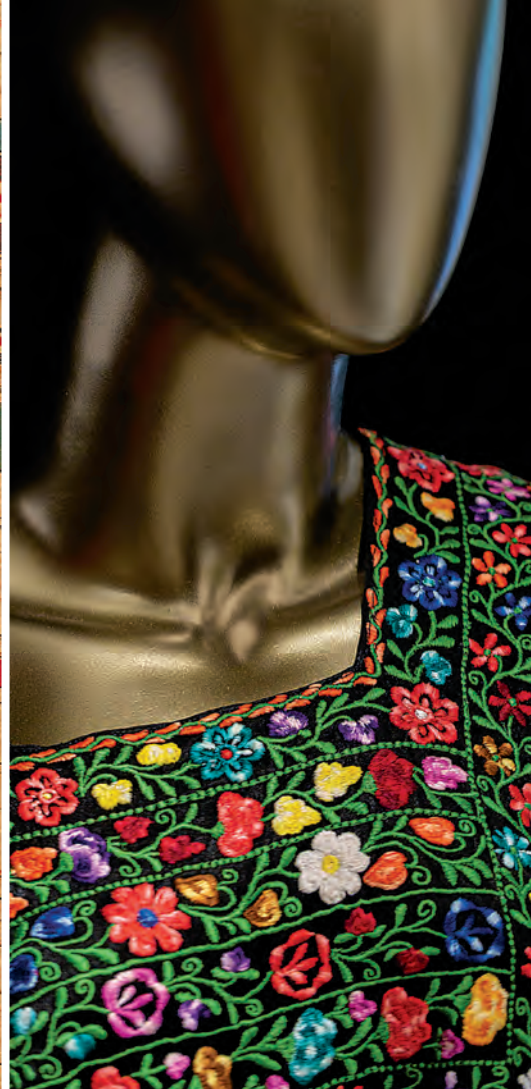


NOVEMBER DECEMBER 2019

AramcoWorld





6 Messages in the Maps

Written by Graham Chandler
Images courtesy of the Bodleian Libraries, University of Oxford

Long given short shrift by Western scholars for being more schematic than to scale, Islamic maps from the 10th to the 18th century were often sophisticated images, full of insights for anyone willing to set out and explore them.

14 Washington's Museum of Palestine

Written by Larry Luxner
Photographed by Eric Kayne

What started as a traveling exhibit of history, culture and art opened this year as one of the newest museums in Washington, DC, in a former residence in the Adams Morgan neighborhood.

16 A Palette in White

Written and photographed by Alia Yunis

There is no official count of how many varieties of cheese the Arab world produces. Although each is unique, all are white. Don't even begin to think that makes them boring.

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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: The white palette of Arab cheeses, says Jordanian artisan cheesemaker Nisreen Haram, is a consequence of the warm Middle Eastern climate. Tastes and textures, however, are altogether distinct, she says. Photo by Dayna Wiles.

Back Cover: "Facade to Facade," an exhibit at Gulf Photo Plus in the Alserkal Avenue district, displayed images by graphic designer Hussain AlMoosawi. Photo by Mohamed Somji.



22 The Storyteller Who Listened

Written by Rami G. Khouri
 Photographed by George Azar

"I've tried to listen and understand," said the late Anthony Shadid, the first Arab American correspondent to win a Pulitzer Prize in international reporting. How he did it was no secret formula: time; attention; sincerity—and lots of notes.



26 Cooling Dubai

Written by Beliz Tecirli

Some 90 former warehouses have been transformed into a lively cultural scene at Alserkal Avenue—the latest of Dubai's replies to the question, "What can art do for a city?"



30 Robots of Ages Past

Written by Robert W. Lebling

A century ago, a Czech playwright coined the word "robot," and 500 years ago, Leonardo da Vinci designed a pretty good one—and he was far from the first. (Hey Siri, who was Ismail al-Jazari?)

