahangir, the fourth Mughal emperor. At lower left, an Ottoman sultan looks on deferentially. The hierarchy reflects not only Jahangir's position, but also his responsibility to advance scholarship.

## NATURAL PHILOSOPHY

After the Muslim conquest of India, several rulers, including most notably the Mughal emperors of the 16th and early 17th centuries, beginning with Akbar the Great, facilitated translations of Indian literature into Persian and Arabic. Several well-known Indian books such as *Mahabharata*, parts of the *Vedas*, *Yoga-Vasistha*, *Bhagavad-Gita* and *Bhagavata Purana* were thus translated. The most fundamental views contained within these texts express the crux of natural philosophy: a universe in constant transformation, wherein elements are interconnected, sharing in absolute unity and having a sequence of creation. The *Yoga-Vasistha*, for example, a collection of stories and fables nearly 30,000 verses in length, was appreciated for its "realities, diverse morals, and remarkable advice."

Under Dara Shukoh, some 50 major Indian works

were translated, among them the *Upanishads*, the pinnacle part of the *Vedas* script, which he considered imbued with the power to make people "imperishable, unsolicitous and eternally liberated." His rendering was later translated into Latin in the 18th century by Anquetil Duperron of France. It was read in turn by the eminent 19th-century German philosopher Arthur Schopenhauer, who was so impressed by the universality of its message that he kept a copy open on a table near his bed.

Much of what Akbar and his successors learned to value, however, had already been observed centuries before. During his years in India in the 11th century, Abu al-Rayan al-Biruni, an all-around erudite from Kath in Central Asia, studied Sanskrit and researched the arts, literature and science. He analyzed metaphysics in Vedic texts and translated a number of them into Arabic, including selections from *Patanjali's Yoga-Sutras*, a philosophical compilation, and the 700-verse *Bhagavad-Gita*. In his own book, *Kitab*

*Ta'rikh al-Hind* (*Book of Indian History*, popularly known as *Alberuni's India*), he introduced Muslim readers to Indian scholarly culture. Al-Biruni admits in the introduction that despite cultural and linguistic barriers, his book is an attempt to offer “the essential facts for any Muslim who wanted to converse with Hindus and to discuss with them questions of religion, science, or literature.”

He also identifies crossovers between Indian science and literature, notably *Kalila wa Dimna* (*Kalila and Dimna*), a celebrated book in the Middle East since the early medieval period. Based on an earlier Indian work, *Pancatantra* (*Five Principles*), it was written down from the oral tradition in the third century BCE, and it uses animal fables (Kalila and Dimna are jackals) to tell stories about human conduct and the arts of governance.

It came to Arabic circuitously, first via Burzuwaih (or Borzuy), a physician to fifth-century CE Sassanid king Anoushiravan. Burzuwaih traveled to India to collect medicinal herbs for his monarch, and he returned with the *Panca-tantra*, which he translated into Pahlavi, a northwestern Persian language. After the introduction of Islam into the region, the eighth-century author and thinker Ibn al-Muqaffa translated it into Arabic and retitled it *Kalila wa Dimna*. So popular was the book 500 years later, the 13th-century Christian king of León and Castile, Alfonso “The Wise,” included it among works he ordered translated into Old Castilian.

In truth, under a range of different titles—and at times with new additions and revisions—*Kalila wa Dimna* remains one of the most widely read works of literature in the world, popular throughout all parts of Asia as well as the Middle East, North Africa and Europe up through the 18th century. Starting a few decades after 1800,

the work began to give way in the West to Aesop’s well-known *Fables*. Yet in India itself, as in most Muslim nations, the parables of Kalila and Dimna continue to be read to teach children and adults about human nature and good behavior. Most recently of all, it has been the subject of exhibitions in places as diverse as Manama, Bahrain, and Indianapolis, Indiana.

## MATHEMATICS

Beyond philosophy and fables, Vedic texts sought to comprehend the cosmos and its workings, including creation cycles and planetary motions, thus framing some of the questions that have underpinned human scientific inquiry ever since. Modern mathematics, as we know it, would be inconceivable without the commentaries of Indian philosopher Bhaskara, who lived in the sixth and seventh centuries CE, on the *Aryabhatiya*, written in Sanskrit by Aryabhata, the earliest known Indian astronomer. The *Aryabhatiya* laid out the rotations of planetary objects as well as advanced techniques for numerating. Bhaskara’s commentaries on it

represented one of the first popular writings to employ the concept of zero, which was assigned then a symbol familiar today: a circle.

The fundamental concept that void, emptiness or absence is itself an essential element of the cosmos had existed in the culture of the Indus Valley from a very early period. That this should evolve into a numerical symbol thus might seem logical in a mathematical system designed to describe and predict the motions of the universe. The zero is, in fact, a “placeholder” as much as a number: It moves other numerals to the left by one place, thus increasing their magnitude by a factor of 10. Zero was thus both an



A manuscript edition of *Kitab al-Qanun al-Mas'udi*, a treatise on astronomy by 11th-century scientist Abu al-Rayan al-Biruni, shows the motions of planets represented as circles. Originally from Central Asia, al-Biruni traveled to the Indus Valley, and for more than 10 years he studied Sanskrit and researched the region’s arts, literature and sciences, translating a number of works into Arabic.

predict the motions of the universe. The zero is, in fact, a “placeholder” as much as a number: It moves other numerals to the left by one place, thus increasing their magnitude by a factor of 10. Zero was thus both an

idea and an actual number.

When Arab and Persian thinkers learned about zero, they transliterated its word in Sanskrit, *sunya* (“empty”), into a roughly corresponding Arabic *sifr*. In the early 1100s, when Arabic works were first translated into Latin, Adelard of Bath called it *cifrae*. A century after that, Fibonacci called it *zephir*.

From there, the term became *zéro* in early modern French and, in English, *zero*.

Equally important was Bhaskara’s contemporary, Brahmagupta, a fellow Indus Valley mathematician (and astronomer) who helped develop the decimal system—the 10-digit, base-10 system of numbering that serves the world as the alphabet of all calculation. Mislabeled for several centuries in the West as “Arabic numerals,” it was conceived in India and transmitted to the Middle East even before the rise of Islam.

From Abu al-Hasan Ahmad ibn Ibrahim al-Uqlidisi, a 10th-century Arab mathematician, we know that prior to the introduction of numerals from India, the Islamic world expressed numbers through a system of letters, much like the Roman numeral system.

It was around the seventh century CE that the Indus Valley-based system became competitive. Severus Sebokht, a seventh-century Syrian bishop and natural philosopher, wrote of the rivalry:

I will omit all discussion of the science of the Hindus ... their subtle discoveries in the science of astronomy, discoveries which are more ingenious than those of the Greeks and the Babylonians; their valuable method of calculation; their computing that surpasses description. I wish only to say that this computation is done by means of nine signs. If those who believe, because they speak Greek, that they have reached the limits of science, they should know these things.

The people of the early Indus Valley used tablets (*takht* in Arabic) covered with a layer of sawdust or sand to write numbers and perform mathematical calculations. The Arab world adopted this computational practice, calling it *bisab al-gubar* (dust-board arithmetic). Since the practice does not leave a permanent record, we are left only with scant information about these tablets. One of the earliest documents describing

this medium of calculation is an 11th-century work by scholar and judge Said al-Andalusi of Córdoba titled *Tabaqat al-Umam* (*Book of the Categories of Nations*). Seen as the first world history of science, al-Andalusi’s compendium credits the Indus Valley for “great strides in the study of numbers.”

No less significant to modern mathematics are the works of Muhammad ibn Musa al-Khwarizmi. Born in the late eighth century in the Khwarazm oasis, in what is now Khiva, Uzbekistan, al-Khwarizmi moved to Baghdad during the reign of Al-Mamun. There, he served as a teacher and scholar in the famous *Bayt al-Hikma* (House of Wisdom), where the arts of translation and scholarship reached their zenith. His writings freely reference mathematical computations borrowed from the Indus Valley. In his *Kitab al-Jabr wa al-Muqabala* (*The Book of Manipulation and*

*Restoration*), he lays out its purpose:

[To teach] What is easiest and most useful in arithmetic, such as men constantly require in cases of inheritance, legacies, partition, lawsuits, and trade, and in all their dealings with one another, or where the measuring of lands, the digging of canals, geometrical computations, and other objects of various sorts and kinds are concerned.

This composition served as a popular introduction to what became algebra, based on methods acquired from India, which al-Khwarizmi simplified from their original metrical (poetic) forms, writing them out in prose with explanations that have resonated ever since. The *Kitab al-Jabr wa al-Muqabala*, translated into Latin, made a significant impact in Europe—so much so that part of its title, *al-jabr* (“restoration”), became synonymous with the equation theory that we know today as algebra.

The third major mathematical contribution with connections to India is the function we call sine. Ubiquitous in science and mathematics, its history transcends the boundaries of one country, one culture or one period. It appears in the *Aryabhatiya* as tables of half chords, trigonometric solutions equal to sine tables. In Arabic, al-Khwarizmi, through a translation of the work, introduced sine in *Zij al-Sindhind*, which was much copied. An 11th-century version

*Mislabeled for several centuries in the West as “Arabic numerals,” the decimal system was conceived in India and transmitted to the Middle East even before the rise of Islam.*

of this book, by the mathematician, astronomer and economist Maslama al-Majriti of Córdoba, Spain, was translated into Latin during the early 12th century. This Latin rendering was brought into English in 1962 by the scholar Otto Neugebauer, and today it serves as a key resource for our understanding of al-Khwarizmi's knowledge in astronomy and trigonometry.