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FIRSTLOOK

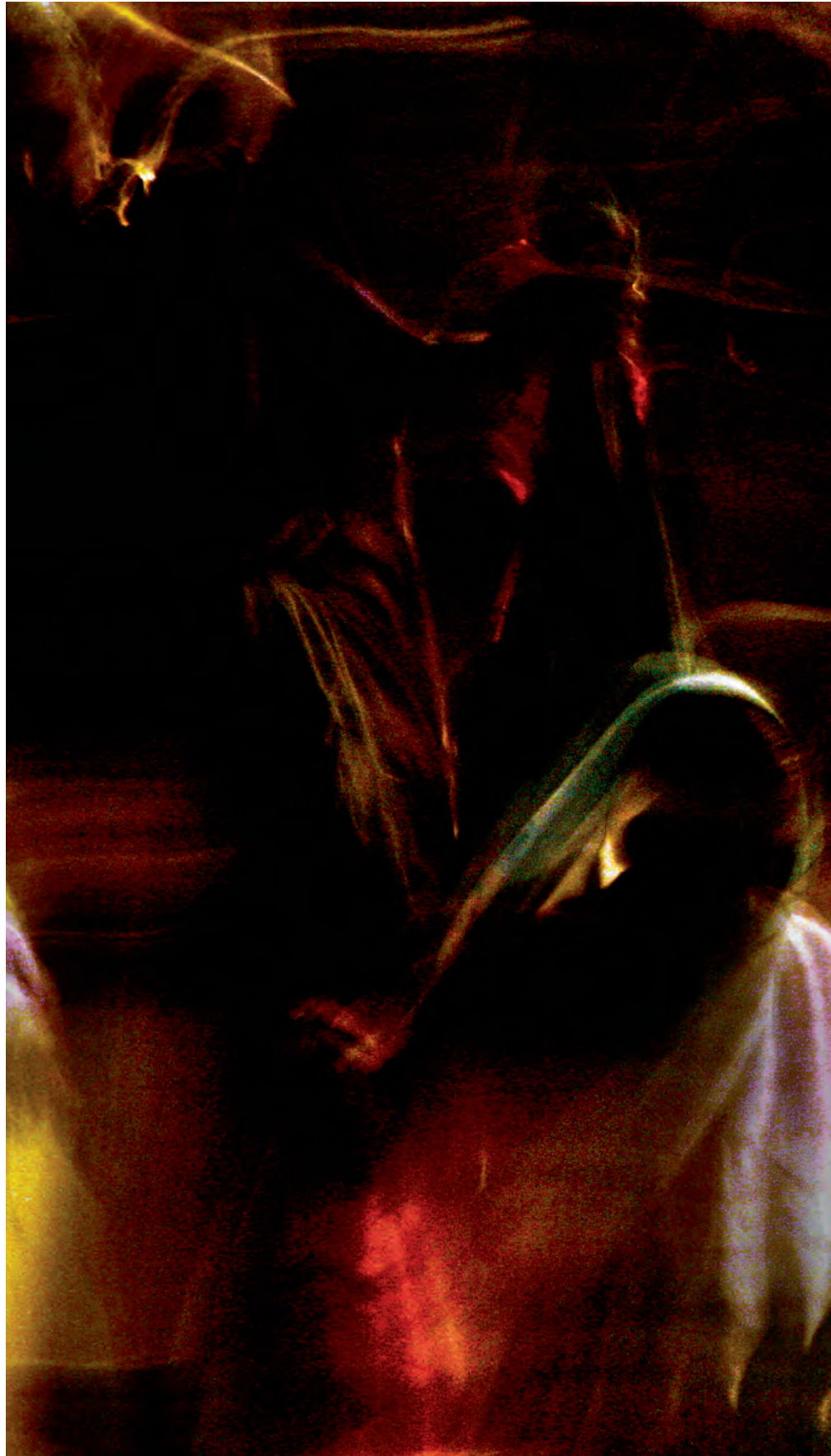
A Memory of My Mother's Scarf

*Photograph by
Laura El-Tantawy*

My childhood memories are often like flickers I can touch but never quite hold onto. I have held onto one, though: My mother kneels down to lift me off the ground, and as she does, the sheer fabric of the scarf covering her hair shifts in the summer breeze that smells of jasmine. She caresses me, and I remember the glint in her eyes and the light hitting just the right spot on her face. To this day, wherever I go, the covers women use over their hair feel like odes to my mother. It is impossible for me to look at the women in my life as people defined by anything other than their ambition, determination, independence and ultimately their choices, their individuality. When I think of all the ways women through centuries have covered and adorned their hair, all the way from Asia to the Middle East to Europe, I see customs that can bring women and cultures together, not ones that have to divide us. Although the women in this photograph are in India, and I grew up in Egypt, it's an image that brings me close to that moment with my mother.

—Laura El-Tantawy

www.lauraeltantawy.com







FLAVORS

Poulet stuffed with herb-infused freekeh

Recipe by
Joudie Kalla

Photograph courtesy
Jamie Orlando Smith

Freekeh is one of the best grains out there, quickly earning a reputation as the newest “supergrain.” Freekeh is green and nutty and has this amazing aroma when cooked. It is also replete with whole grain sources of fiber and offers a whopping 7 grams of protein per serving.

So, this freekeh-stuffed poultry dish is definitely good for you. Palestinians love adding spices and herbs to food, especially nearer the coastal areas where they are in abundance. Freekeh is used in many stuffings and food combinations because it is filling, hearty and packed with nutrition. It works really well with chicken, but I prefer Cornish game hens. The herbs in this dish are bursting with flavor, and whether serving your family or dinner-party guests, this dish is sure to be a fan favorite.

(Serves 4)

2 c (10 ½ oz / 300 g) freekeh