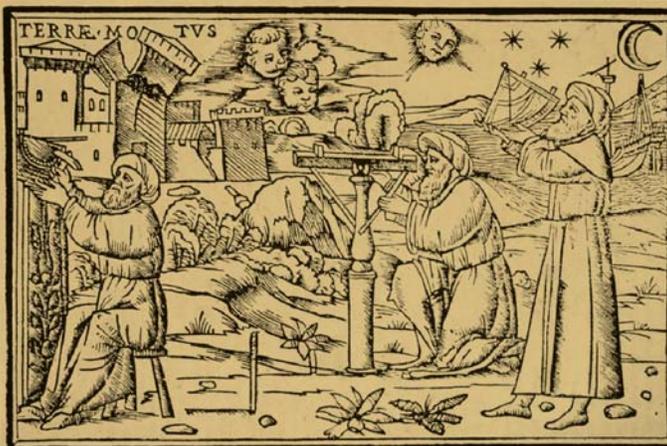
The Arabic term for sine, *geib* or *jaib*, represents an adapted form of the term *jya* ("bowstring") used by the peoples of the Indus Valley. In truth, the Arabic word *jaib* came to have multiple meanings: pocket, fold or bosom. It was rendered as *sinus* in Latin ("pocket," "bay"), possibly through a mistranslation, by the most prolific of all Arabic-to-Latin translators, 12th-century Italian Gerard of Cremona. By the 17th century, *sinus* had evolved into the abbreviated *sin*.

## ASTRONOMY

Brahmagupta lived in north-central India, in Ujjain, and he set his city as the Greenwich of the ancient world by associating it with zero longitude. Brahmagupta's work gained in popularity and influence in the Middle East, where calculating solar and lunar cycles and positions was part of workaday routines, and it was translated more than once into Arabic. Portions of it, including the use of Ujjain as a prime meridian, were adopted by al-Khwarizmi in *Zij al-Sindhind*, which also established the *zīy* tradition in Islamic astronomy. This term came from *zīy*, a term born out of the Pahlavi language, which connotes a thread or a cord. It referred to tables of operations that allowed astronomers to determine positions of the sun, moon, stars and planets; the time of day according to position; prayer times; and more. Comprising trigo-

### *The Elusive Measure of Longitude*

Most histories of science attribute the first efforts to lay a system of grid lines on a world map to Greek astronomers Eratosthenes in the third century BCE and Hipparchus in the second century BCE, even though it is possible Babylonians did this earlier. No maps or diagrams survive from any of these sources, however. Latitude was easy: It was the height above the horizon of the sun at noon or the polestar in the night sky. Simple tools for such measurement were the *gnomon*, the quadrant and, a bit later, the Arabian *kamal*—a simple but effective string-and-cardboard device. Longitude, however, was elusive. It could only be determined using time—horizontal distance equals time, due to the rotation of the Earth. A reference meridian was essential, but it was never quite enough. Hipparchus understood this and placed it through Rhodes, in the western Mediterranean, while Brahmagupta preferred Ujjain. The *Surya Sidhanta*, a set of treatises drafted in the sixth century CE, likewise show astronomers of the Indus Valley used the total lunar eclipse, which all observers would presumably see at the same moment, to compare the time at some location with that along the meridian. However, none of these efforts proved definitive until the development of the modern mechanical clock, which could keep time over distance accurately and repeatedly.



This intaglio print depicts a Venetian artist's regard for the technology of Arab astronomers, circa 1513.

nometric tables, this proved superior to the Ptolemaic chord function that had been used to date by Islamic scholars in timekeeping and the deciphering of astronomical mathematics.

Al-Khwarizmi could have chosen Baghdad, his place of residence, as the prime meridian. However, perhaps due to the prevalent practice in the Arabic-speaking world and al-Khwarizmi's dependence on the Indian astronomical tables, he kept Ujjain, just like Greenwich endures as a world standard despite the fading of the British Empire in which it originated. As we know from Said al-Andalusi, it was Muhammad ibn Ibrahim al-Fazari, an eighth-century philosopher, mathematician and astronomer, who was the first person

to translate into Arabic, under directives from Caliph Al-Mansur himself, Brahmagupta's *Brahmasphuta-Siddhanta*, which provided mathematic evidence for calculating planetary epicycles and their positions, and even diameters of the Earth, sun and moon, beyond the Indus Valley. Al-Khwarizmi later summarized this work in *Zij al-Sindhind*, which remained an important reference work in Europe during the medieval period, including, for example, for the Castilian texts *Toledo Tables* and the *Alfonsine Tables*.

## MEDICINE

Indian medical texts and ideas also had potent influence in Islamic scientific circles. Al-Tabari, an early ninth-century scholar from Tabaristan along the southern shore of the Caspian Sea who later served as physician and counselor to Caliph al-Mutawakkil in Baghdad, wrote an encyclopedic book on medicine, *Firdaws al-Hikmah (Paradise of Wisdom)*. This book contains some 36 chapters and refers to the works of noted Indian physicians such as Caraka, Susruta, Madhavakara and Vagbhata II. Al-Tabari devoted much space to Ayurvedic medicine, a science born of early Indus Valley civilizations and recorded in Sanskrit literature.

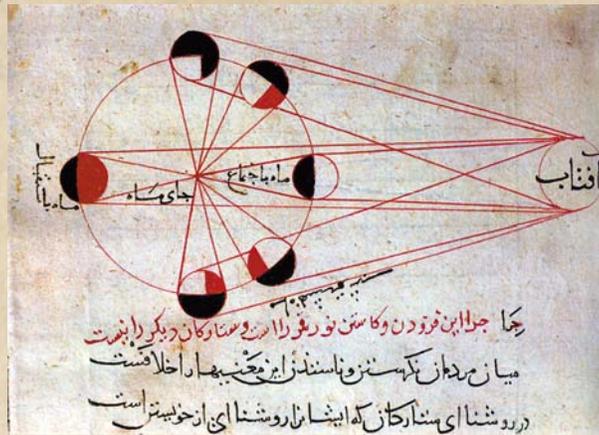
Al-Biruni's thoughts on medicine, likewise, were

influenced by Indian tradition. In his works, we find mention of the availability of an Arabic translation of *Caraka-Sambhita*, a medical text first written in Sanskrit before the second century CE. A century before Al-Biruni, Al-Kindi from Baghdad wrote a

medical formulary called *Aqrabadhin (Pharmacology)*, an English translation of which was published by Martin Levey, an American professor of Semitic languages, chemistry and mathematics. According to Levey, about 13 percent of the book originates from the Indus Valley. In his view, however, "many of the Persian *materia medica* may more properly be considered to be Indian," thus suggesting that as much as a third of the plants and drugs

described originally came from India.

In all these fields of knowledge and inquiry, then, we find deeper interconnections among the scientific culture that developed in Islamic lands and India than are often discussed in (mostly Western) histories of science. This kind and degree of connection, we should note, is not unique to the advances of Islamic science. It is much of the story of how knowledge itself has advanced through regional and global processes of contact and communication—processes that advance at their most rapid pace ever today. 🌐



Regarded as the "founder of Indiology," Al-Biruni advanced sciences in the Islamic world with his translations of and reflections upon a wide range of Indus thought. This illustration depicts his understanding of the phases of the moon.



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# MOROCCO'S

# CINEMA CITY



*Written by* TRISTAN RUTHERFORD  
*Photographs and video by* REBECCA MARSHALL

**“Walk past ancient Egypt and then turn left at Tibet,” says Amine Tazi, general manager of Africa’s largest film and studio complex. “That’s where we filmed the Saudi TV series *Omar*,” about the second caliph of Islam, Omar ibn al-Khattab.**



If the desert film sets look even vaguely familiar to a visitor, he explains, that’s because they probably are: Recently they were also backdrops for, among other things, episodes of the US television hits *Homeland* and *Game of Thrones*. But *Omar* took a full six months of shooting to produce 30 episodes, in Arabic. That was solid business for the two studios Tazi manages, Atlas and CLA, which were, until this year, solely responsible for making the town of Ouarzazate, poised between the Sahara desert and the Atlas Mountains in eastern Morocco, into a continental capital of cinema.

“*Omar* reused an existing film set to look like Damascus,” recalls Tazi, a no-nonsense studio boss whose role model for dealing with production challenges is a bulldozer. “Then we built [a replica of] the holy Ka’bah in the desert next door.” He

With the 20-hectare production studio in the background, at the edge of the desert beneath the Atlas Mountains, a sign decorated like a film director’s clapperboard advertises Atlas Studios’ hotel in Ouarzazate, Morocco.



A faux-Pharaonic entrance sets the tone for CLA Studios, which, with its partner Atlas, offers interior and exterior film sets that can take filmmakers from ancient Egypt to fairytale kingdoms—and almost anywhere in between. Used for countless Arab film and television productions since its founding in 1983, it has also hosted world-famous directors such as Martin Scorsese, Ridley Scott and Oliver Stone.

notes he holds a government license that allows him to draft in the Moroccan army as extras: For *Kingdom of Heaven*, in 2005 Tazi equipped 3,000 real Moroccan soldiers with spears and sandals so they could fight a running battle scene across an imaginary Palestine. “Our studios are known as ‘Ouallywood,’” he quips. “Hollywood, Bollywood, they all come to us to film.”

It’s a testament to its unique topography that the cinema industry in Ouarzazate (pr. *Wahr-za-zaht*) predates Tazi’s studios. Clear mountain air funnels down from the High Atlas to the north. It rarely clouds over, let alone rains. In 1962 British producer-director David Lean became the first top producer to utilize the site’s crystal-clear atmosphere when he shot shimmering desert scenes for *Lawrence of Arabia*. Those same dunes, casbahs and mountain lakes now stand in for Saudi Arabia’s Empty Quarter, rural Afghanistan, the Russian steppe and more.

Morocco’s human diversity also helps. If a movie needs African actors, local casting directors tap a regional database of on-call extras in towns like Erfoud, near the Algerian border. For Mediterranean types, they phone contacts in Tangier to the north. In 1997 American director Martin Scorsese planned to fly 400 ethnic Tibetans to Ouarzazate for his Dalai Lama epic *Kundun*, but local fixers visited a Berber

tribe whose ancestors fought for France in Vietnam and, as a result, married and brought home dozens of Indochinese women. Scorsese placed their Asian-looking offspring to the rear of his set pieces, with a mere 60 bona fide Tibetans front-of-shot.

It’s clear that both the region and the movie industry enjoy a largely symbiotic relationship, but it’s precarious, explains Tazi. If the moviemakers succeed, Ouarzazate will maintain the current windfall that now is financing a new wave of Moroccan and Arab actors and directors. If they don’t, the town risks a return to its status as an obscure, if picturesque, dusty crossroads between the Atlantic and Timbuktu.

“Fortunately, the wealth our blockbusters bring is transferable to the town,” says Tazi. By way of example, when a production is shot wholly within Morocco, around 30 percent of the budget is spent locally on everything from hotels and meals to helicopters. That’s a huge boon for a city nudging 100,000, especially when one considers that *Kingdom of Heaven* had a budget of \$130 million. More recently, in 2014, when NBC’s marathon *A.D. The Bible Continues* checked into Ouarzazate, it employed some 600 local artisans for half a year.

Outside the walls of Tazi’s adjacent studios, ironworkers are hammering out swords and shields that will be laid down only after filming. Street seamstresses sew tunics



A boom-mounted camera stretches over film-crew members, actors, cameras, tents and gear at CLA Studios during the filming of episodes in the HBO series *Game of Thrones*, one of about 100 international television episodes and 20 feature films that annually come to the area.

and togas in the warm Saharan air. My driver tells me he regularly doubles as an extra for \$25 a day plus lunch. My barber, it turns out, moonlights as a hair-and-makeup man, a profession in the \$50-per-day category. The semi-desert that surrounds Ouarzazate may not have resources like oil or gas, “just excellent natural and human resources,” concludes Tazi.

As the movie industry matures, those resources are more and more tapped. Entrepreneur Mohamed Belghmi, who first saw a need for a permanent movie-production space in 1983, built Atlas Studios. When the Michael Douglas adventure *The Jewel of the Nile* was shot here two years later, 20th Century Fox flew out the camera crew, assistants, grips, animal handlers and even caterers. Now those slots are usually filled by graduates

of film-technician courses at the École de Cinéma de Ouarzazate and production and scriptwriting classes at the Faculté Polydisciplinaire. All that’s needed now to make a foreign movie is to fly in a director and a bag of cash. According to studio bosses, about 80 percent of movie staff are now Moroccan.

These figures are confirmed by Mohamed El Hajaoui, a dashing 27-year-old actor who also leads tours of the Atlas

and CLA Studios. (The latter was created in 2004 as a partnership among Italian studio Cinecittà, the late producer Dino de Laurentiis and Moroccan investor Saïd Alj, and both studios are now co-owned.)

The studios, it seems, can fabricate anything anywhere—a virtual planet of plaster, plastic

Amine Tazi, general manager of CLA Studios and Atlas Studios, says the increasing number of film productions in Ouarzazate not only creates new opportunities for Moroccan and Arab-world actors and directors, but also boosts income for everyone in the region, from taxi drivers to restaurant owners.



and polystyrene held together with bits and strips of wood and metal. With a few deft moves, the squad can transform the Luxor set into Constantinople, Jerusalem, Makkah or Persepolis. It's here that young assistant directors like Mehdi Elkhaoudy learned the trade shooting scenes on the US television series *Prison Break*, which turned a real local primary

school into a temporary Yemeni jail set, and the recent Ben Kingsley series *Tut*, in which El Hajaoui played a small role. The actor demonstrates the set's resilience by picking a giant foam "rock" off a medieval catapult and hurling it against a plywood "citadel wall," which holds fast.

El Hajaoui and I walk into a plaster-built mock village that provided the backdrop for scenes in *Gladiator* (2000), yet another Hollywood epic attracted to Ouarzazate by its combination of ethereal light and down-to-earth costs. (That film, he points out, is one of four veteran British director Ridley Scott shot here.) As he shows me around, we meet Arab and European movie tourists. Sauntering over the sets, playfully emulating cinematic heroes, they are also a source of income to the town and, more generally, Morocco. Ouarzazate's hotels reported a 40 percent gain early this year over last year, and over the past 10 years, national foreign-visitor totals have risen from around 7 million to more than 10 million a year.

The props departments at both studios appear to be working overtime. Among the upcoming films is an Indian historical epic, for which staff are polishing Saracen swords, Phrygian



Set pieces created for the 2002 French fantasy comedy *Astérix & Obélix: Mission Cléopâtre*, starring Gérard Depardieu and Christian Clavier, await their next assignment.

standards and Roman shields that had their origin in some earlier production. Behind them, gathering dust in a hanger-like store-room the length of two buses is a wonderland flea market full of abacuses, leather moneybags, brass bowls, scrolls and knick-knacks from pretty much any century you wish for. The nearby costume department, mean-

while, is busy dyeing garments for an American-boy-meets-Arabian-girl desert drama.

The whinny of horses eager for their midday meal leads us to the animal training center, where 17 staff care for two dozen camels and donkeys, indispensable creatures for any desert tale. Horse trainer Brahim Rahou leads us to a handsome albino stallion named Spirit, who is the stable's most recent celebrity. "This horse carried Khaleesi," Rahou explains, referring to the nickname for the lead role of Daenerys Targaryen in *Game of Thrones*, which shot some five episodes here.

In sum, the Ouarzazate studios and region annually attract around 10 foreign and 10 Moroccan feature movie productions, plus 100 or so predominantly international television episodes—a number that has been rising, as the series format has gained traction on outlets such as Netflix and Amazon. Nationally produced films, such as *Les Indigènes* (2006), a drama about Moroccan soldiers who fought for France in World War II, are intensely popular, in most years attracting as much as a third of Moroccan cinema visits and making up half of the country's top 10 biggest-grossing films. What the

Car props stand in the "parking lot" at Atlas Studios and, in the distance, the snowcapped High Atlas Mountains decorate the horizon. Right: The Oscar Hotel in Ouarzazate shows off costumes, props and production photographs from the 2000 film *Gladiator*, shot on location.





Ouarzazate native Naceur Oujri, *left*, has appeared as an extra in more than 150 international and Moroccan movies made in his hometown. Stuntman as well as trainer of camels and horses, Brahim Rahou poses at Atlas Studios, which keeps some two dozen camels and donkeys on hand.

likes of actor El Hajaoui and animal trainer Rahou require is a sustained throughput of hits. These days, although work is going well, runs the sentiment on the ground, everyone is always eager for more.

It's fortunate that the job of attracting foreign movies here has fallen to Abderrazzak Zitouny, the whirlwind director of

the Ouarzazate Film Commission. Since 2008 he has pulled in several million-dollar productions by force of personality alone. A few years ago, "Werner Herzog came to our Ouarzazate stand at the Los Angeles Film Festival," remembers Zitouny, a swashbuckling dead ringer for a Moroccan Johnny Depp. "I sold our region's beauty like I was selling a dream." He sold it so well that the famous German director offered him an acting job, Zitouny says. "I said, 'Of course, Werner, but only if you film in Ouarzazate!'" The result was *Queen of the Desert*, a 2015 biodrama about British writer and policymaker Gertrude Bell.

Abdelalali Idrissi, *left*, co-launched the Ouarzazate International Film Festival in 2016, which screened movies for the general public and visitors as well as in the Ouarzazate town jail and also to schoolchildren who had never watched a film set in their hometown. "The prisoners told us to come back next year!" he says, and the students were "very happy to assist" in critiquing the festival's animation selections. Posing in the "Tibet" set at Atlas Studios, actor Mohamed El Hajaoui, *right*, has worked as an extra in films including *Tut* (with Ben Kingsley); he also guides tours of the studios.





Abderrazak Zitouny, director of the Ouarzazate Film Commission, takes a center-stage throne on a movie set at the Ouarzazate Cinema Museum. The commission is the second-oldest on the continent after one in South Africa, and it has reeled in several million-dollar productions since it opened in 2008.

Initial filming enquiries land in Zitouny’s downtown office near the École du Cinéma. As the second-oldest movie authority on the continent after South Africa, the Ouarzazate Film Commission has clout. A foreign producer or location manager is usually looking for an idea of local dunes, mountains or medieval-looking villages, professional photos of which Zitouny keeps on his hard drive. A database of every carpenter, caterer and grip in southern Morocco is expected to be completed this year. “That way we can prove that we can offer blockbuster movies and TV shows everything,” he says.

When a production assistant arrives in Zitouny’s office, he or she is driven about 30 kilometers northwest of town to the hill village of Ait Benhaddou. If the producer is American, Zitouny shows off its UNESCO-protected kasbah where *Prince of Persia: The Sands of Time* (2010) was filmed. With Arab guests, he expounds upon *The Message* (1976) by legendary Syrian director Moustapha Akkad, an Oscar-nominated exodus-to-Madinah epic shot in the same mountain outpost.

“The movie business is a hard-nosed one,” Zitouny says, admitting that the line between making a film in one place and not in another rests heavily on the bottom line. The commission can

smooth the way, from import procedures for camera equipment to discounted entrance fees to local sights and much in between. However, the most enduring allure is Morocco’s value-added-tax (VAT) exemption on all supplies and services, which knocks roughly 20 percent off the top for starters. “Combined with low costs for hotels, drivers and extras, we can make a movie for 50 percent less than in the United States or Europe,” Zitouny says. In addition, he says, a single permission grants filming rights anywhere in the country. “Try doing that in Paris or Dubai,” he says with a smile.

The incentives are paying off. The daily flight from Ouarzazate’s tiny airstrip to Casablanca on the coast, which connects with Royal Air Maroc’s direct New York flight, is welcoming stars. This year the downtown Musée du Cinéma,

a nearly endless exhibition of movie props that opened in 2007, will inaugurate two screening rooms for local viewing of locally made feature films as well as screening of pre-production rushes before hopping back into the desert for final shots.