1 ⅔ c (3 ½ oz / 100 g) chopped flat-leaf parsley

1 c (1 ¾ oz / 50 g) chopped fresh chives

1 bunch of fresh mint

3 c (6 oz / 170 g) chopped fresh cilantro

4 scallions, chopped

2 garlic cloves, minced

1 tsp salt

1 tsp cracked black pepper

1 tsp red-pepper flakes

Grated zest and juice of lemon

3 tbsp olive oil, plus extra to drizzle

6 poussin or Cornish game hens

Yogurt dip to serve

Preheat the oven to 400°F (200°C). In a bowl, combine all the ingredients, except your poultry and yogurt dip, and taste for flavor. Place the mixture into the cavities of your poultry of choice and place in a deep baking dish.

Season your poultry with extra salt and pepper, and drizzle of olive oil on top. Add water to the bottom of the dish so the lower half of the chicken is submerged. Cover dish with aluminum foil and roast for about one hour or until cooked through. The liquid will combine flavors from the poultry, herbs and freekeh, creating a delicious sauce.

Once cooked, ladle sauce over each hen, or whole chicken, and serve with a little yogurt dip alongside.

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Baladi Palestine

Joudie Kalla
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Joudie Kalla has been a chef for over 20 years. She trained at Leiths School of Food and Wine, London, and worked in many prestigious restaurants before going on to run her own successful catering business. She opened a Palestinian deli, Baity Kitchen, in London, from 2010–2013 to much acclaim before turning her sights to writing her first bestselling cookbook *Palestine on a Plate*. She runs cooking classes, catering events and pop-up supper clubs, and she consults on food projects.



Messages IN THE MAPS

Maps were like portals that enabled people to reach across the miles and the centuries to feel a sense of belonging.

—ZAYDE ANTRIM
TRINITY COLLEGE



WRITTEN BY **GRAHAM CHANDLER** IMAGES COURTESY OF THE **BODLEIAN LIBRARIES, UNIVERSITY OF OXFORD**





Using a gentle two-finger pinch, Emilie Savage-Smith turns a page of an 800-year-old manuscript on display at the Bodleian Library in Oxford, England. She leans forward and pauses, carefully reviewing each illustration.