Zitouny led a recent presentation to Morocco’s movie-loving King Mohammed VI, which helped win support for a forthcoming, additional tax rebate on foreign film productions. Even with



that, it is an intensely competitive industry: Can Ouarzazate attract the globalized, digitized moviemakers of tomorrow? And locally, can its film industry ensure that all get a piece of the big-budget pie?

The young man who has saddled himself with those two tasks is another film-fanatic livewire. Abdelali Idrissi is co-founder

of the brand-new Ouarzazate International Film Festival. The 37-year-old prop master and art director produced an acclaimed short film program on a shoestring budget for its debut in April 2016. With a passion for inclusivity, Idrissi even screened movies in the local prison. We meet in Ouarzazate's Taourirt Kasbah, where parts of the original 1977 *Star Wars* were filmed.

"It's great that we welcome Ridley Scott and Martin Scorsese," explains Idrissi. "But our industry needs a relationship with the set builders and costume workers who don't always have the technology to watch the movies that they helped to make. Essentially, we are a cinema city without any cinemas." By screening 100 video shorts on pop-up screens around town—10 of them filmed in Ouarzazate or wider Morocco—the festival drew crowds of up to 1,000 to see their city on the silver screen, many for the first time.

Idrissi co-launched the festival with high hopes and basic tools. "We used Facebook, Google Plus and film contacts to spread the message," he says. Word went viral and some 3,000 entries flooded in from countries as diverse as Indonesia, Pakistan, Colombia and Nigeria, as well as the us (which topped the list with 406 entries).

"We were surprised," Idrissi says with a laugh. "Then we realized we were obliged to watch every single short film!" To handle the volume, organizers expanded the film-selection committee to include Idrissi's brother Abdessamad, who works in film production in Berlin, and his German colleague Stefan Godsken. Although the festival is "for all ideologies," the committee checked each cinematic short for culturally offensive content, whittling down the entry list to 100, set screening dates and booked some 15 directors to attend. Just one ingredient was missing: cash.



Seeming like a clash of centuries, extras costumed as Roman centurions practice marching at Atlas Studios for a scene in the series *Ben-Hur* while a mock F-16 fighter jet, used in *The Jewel of the Nile*, stands behind them.

"We needed money for screening equipment, sound systems and even meals," says Idrissi as he strides around the ramparts of Kasbah Taourirt. He presented his festival budget to Atlas Studios and the film commission, but there were no takers. A last-minute donation from a Saudi solar energy developer and operator, ACWA Power,

paid for the stages and rigs that were scheduled to be erected the very next day. Idrissi and his colleagues plugged the event's remaining budget holes from their own pockets.

"It's fair to say that we lost several kilos in weight during the six days of screening," he explains. Just 200 people came to the opening-night screening of *Wintry Spring*, a short film about an Egyptian girl entering womanhood. There were more viewers on day two when a member of the film commission dropped in on the Iraqi documentary *Dyab*, about a Kurdish Yazidi boy who wants to become a filmmaker. By day three the screening in Ouarzazate jail ("The prisoners told us to come back next year!" Idrissi says) boosted viewer numbers into four figures. Then the film commission stepped in with a small donation, too.

After an early start the following day, the jury lugged rented equipment to the film-set village of Ait Benhaddou. Among the audiences were 220 schoolchildren, many of whom had seen Brad Pitt and Angelina Jolie filming in their kasbah but had never watched a movie set in their hometown. They were "very happy to assist" in critiquing the animation section, Idrissi says.

In all, the festival logged 5,000 viewers, nearly half under age 25. "Of course, many people who could not travel to the Moroccan desert were watching some of the short films on YouTube and thinking about Ouarzazate," says Idrissi.

The make-up of the event's real-life audience was critically important to Idrissi's aims. Pupils from the École de Cinéma and the Film Faculté got to witness the latest filmmaking techniques while gleaning tips from the directors who had flown in from abroad. More importantly, attendees took a tour of the sets and digital facilities at Atlas and CLA Studios. "In 10 years' time, these short-film guys

Centerpiece of this display at the Oscar Hotel is a poster for the French edition of *The Jewel of the Nile* (1985), starring Michael Douglas, Kathleen Turner and Danny DeVito.



might be top directors or producers,” notes Idrissi. For the 2017 edition of the festival, featuring technical and artistic workshops in both city academies, he is aiming to accommodate 50 visiting directors when the event turns on its projectors in September.

It’s all a distant cry from the very first movie ever shot in Morocco. Back in 1897, France’s Lumière brothers captured flickering images of a goatherd, a sequence that would now seem quaintly stereotypical. Now a new generation of

Moroccan filmmakers are opening studios where they aim to beat the cinematographers from the West at their own game.

In April producer Khadija Alami opened Oasis Studios Morocco near Oasis du Fint, 15 kilometers from downtown Ouarzazate. Location, producer and equipment are all A-list. It was this oasis that backdropped in *Lawrence of Arabia* and *Prince of Persia*, and Alami’s credits include *Homeland* and *Captain Phillips* (2013). “There is so much demand for Hollywood and Arabian movies it warranted opening our studio,” says Alami, whose new one-stop shop will rival incumbents Atlas and CLA. For the first time, foreign television productions can be scripted, shot, edited and delivered without leaving the compound and using a crew entirely Moroccan.



About 30 kilometers west of Ouarzazate, the hillside mudbrick village of Ait Benhaddou is both a UNESCO World Heritage Site and a popular set for many films, including *The Jewel of the Nile*, *Gladiator* and more.

relative safety is a huge asset for foreign pictures,” Alami explains. However, she adds that even beyond this lies what has always been top currency in movies: Beauty. “It is Ouarzazate’s film-set looks that keep producers coming back for more.” 🌐



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Alami’s Hollywood-standard studios exceed anything on offer in Morocco’s more traditional rivals, as well as anything in Jordan or Tunisia. Only the production powerhouses of Turkey and Egypt produce more Middle East-related films. “Political stability means that Morocco’s

 [www.ouarzazatefilmcommission.com](http://www.ouarzazatefilmcommission.com)

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## FILMED *in* OUARZAZATE

QUEEN OF THE DESERT [2015]

THE PHYSICIAN [2012]

BEN-HUR [2009]

BODY OF LIES [2007]

KINGDOM OF HEAVEN [2005]

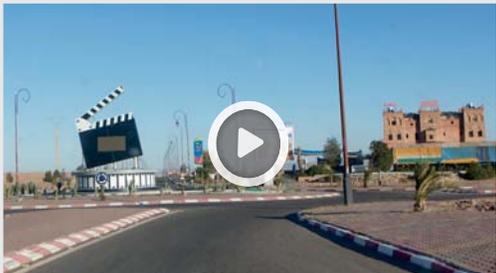
PRISON BREAK [2005]

CLEOPATRA [1998]

GLADIATOR [1998]

THE JEWEL OF THE NILE [1984]

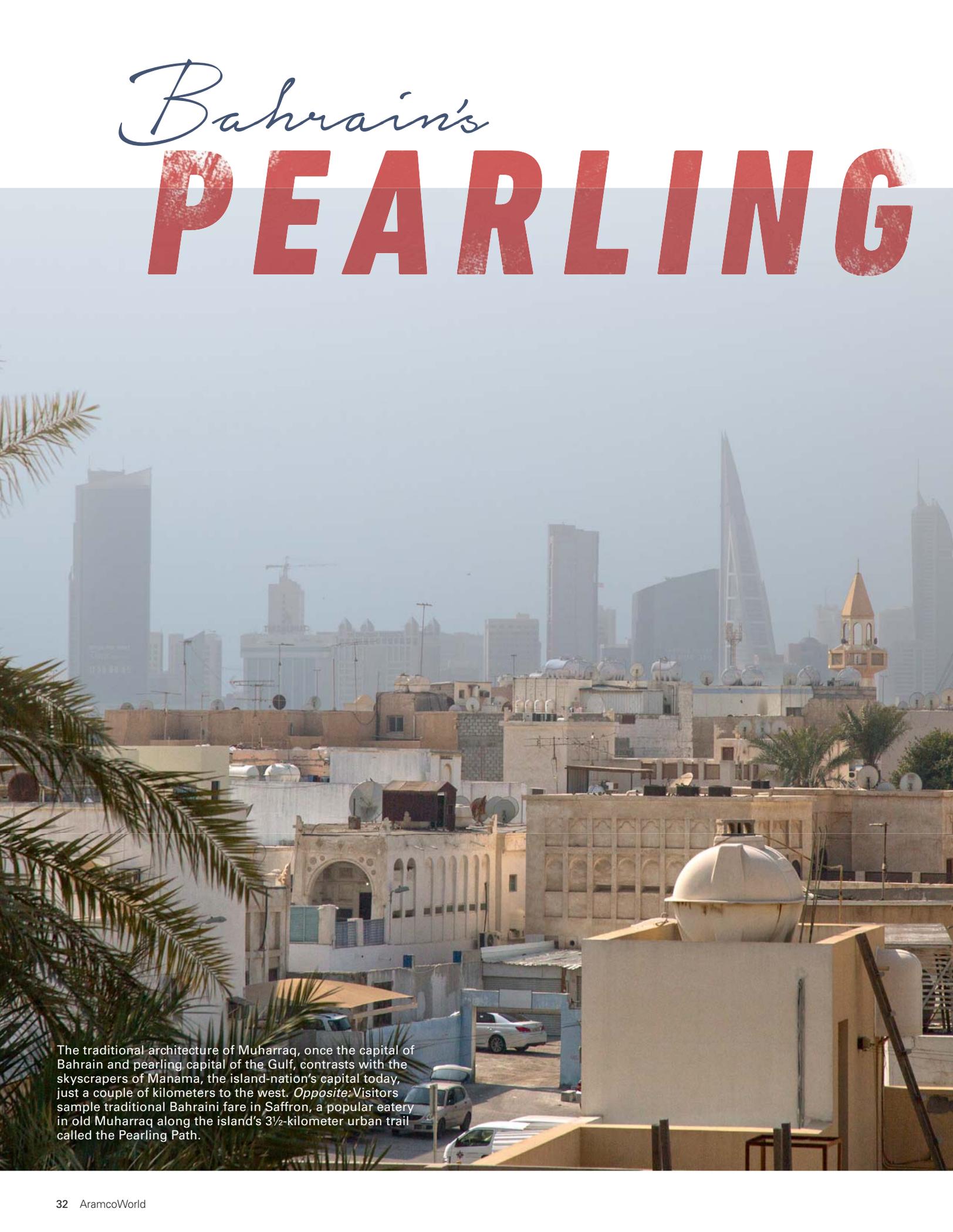
LAWRENCE OF ARABIA [1962]



**VIDEO:**  
[aramcoworld.com](http://aramcoworld.com)



# Bahrain's **PEARLING**



The traditional architecture of Muharraq, once the capital of Bahrain and pearling capital of the Gulf, contrasts with the skyscrapers of Manama, the island-nation's capital today, just a couple of kilometers to the west. *Opposite:* Visitors sample traditional Bahraini fare in Saffron, a popular eatery in old Muharraq along the island's 3½-kilometer urban trail called the Pearling Path.

# PATH

WRITTEN BY  
SYLVIA SMITH

PHOTOGRAPHS  
AND VIDEO BY  
RICHARD DUEBEL



It's 9:30 on a Saturday morning, and already the usual crowd is building up outside Saffron, a café on Muharraq, the second-largest island in the archipelago of Bahrain. Locals and foreigners chat congenially while they wait for tables to open. Parents distract restless children by pointing out to them the 400-year-old date press sunk into the ground that extends under the café, visible through glass panels in the floor.

It's a typical weekend rush at Saffron, one of the most successful of the restored and repurposed historic buildings on the island that was once the capital of Bahrain during its centuries of pearling prowess. It's also a fine place to take on sustenance before setting out on the 3½-kilometer "Pearling Path" to view 17 restored historic buildings that celebrate Muharraq's heritage—part of a string of local sites that in 2012 UNESCO placed on its World Heritage List.

"There is great interest in the food that our ancestors would have eaten," explains Saffron owner and chef Narise Kamber. "Many Bahrainis have studied and worked abroad and are used to international food. Here they get something local, traditional, but with a contemporary twist." The mix of old and new is carried throughout the café's concept from its exterior, which blends with the narrow lanes of the nearby marketplace to its menu, music, and décor that fuses industrial chic with heritage.

The most popular meal, Kamber says, is the eight-dish, "full Bahraini" breakfast, which is served "in small pots all on one tray, tapas-style," she tells a table of first-timers. And, she adds, "We can easily make it vegan."

Among the offerings are sweet vermicelli cooked in rose-water, cardamom and saffron; beans slow-cooked in a spicy tomato sauce; thin bread brushed with an anchovy-like fish paste; a vegetarian kebab; and a subtly spiced potato dish



The glass-walled visitor's center near Bu Maher Fort at the southern tip of Muharraq overlooks the historic launching point for Bahrain's annual summer pearling fleet and marks the southern starting point for the Pearling Path.

provided prosperity, social cohesion and identity. Bahrainis—from ship captains to pearl divers, chandlers to knife sharpeners—had to leave pearling behind as Bahrain's capital moved a couple kilometers west to Manama.

Muharraq's residents also gradually abandoned most of the large pearling houses that had been centers of society. Over the years, these structures of timber, *faroush* (a stone harvested from the sea) and plaster fell into disrepair. In 2002, however, this began to turn around. Shaikha Mai bint Mohammed Al-Khalifa, a pioneer in the region's conservation

movement and now president of the Bahrain Authority for Culture and Antiquities (BACA), inaugurated the old capital's first major restoration, the Shaikh Ebrahim bin Mohammed Al-Khalifa Center for Culture and Research. It quickly became a venue for poets, writers and philosophers—and a catalyst for a new Muharraq.

Shaikha Mai's effort was, she says, born out of her respect for Shaikh Ebrahim, her grandfather, and her determination to keep his memory alive. Born in the mid-19th century, he was recognized in the region as a man with a thirst for knowledge and debate who attracted the best minds to his *majlis*, or salon, until his death in 1933.

Among his guests were Farida Mohammed Saleh Khunji, one of Bahrain's most prominent religious and literary intellectuals; Yusuf bin Ahmed Kanoo, a leading businessman in the Gulf region; Hafez Wahbah, an educator and author who moved to Riyadh and served as Saudi Arabia's ambassador to Great Britain during World War II; and Louis P. Dame, MD, a physician at the American Mission Hospital in Bahrain who was known for his work in the region.

The center, Shaikha Mai explains, was never planned in isolation. Her vision was to build on—not over—Muharraq's pearling past.

"The center has a number of strategies when it comes to the old pearling houses," she explains. "Some of them we can refurbish, as they are still structurally sound. Others have deteriorated to the point where we can only remove the rubble and start afresh."

In the case of Shaikh Ebrahim's house, architects, engineers, planners and designers, all mainly from the Arab world, turned the house—for the second time around—into a new kind of magnet for intelligentsia, one featuring a 300-seat auditorium with

served with milk tea. All are enhanced by music playlists Kamber has compiled from childhood memories of hearing folk songs hauntingly sung by local artists. "Youngsters often ask me if they can download," she says with a laugh.

"We enjoy eating here because of the atmosphere," says a young regular named Abdulla, who is tucking into a "full Bahraini" breakfast. "And the food tastes great!"

The heavy, 100-year-old wooden door at Saffron's entrance is another relic of the past, and it is a portal to the future for Muharraq—a link between the island's rich history and its newfound modern identity as a culture hub.

In the early 1930s, Bahrain had to recalibrate its economy to account for both the discovery of oil and the arrival, from Japan, of the cultured pearl. Together these collapsed the old pearling culture, which had developed over millennia and

Shaikha Mai bint Mohammed Al-Khalifa, president of the Bahrain Authority for Culture and Antiquities and the driving force behind the establishment of the Pearling Path, stands alongside Bahraini journalist and poet Hassan Kamal at the inauguration of Al-Khalifayah Library in the old city center of Muharraq in April.



a research library upstairs. On its walls, photographs portray the hundreds of personalities who have lectured, read poetry, performed music and provided other cultural stimulation since the building's reopening 15 years ago, including Zahi Hawass, Egypt's former antiquities minister, and Zeinab Badawi, a British television and radio journalist who was born in the Sudan.

This year's anniversary provided a chance to assess the area's changes, and the BACA celebrated and promoted it with

"15/15," an art exhibition spread among 15 restored houses. Hala Al Khalifa, director of Culture and Arts at the BACA and an artist herself, stepped back in time with an installation called "Light" that projected, on the center's façade, the names in Arabic of leading figures who had visited the house during Sheikh Ebrahim's time. "I wanted to highlight the legacy of my great-grandfather on the spot where he met many forward-thinking personalities from countries throughout the world," she explains.

Visitors to the three-month-long celebration could walk along the new, winding, pedestrian-only "Pearling Path," which zigs, zags and wiggles through the southwest part of Muharraq. Officially it starts northbound from Bu Maher Fort on the island's southern tip, which was the historic departure point for pearl divers as they left for a four-month season every summer. Opalescent, pearl-round streetlights guide visitors from a simple pearl diver's house, Bayt al-Ghus (from *ghawwas*, Arabic for diver)—now a small museum displaying the basic tools of the trade (a nose clip, a knife and a string bag for the oysters)—to the grand houses of the pearl merchants, several now endowed with new purpose.

Other stops include a coffee shop where pearl traders used to chat and play carom, a traditional board game, and the Mohammed bin Faris House for the local, traditional *sawt* music, where every Friday night there is a free concert. The standard of craftsmanship in all the buildings makes the restorations stand out, says Sophia Delobette, a local guide. "There is imagination in the way each building has been envisaged to suit another era," she says. "What I really like is the attention to detail and the meticulous finish."

One of the largest and most elaborate buildings on the trail, the two-story Bin Matar House, reflects the importance of that family in the pearl business, explains its director, Melissa



This narrow, shaded, traditional Muharraq thoroughfare, built to channel cooling breezes, is one of the main streets on the Pearling Path. Press House, Al-Nuzul Guest House and Kurar House are all in this vicinity.

Enders-Bhattia. "This magnificent early 20th-century house was constructed as a family home," she says. "Now that it's been fully restored, we have an art gallery space for temporary exhibitions."

It was here that, for the "15/15" event, photographer and artist Camille Zakharia showed his series of black-and-white images of Muharraq's narrow streets, "Stories from the Alley," which use photographs, collage and calligraphy. "I have recorded the rich, traditional Bahraini architecture," Zakharia says. "I am hoping to encourage people to appreciate and preserve their architectural heritage, rather than just being part of this globalized world."

Shaikha Mai, he says, has been "a force behind all these traditional houses here to ensure they remain standing, and you can see the quality of restoration that has taken place to regain their beauty." The costs of the restorations have been borne by both public and private sectors through Shaikha Mai's sponsorship initiative called "Investing in Culture," which brings Bahrain's cultural sector into partnership with its banking and financial institutions.

As more houses were restored, the Ministry of Culture took the project further, winning UNESCO approval for the 17 Muharraq buildings, three oyster beds that lie north of the island, part of the shoreline and Bu Maher Fort to all be placed on the World Heritage List. The agency's report called the places "the last remaining complete example of the cultural tradition of pearling and the wealth it generated ... from the second century to the 1930s," adding that collectively they represent an "outstanding example" of how human interaction with the environment shaped the economy and society. "We are proud that this final expression of the pearling industry has been recognized internationally," Shaikha Mai says.