“This entire treatise is one of the universe,” says Savage-Smith, professor of the history of Islamic science at the Faculty of Oriental Studies at the University of Oxford, describing the *Book of Curiosities*, a 13th-century compendium of Islamic maps. “It starts from the very outside where the stars are, and works its way down to the Earth. And then, when you get to the Earth, you get the diagrams of the winds, etcetera. This is the only treatise I can think of where the two are combined.”

The last few years of her three-decade tenure at Oxford has been dedicated to researching the *Book of Curiosities*, whose actual author remains unknown.

Savage-Smith, like other scholars in her field

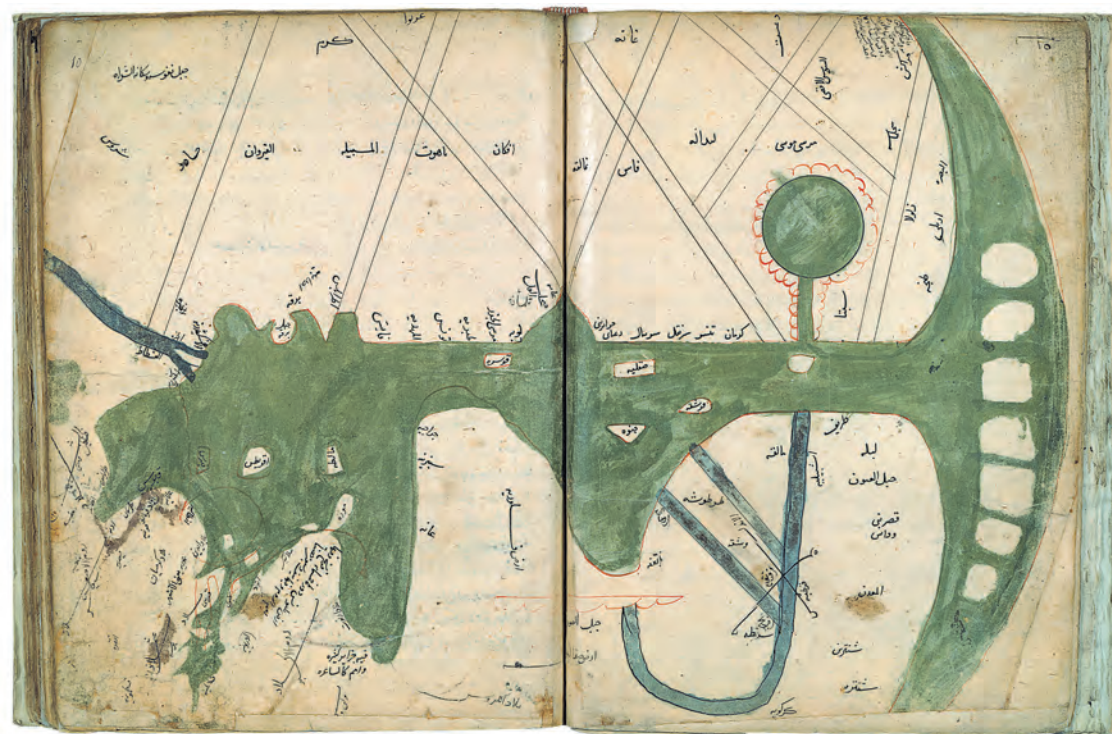
who have researched the book’s contents since its discovery and acquisition by the Bodleian in 2002, asserts that its maps and Arabic texts offer new insights for understanding the ways people understood the world at that time.

Its original title, transliterated from Arabic, is *Kitab gharaib al-funun wa-mulah al-uyun* (*Book of Curiosities of the Sciences and Marvels for the Eyes*), and it was first produced around 1200 CE. The Bodleian acquired this 13th-century CE copy through a London antiquarian dealer, and the library has since translated its texts into English and posted its images on the library’s website. In its day, the oversized book would have been placed on a lectern or tabletop, as it is too large and heavy to fit across one’s lap for casual reading. In front of Savage-Smith, the book appears larger still, its cartographic illustrations spanning a full 23 by 33 centimeters across the faded, brown pages.