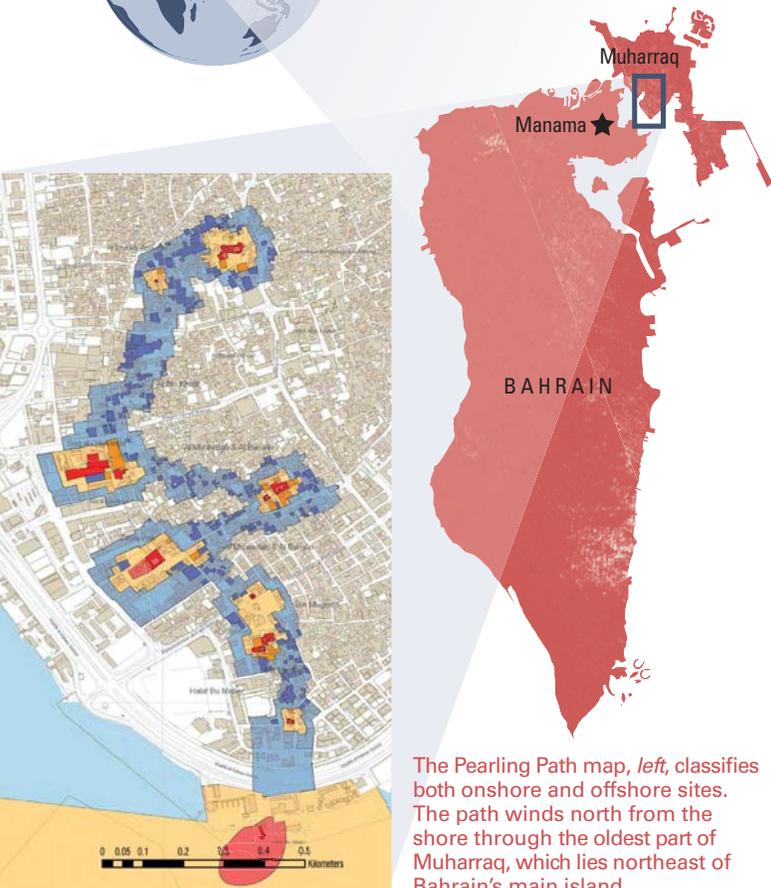
The listing has become the springboard for the restoration of the entire old city of Muharraq, which is now one of the



Al-Khalifiyah Library stands on the site of its namesake predecessor, its upper floors cantilevering out to make best use of the limited space. Along with a reading area, a research center and an Internet lab, it offers a cultural program for youth in the heart of Muharraq.

best-preserved historic cities in the Gulf region, with another 600-odd buildings to be restored.

According to Noura Al-Sayegh, a Lebanese architect who works closely with Shaikha Mai on the renovations, the importance of the creation of the Pearling Path goes beyond rebuilding. “We hope to improve the economy by creating cultural tourism as well as



The Pearling Path map, left, classifies both onshore and offshore sites. The path winds north from the shore through the oldest part of Muharraq, which lies northeast of Bahrain’s main island.

making Muharraq a more pleasant place in which to live,” she says.

Already, passengers from cruise liners that dock in Bahrain are taken to the shoreline near Bu Maher Fort. At one of the stops on the Pearling Path, Kurar House, they visit a suite of rooms displaying traditional clothes sporting gold trimming still made there by a complex hand-weaving process. As she watches four women entwining the multiple threads, British tourist Anne Scott comments, “It looks a bit like the cat’s cradles we used to make as children, only far more complicated. The results are better too!”

The finished golden bands that emerge after the interchange of threads are put on sale as decorative edging for clothing. At around \$25 a meter, it may be expensive, but Scott thinks it is a great value. “I have an evening dress that I can stitch this onto,” she says. “I think it will really add something exotic.”

As the group of visitors makes its way along one of the narrow lanes, members enter a small guesthouse that accommodates speakers, poets and singers who appear at the Shaikh Ebrahim Center. In its previous incarnation, the restored house was home for a merchant who traded in ropes and wood used to construct dhows, such as those that carried pearl divers, explains Delobette.

Next stop is Press House, the former dwelling of Abdullah Al Zayed, founder, in 1939, of the first weekly newspaper in Bahrain and the Gulf region. His 100-year-old home has been reborn as a place of both architectural and literary illumination dedicated to preserving Bahrain’s press heritage with displays and an archive of the country’s early journalism. Al Zayed’s typewriter, official letters written on it in English by the



LOWER LEFT: BAHRAIN MINISTRY OF CULTURE AND INFORMATION

multilingual owner, his bed, photographs of the man himself, and back copies of the newspaper that ran until 1944, shortly before his death, all give texture and context to the restoration.

From one of its upstairs windows, a contemporary addition to the neighborhood is brightly visible: a wall filled with the colorful calligraphitti of French Tunisian artist eL Seed. It contrasts dramatically with its immediate neighbors, the understated Siyadi House, whose plain exterior belies an intricate interior, and the adjacent Siyadi Mosque, built by Ahmed bin Jasim Siyadi, a 19th-century pearl merchant, about the same time as the house. The mosque, too, has been restored for community use, and its 10-meter minaret will not be overshadowed anytime soon: Zoning laws now limit buildings in the historic area to two stories.

Not far away, Hamad Busaad, a young entrepreneur, runs his design business and Busaad Art Gallery in the house that belonged to his great-grandfather and where his father, now an artist, was born. “You need a good architect to retain the authenticity, the traditional look and feel, of an old house like this,” he says. “The restoration’s been quite a challenge. The building became a cold store, then a corner shop, after my family moved out. My father decided to get the house back after we had driven past one day. Seeing it made my dad decide to turn it into an art gallery.”

After all the quiet good taste of the earlier restorations, confidence has grown, and some of the most recent restorations and new buildings are near-riots of color and design innovation. Dar Muharraq, for example, has tangerine-colored walls and an outer “curtain” of metal chains that rises whenever dances are performed there and falls again afterward to close off the building. The new Al-Khalifiyah Library is entirely contemporary architecture: With a bronze sheen and gradually cantilevered upper floors, it’s like an inverted ziggurat—a design that takes creative advantage of a small plot of land.

**Bin Matar House, built in 1905 by pearling tycoon and philanthropist Salman bin Hussain bin Salman bin Matar, was saved from demolition and restored to house a pearling museum and art gallery. *Opposite:* At Kurar House, embroiderers deftly entwine gold threads to make one of Muharraq’s most famous crafts, the decorative fabric trim after which the house is named.**



The brilliant colors of a wall mural by eL Seed provides a modern complement to the traditionally whitewashed architecture of Siyadi House, a World Heritage Site that stands nearby. Built in the 19th century, its plain exterior belies an intricately crafted interior.

One can only imagine the astonishment—and pride—that Muharraq’s divers and merchants might feel now if only they could see their old neighborhood again, a bit like old pearls, once forgotten but rediscovered, buffed and set on a string as a new national treasure. 🌐



**Richard Duebel** is a filmmaker, photographer and art director who has been working in North Africa and the Middle East for more than 20 years. His interests lie in culture, the environment and the applied arts. **Sylvia Smith** makes radio and television programs from the Arab world as well as reports from Europe and elsewhere that explore connections with North Africa and the Middle East.



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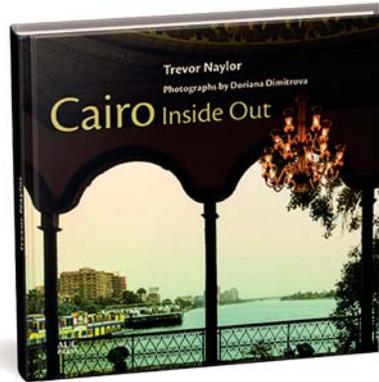




# REVIEWS & RECOMMENDATIONS

Without endorsing the views of any of the authors, the editors encourage reading as a path to greater understanding.

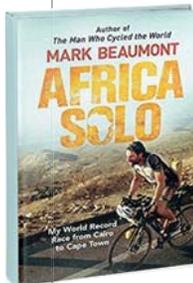
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“... Cairo is not a megacity, but rather an amalgamation of different villages. One can go to the same place in twenty years and still be recognized, or pick up a conversation from years before with ease.”

## Cairo Inside Out

Trevor Naylor. Photographs by Doriana Dimitrova. 2016, Arc Press, 978-9-77416-756-0, \$29.95 hb. This richly illustrated book lovingly explores Cairo through insiders’ eyes and lenses. Naylor and Dimitrova stroll through many of Cairo’s most famous neighborhoods (Zamalek, Old Cairo, Downtown) and visit monuments and locales (the Citadel, Khan al-Khalili marketplace, the Pyramids) in the locations’ quieter moments, often at dawn, when life is just stirring. The perspective is inside-looking-out: the *Arabian Nights*-inspired architecture of the “impressively renovated Mu’izz II-Din Allah Street” shot through latticework window screens, or foot traffic outside the city’s famous Anglo-Egyptian bookstore, viewed through its window displays of books. Even the Sphinx and Great Pyramid share the photographic stage with the trinkets and postcards astride a gift-shop doorway that frames a view of the monuments. These carefully captured perspectives speak volumes without shouting. —TOM VERDE



## Africa Solo: My World Record Race from Cairo to Cape Town

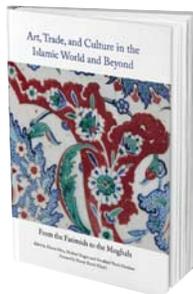
Mark Beaumont. 2016, Bantam, 978-1-47352-695-2, \$11.99 pb.