Maps inside the book boast expertly inked, black contours supplemented by brilliant blues, reds, yellows and greens in seemingly abstract,



The original of this world map, **left**, was likely drawn in the 12th century CE by an anonymous and likely Egyptian scholar for the *Kitab Ghara'ib al-funun wa-mulah al-'uyun* (*Book of Curiosities of the Sciences and Marvels for the Eyes*), and the earliest-known version of it is this 13th-century CE copy. Oriented with south at the top, where the source of the Nile is prominent, it is the only horizontal world map known to precede the Renaissance. North Africa, southern Europe and western Asia are detailed with mountains, rivers, cities and ports; at the lower left is a stone gate representing the legendary wall built by Alexander the Great against the giants Gog and Magog. **Above:** The Weston Library of Oxford University’s Bodleian Libraries Group holds many special collections. **Lower:** The earliest Islamic maps of the Mediterranean were drawn in the late 10th century CE by geographer and cartographer Ibn Hawqal in his *Kitab surat al-ard* (*Book of a picture of the earth*). This is a copy from the late 15th or 16th century, with the addition of the Canary Islands, at far right, which do not appear on earlier copies. Its fine detail at lower left suggests that the copyist of this version may have hailed from Ottoman Anatolia.



schematic renderings of lands and seas, fairly bursting with additional grids, charts, diagrams, inset illustrations and travel routes.

Savage-Smith notes that some of the book’s cartographic illustrations are particularly important—especially its large, rectangular map of the world. Its shape, she explains, is the only one of its kind to predate the Renaissance. Other maps in the book detailing rivers—the Nile, Euphrates, Tigris, Indus—and islands across the Mediterranean incorporate details that refer to culture, daily life and trade.

“One of the things you look for, for approximate dating, is the nature of the ink,” she explains. With Arabic manuscripts “it’s the red ink. The color of the red ink changes with time,” she says, adding that some of the map dating process requires scrutiny of materials.

In a time before the printing press, copying was done by hand. Maps in the *Book of Curiosities* were frequently copied, leading scholars to ask, “How did one prevent errors in the copies?”

Over time, with scholars examining multiple copies of the same text and maps, Savage-Smith says it has become easier to know which copies remained truest to their originals.

“You don’t know what possible changes the copyist might have introduced,” says Savage-Smith. “You have to guess. Obviously if a place didn’t exist at the time of the original, that would be clear. And that’s about all you can do. You can compare copies.”

There are other methods, too—including scent: “If a person is forging manuscripts or maps, it will have a different odor,” she says.

The *Book of Curiosities* offers its greatest breadth of information about Egypt, with many pages dedicated to the Nile Delta and, in particular, the town of Tinnis. It also makes positive references to the rulers of Cairo. Its script, ink and materials are consistent with those known from 13th-century Egypt. All suggest that the book’s unknown author was likely an Egyptian schooled in the geographical traditions of the time, which were flourishing most brilliantly in Baghdad, and that drew also upon earlier Greek work, notably that of Ptolemy.

“It is beautifully structured,” Savage-Smith says of the book.

It was in Baghdad that what is known as the Balkhi school of classical Islamic geography developed, named after the Baghdad-based, 10th-century CE polymath Abu Zayd Ahmad ibn Sahl al-Balkhi. His use of a world map and 20 regional maps supplemented with explanatory texts became a kind of template in the field. Other geographers of the Islamic Golden Age followed, including al-Istakhri, Ibn Hawqal, al-Muqaddasi and, in the 12th century CE, al-Idrisi.

Elements of Balkhi-style map models can be seen even in the Ottoman maps of the 16th and 17th centuries. They influenced early rectangular European atlases. But these and other Islamic styles of mapping generally declined after the Renaissance, and they virtually disappeared with the onset of European colonialism and advances in survey tools. Mapping standards shifted to European ones.