How do you follow up cycling around the globe

and then pedaling more than 24,000 kilometers from Alaska to the tip of South America? How about a ride from Cairo to Cape Town? Mark Beaumont met that challenge with aplomb in 2015, finishing in 41 days and 10 hours to smash the old record of 59 days, but it wasn’t easy. The 32-year-old Scotsman rode unsupported, occasionally got sick and had to locate lodgings each night, while averaging an astonishing 260 kilometers a day on a route from Egypt through Sudan, Ethiopia, Kenya, Tanzania, Zambia and Botswana to South Africa. Though Beaumont’s focus on speed left him little time to enjoy the continent and its people, his trip offered refreshing peeks into the local culture. In a small town near Khartoum where he found primitive quarters and

a broken bed, his hosts prepared a tasty meal and treated him with kindness, even if they couldn’t quite understand his unusual quest.

—BRIAN CLARK



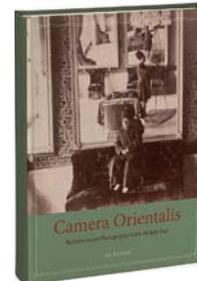
## Art, Trade and Culture in the Islamic World and Beyond: From the Fatimids to the Mughals

Alison Ohta, J.M. Rogers and Rosalind Wade Haddon, eds. 2016, Gingko Library, 978-1-90994-290-5, £60/\$85 hb.

This compendium of 23 essays is dedicated to Doris Behrens-Abouseif, who retired from the Khalili Chair of Islamic Art and Archaeology at SOAS, University of London, in 2014. The range and depth of the contributions are a fitting tribute. The essays are grouped by medium: metalwork, architecture, ceramics, books, art and painting, and material culture, the latter focusing on motifs and techniques. Some examine such overlooked pieces as a damaged 13th-century pen box whose

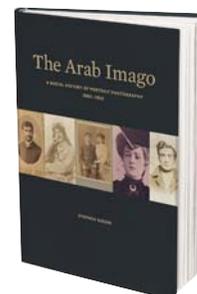
decoration Moya Carey ties to the Mosul court, or Chinese-style ceramics from the late 18th to the mid-19th century that George Manginis traces to Armenian traders in India. Others bring new insights to famous works and sites, and many draw unexpected connections. Jeremy Johns, for example, argues that artisans from Fatimid Cairo carved the ceiling of Palermo’s Cappella Palatina in the

1130s and ‘40s, then traveled to Constantinople to work on a hall in the Great Palace. —LEE LAWRENCE



## Camera Orientalis: Reflections on Photography of the Middle East

Ali Behdad. 2016, University of Chicago Press, 978-0-22635-640-2, \$30 pb.



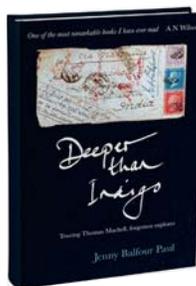
## The Arab Imago: A Social History of Portrait Photography 1860–1910

Stephen Sheehi. 2016, Princeton UP, 978-0-691-15132-8, \$45 hb.



These scholarly titles examine the works of some of the Middle East's earliest and most influential native photographers. Not long after the introduction of photography in 1839, European photographers fanned out across Egypt, the Levant and Turkey, transforming the West's romanticized, Orientalist vision of the region "into images received as objective fact," writes Behdad. Yet "utterly neglected in art-historical discussions" on the period is the fact that the subjects of these early images stood on both sides of the camera. Embraced "almost immediately by the wealthy and powerful in the region," photography became a vehicle for local Middle Eastern photographers to capture visions of themselves and their environments. Such "Orientalist photography," Behdad argues, was a "mode of representation produced through cultural contact between the West and the East." Dozens of historic images of the Middle East highlight Behdad's work. Sheehi writes that the pioneering artists who established studios in cities such as Beirut, Alexandria, Cairo and Jerusalem captured "all walks of life, all classes, and all ideological positions." Their milieu was *al-nahdah*, a regional rebirth of Arab culture, chronicled in print and pictures, where the camera played a key role in recording and exhibiting "the new ideological vision." Garabed Krikorian (1847–1920) stands out as "Palestine's most prolific" photographer, whose images of local officials, military figures and religious leaders left an archive of the "complex network" of relations "in the Ottoman Arab world."

—TOM VERDE



**Deeper than Indigo: Tracing Thomas Machell, Forgotten Explorer**

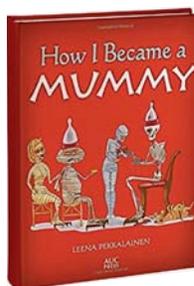
Jenny Balfour Paul. 2015, Medina Publishing, 978-1-90933-953-8, £22.99 hb.

Englishman Thomas Machell set off to seek his fortune

in the East in the mid-19th century when he was just 16. He traveled widely in India, where he became an indigo (and later a coffee) planter; Polynesia, where he fell in love with a chieftain's daughter; China, where he witnessed the First Opium War; and the Middle East, where he had numerous adventures from Yemen to Suez. This strange and compelling

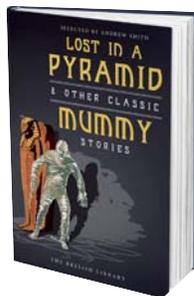
recounting of Machell's life by probably the world's foremost expert on indigo is based in large part on five illustrated diary volumes covering the years 1840–1856 that lay half-forgotten in the British Library until they were brought to the author's attention because of their link to indigo. In this tour de force, Balfour Paul interweaves her own travels and adventures in search of Machell into the story, bringing her subject back to life as she identifies ever more closely with him. The book's many illustrations—his and hers—add a great deal to the narrative.

—CAROLINE STONE



**How I Became a Mummy**

Leena Pekkala. 2016, AUC Press, 978-9-77416-811-6, \$18.95 pb.



**Lost in a Pyramid & Other Classic Mummy Stories**

Andrew Smith, ed. 2016, British Library, 978-0-71235-617-6, £8.99 pb.

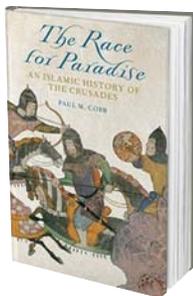
These books' original views of ancient Egypt will captivate a wide range of readers. *How I Became a Mummy*, a book "for children and Egyptologists of all ages," follows

the death of a pharaoh and the mummification process through ample cartoon-like illustrations. The narrative is very easy to follow, making it a perfect book for a parent or grandparent to read to a curious child who wants to know how mummies are made. The procedure is described in detail through the dispassionate eyes of the dead pharaoh in chapters concerning subjects such as washing, gutting, the brain, canopic jars and coffins.

*Lost in a Pyramid & Other Classic Mummy Stories* is a collection of tales published between 1869 and 1910. The stories vary from horror, to romance, to comic, painting a fascinating picture of how Egypt was viewed through Western eyes in the late 19th and early 20th centuries—a period of great archeological and geopolitical interest in the country.

Readers will recognize some authors, notably Sir Arthur Conan Doyle and Louisa May Alcott.

—MARGARET POWIS



**The Race for Paradise: An Islamic History of the Crusades**

Paul M. Cobb. 2014, Oxford UP, 978-0-19935-811-3, \$29.95 hb.

*The Race for Paradise* offers fresh perspectives on medieval encounters between Muslims and Christians. Western

readers will benefit from seeing the Crusades "from the other side of the fence" and in a larger context. Middle Eastern readers will find much that is useful in this work—not only to dispel simplistic stereotypes of Crusaders that populate extremist philosophies, but also to introduce important Muslim and other Eastern chroniclers, historians and commentators seldom read today. The author, a professor of Islamic history, skillfully illustrates his arguments with compelling anecdotes from Spain to Sicily, the Levant and Mesopotamia. He shows the Crusades were not an epochal clash of religions or civilizations, but rather a series of very particular battles between localities, cities and personalities, fought for reasons that have nothing to do with modern concerns. Societies, East and West, were organized differently—with local kings and nobles, antique economic structures and the like. Cobb captures tragic, shocking, even uplifting human stories behind that period and broadens our understanding of a pivotal era.

—ROBERT W. LEBLING



**Signs of Our Times: From Calligraphy to Calligraffiti**

Rose Issa, Juliet Cestar and Venetia Porter. 2016, Merrell, 978-1-8589-4652-8, \$70 hb.

In the late 1990s Princess Wijdan Ali of

Jordan introduced the notion of a "calligraphic school" of modern art characterized by artists' use of Arabic writing (see *AramcoWorld* M/A 97). Even though none of the authors mentions Wijdan's work on this subject, their book is nonetheless a continuation, showcasing the

range of work in this genre to date. Venetia Porter of the British Museum introduces the historical arc of Arabic writing, while Juliet Cestar provides in a coda a chronology that relates select milestones in art to historical developments. In between, independent curator, writer and publisher Rose Issa discusses the organizing principle for the book: "Innovation" (1950s–'70s), "Exploration" (1980s–'90s) and "Circumnavigation" (2000–'15). The 43 artists she selected occupy most of the book. She represents each with three to six works, a short biography and quotes from the artist. Her selection drives home the astounding variety of artists' relationships to Arabic writing and will serve as a useful reference.

—LEE LAWRENCE



**Andalusia of Love (Andalus al-Hob)**

Marcel Khalife. 2016, Nagam Records,

B01BHFPSNA, \$12.45 cd.

The music and lyrics of Lebanese composer, singer and 'ud master Marcel Khalife have captivated international audiences since he began performing in the 1970s. *Andalusia of Love* carries on this extraordinary musical legacy. Khalife collaborated with the renowned Palestinian poet Mahmoud Darwish, whom he calls a "second soul in his heart," for more than four decades until the poet's death in 2008. In this haunting suite of 14 pieces, Khalife explores Darwish's vision of a renewed Golden Age, harkening back to 10th-century Muslim-ruled al-Andalus where people of the three Abrahamic religions coexisted peacefully. Performed by the Al Mayadeen Ensemble—Khalife ('ud, vocals), sons Rami (piano) and Bachar (percussion), and Jilbert Yamine (*qanun*)—this presentation deftly combines Western classical, jazz and traditional Arabic music. "I was compelled to ... break away from the traditional formats of oriental music and song and come up with a more personal musical work," comments Khalife.