The *Book of Curiosities* includes this large, detailed map of Sicily, **above**. Like other maps of its era, it is schematic rather than mimetic, and it shows ports, cities and more. Maps were produced mostly on the basis of oral accounts. Even more abstract in appearance is an incomplete map of Cyprus, **opposite, top**, probably made in Egypt between 1020 and 1050 CE and subsequently copied. The *Book of Curiosities*'s map of Mahdia, the second capital of the Fatimid Caliphate and today a city on the coast of Tunisia, **opposite, lower**, included detailed drawings of the buildings mariners could expect to see when approaching the port.

New research of Islamic cartographic illustrations, both in the *Book of Curiosities* and beyond, however, reveal how these maps demonstrate previously underestimated understandings of the Earth and the cosmos, and how maps were used for more than maritime navigation.

"Maps did not function as practical travel aids in the medieval Islamic world," explains Zayde Antrim, professor of history and international studies at Trinity College in Hartford, Connecticut, and author of *Mapping the Middle East*, published in 2018. "People sought written or oral directions. They consulted guides. They traveled in groups. They observed landmarks and celestial bodies. Maps, instead, emerged from travel. They were produced after the fact and for a different purpose," which was to describe someone's perception of a world traversed.

And maps in most medieval Arab atlases were not intended to stand alone, Antrim adds, pointing to the *Book of Curiosities*. With often elegant composition and texts using expensive materials such as silk and gold, these were made for those with enough

status to read and study their importance.

"The written text constantly refers to the accompanying map, and authors clearly considered word and image to be complementary vehicles for conveying information. These were maps for book owners and book readers, not for a saddle bag," Antrim says.

Another scholar ushering in new interest in these maps is Yossef Rapoport, reader in Islamic history at Queen Mary University of London. Together, he and Savage-Smith coauthored the 2018 volume *Lost Maps of the Caliphs: Drawing the World in Eleventh-Century Cairo*; Rapoport is also the author of *Islamic Maps*, published this year.

Soft-spoken and deliberate, Rapoport notes the insights the pair have gained from the *Book of Curiosities*.

"Maps of places we haven't seen in maps before; places outside Africa, places in central India and in China, the routes of trade and propaganda, a maritime route that goes down the east coast of Africa. And more about waterways," he says. He notes that the book's maps often included

"Maps did not function as practical travel aids in the medieval Islamic world... Maps, instead, emerged from travel."

—Zayde Antrim

secondary information, such as environmental descriptions of the rivers, for example, which would be of importance to sailors returning to the areas on the map.

Rapoport carefully turns to the Western Sea map, a depiction of the Mediterranean Sea that would not look familiar to anyone looking at a map of the sea today.

“Here we see a completely different view of the Mediterranean space in a couple of ways,” he says, noting the map is the oldest-surviving example of a map with a geographic perspective looking at the coast from the sea, which was typically drawn the other way around in earlier maps. “It sports 118 islands in a dark green sea and 121 harbors and anchorages on its coast, each carefully labelled in Arabic script,” Rapoport says.

The Western Sea map is an important point in the history of navigation, as it presages the portolan charts of the later Middle Ages. It also depicts a correct sequence of harbor

Maps in medieval Arab atlases generally relied on extensive explanatory texts.

points, each describing the offerings of the area, such as water sources or, for example, how the port of Gaza can protect someone from the north wind. Other details show the capacities of the harbors, or how many boats can pass or dock.

“Its abstract nature is precisely because it is for mariners. It is clearly made for sailors, especially before the compass,” he says.

Rapoport turns to a map of Mahdia, the second capital of the Fatimid caliphate and today a city on the coast of Tunisia. It too was designed for sailors, he says, and one like this would have helped them recognize buildings as they approached the port.