—PINEY KESTING



# EVENTS & EXHIBITIONS

Highlights from our searchable listings at [aramcoworld.com](http://aramcoworld.com)



## CURRENT / SEPTEMBER

**Batik Textiles of Java.** The Indonesian island of Java is the principal source of the brilliant textiles known as *batiks*. The term “batik” derives from the Malay word meaning to draw with a broken dot or line and refers to the wax-resist process by which patterns are imposed on fabric. Many countries, especially in Asia, produce wax-resist textiles, but the Javanese have developed the most sophisticated method for executing the process. Traditionally, women have been the primary producers of batik. Dyeing, on the other hand, is a craft done by both men and women, though indigo-dyeing falls solely to men. The range of patterns, some identified by name, numbers over a thousand. Javanese batik-makers have always been open to a broad range of sources for their patterns and motifs, from local Javanese and Hindu works to Chinese, Arabic and

Western inspirations. This display features a diverse selection of pattern and functional types, all from the museum’s rich collection, along with materials that further explain the batik process. Art Institute of **Chicago**, through September 17.

**Breeze 2017** by Hungarian-Syrian artist Róza El-Hassan is a search for answers to practical and existential questions about migration, coming home and belonging. She has built a dome that acts as a model for a community building or school in Syria, with drawings and sculptures exhibited around it. The installation also includes spherical hanging gardens displayed in dew banks, which are mechanisms designed to extract water from the air. The dome stands in the center of a colored orbit representing a design for a real shelter. The “orbit” takes a cosmological round-shaped form, much like the sun

with revolving planets. Red Star Line Museum, **Antwerp**, through September 17.

**Between the Sea and Mountains** is a conversation of works by two generations of Azerbaijani artists who are exploring national, cultural and personal identities. The exhibition regards the geographical and historical context of Azerbaijan and describes the nation as Turkic-speaking, which can be considered at once European and Asian, having formed its cultural identity under Arab, Persian and Russian influences. Yay Gallery, **Baku, Azerbaijan**, through September 29.

## CURRENT / OCTOBER

**Company School Painting in India (ca. 1770–1850).** As the British East India Company expanded its purview in India beyond trade to include diplomacy and administra-

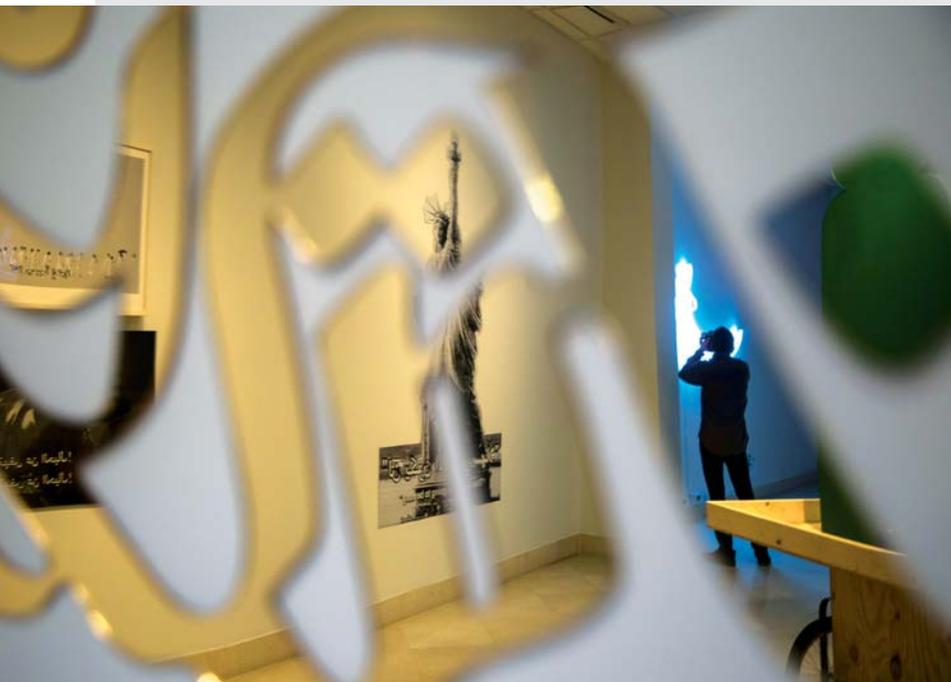
## Epicenter X: Saudi Contemporary Art

The first exhibition of its kind from the Kingdom of Saudi Arabia to appear in Michigan, this show illuminates the vast diversity of contemporary artistic practice in Saudi Arabia and promotes dialogue among the 17 exhibiting artists and us audiences. An alternative

to political discourse, the artworks open windows into the experiences and thoughts of ordinary Saudis on matters such as urbanization, globalization, religion and the impact of American popular culture on Saudi society. The exhibit features a variety of works

in diverse media by both established and emerging artists. *Epicenter X* is organized in collaboration with the King Abdulaziz Center for World Culture, known simply as Ithra, and it is produced with support from CULTURUNNERS. Arab American National Museum, **Dearborn, Michigan**, through October 14.

“Hennkah (Experience),” 2017, by Mawadah Muhtasib. Laser-cut mirrored acrylic. Installation view. This work was conceived and produced during Muhtasib’s residency at Majlis Studio in New York. It features her characteristic reversed Arabic typeface, focusing on the beauty of the strokes rather than on readability. The mirrored finish offers each viewer a unique perspective and interaction.





tion, greater numbers of officers, and eventually their families, were stationed in the region. Many became active patrons of the arts, giving rise to the so-called Company School of painting—or simply Company painting—of the 18th and 19th centuries. Responding to their patrons' European tastes, scientific interests and sense of discovery, Indian artists—some previously trained in late-Mughal techniques of painting—evolved their styles to create large-scale images of India's flora, fauna, people and landscape. While formal natural studies comprise a major genre of Company painting, other idioms, such as the picturesque—which offered romanticized views of landscape and architecture—also flourished. The Metropolitan Museum of Art, **New York**, through October 1.

**The Principle of Uncertainty** features works by artists who pose fundamental questions about the value and meaning of art through the process of reconfiguring the collective truth and personal memories behind their works. These are artists gaining prominence worldwide: Lebanese-born Walid Raad, Singapore's Ho Tzu Nyen, Amsterdam-based artist and filmmaker Zachary Formwalt, and Korean artist Hayoun Kwon. In reprocessing material as well as memories, they reveal the hidden sides of the uncertain world through which they pass. National Museum of Modern and Contemporary Art, **Seoul**, through October 9.

**A Journey into the Great Unknown.** "Energy sparked by creativity is full of potential." So begins Shahzia Sikander's account describing the sense of exploration and excitement sparked by her recent collaboration with the Pulitzer Prize-winning playwright, novelist and screenwriter Ayad Akhtar. Both Pakistani Americans, Sikander and Akhtar have incorporated their Muslim heritage into their separate practices in ways that challenge mainstream perceptions of American Muslim identity. The result of their original collaboration is on view in the museum's South Asia galleries. Entitled "Portrait of the Artist," the work, a suite of four etchings and a related colophon written by Akhtar, explores the theme of *mi'raj*—the mystical night journey of Prophet Muhammad. Asian Art Museum, **San Francisco**, through October 29.

#### CURRENT / NOVEMBER

**L'Afrique des Routes (African Routes).** Cradle of humanity and supplier of labor power, gold and raw materials for other continents for thousands of years, Africa has a history that is part of humanity's vast international dynamics. This exhibition presents a panorama of a continent at the crossroads of different worlds, a counter-current to received ideas. Even as the preconceptions persist, the facts themselves are undeniable: Africans have never lived in

isolation. Although ignored for a long time, exchanges within Africa and outside of its borders began thousands of years ago, well before independence, colonization and the arrival of the first Portuguese ships at the end of the 15th century. This is demonstrated in sculptures, gold and ivory pieces, paintings and other artworks that evoke the routes by river, land and sea that contributed to the movement and contact of peoples, materials and artworks, from the fifth millennium BCE to the present day. Musée du quai Branly-Jacques Chirac, **Paris**, through November 12.

#### CURRENT / DECEMBER

**Islamic Bookbinding** showcases more than 70 artifacts that comprehensively portray the beautiful elements of bookbinding from around the Islamic world. A variety of bookbindings are shown both bound and unbound; some bindings were kept in wooden boxes, wrapped in leather pieces; and others were bound in codex form. The cover materials comprise mainly leather, lacquer work and textiles, in addition to other decorative media such as metal and precious gems. Some manuscripts on display also come with additional housings (i.e., box, pouch, slipcase). The exhibit demonstrates that the art of bookbinding was not only concentrated in refining the design of the covers but also focused on other elements such as the doublure (inner cover)

and flap, which are features associated specifically with Islamic bindings. Islamic Arts Museum Malaysia, **Kuala Lumpur**, through December 31.

#### COMING / SEPTEMBER

**Arts of the East: Highlights of Islamic Art from the Bruschetti Collection.** The Bruschetti Collection is world-renowned for its Islamic art. This special exhibition showcases a fascinating selection of 13th- to 17th-century carpets, textiles, polychrome Iznik wares, paintings and precious inlaid metalwork chosen from the collection, revealing the enduring appeal of Islamic masterpieces. Handpicked by Allesandro Bruschetti in conversation with Aga Khan Museum, this impressive array of works, each equally astonishing in vibrancy and technical perfection, has origins spanning the Islamic world, from China to Spain. Bruschetti's ongoing love of seeking out exquisite examples of such art represents the epitome of the collecting spirit and the essence of the collection. Aga Khan Museum, **Toronto**, September 23 through January 21.

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