“This would have been at the entrance of the harbor, but not the actual shape of the harbor,” he says, pointing to a trio of buildings drawn in detail on the map. “This appears to be the guard tower overlooking the harbor. These are the two palaces of the Fatimid king. They no longer exist, but we do



know they were located around this area. We also know the gates of the city are in the right place. They were famous double gates. And the topography is right—here is a hill.”

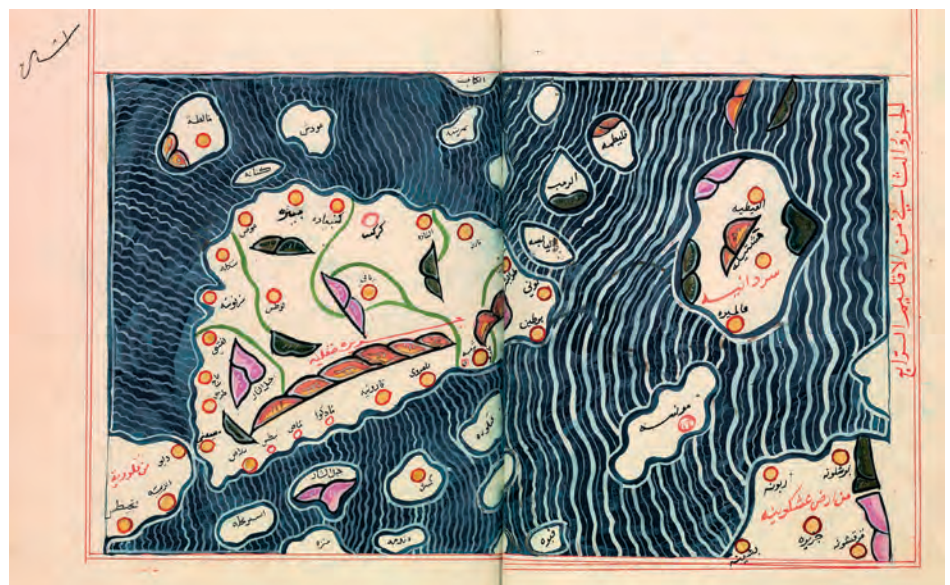
Other maps cover much broader territory. The Indian Ocean map features much detail on the Horn of Africa, which Rapoport notes is “very distinctive. It tells you the name of the bay. This one is actually a translation of a Greek name. Here it says the bay begins with such number of miles,” he explains.

He turns to another map, this one in its own customized box: a map by al-Sharif al-Din al-Idrisi, known simply as al-Idrisi. Its leather cover and spine are cracked and worn, but inside, it has weathered the centuries well. The map colors remain brilliant—lapis lazuli blue for water, leaf green for salt water. The paint is still thick.

No matter how often Rapoport and Savage-Smith examine the maps, they say, they continue to discover new information about how these early Islamic maps set a standard for the geographic world.

Nadja Danilenko, too, is surveying the impacts of early Islamic maps focused on the practice of copy making over centuries. Now a fellow at the Freie Universität Berlin’s Berlin Graduate School Muslim Cultures and Societies, her doctoral dissertation was the first in-depth study of the oldest-surviving cartographic work from the Islamic world, the *Kitab al-masalik wa al-mamalik* (Book of routes and realms) by al-Istakhri. Like al-Balkhi, he lived in Baghdad in the 10th century CE and hailed from Persia; his cartography, too, produced a world map and 20 regional maps.

Al-Idrisi’s planisphere world map, **opposite**, was produced in 1154 CE in Sicily under commission from Norman King Roger II. Al-Idrisi also produced 70 maps that together comprised the most detailed map of the world from the Equator to the Baltic Sea, and the Atlantic to Siberia. Three 16th-century copies of al-Idrisi’s original folios show, **from top right**, Cyprus and the Levant, part of the east coast of China, and Sicily.



قريه الجزيره

اعدسون



الطوره



الزباب الاحمر

الزباب الاحمر



الانبار
هيئت
عنايه
الدايه
الرحه
دوسيا

الجزير الجاوم

الزباب الاصغر



دارسني
الواقعه
الرتنه
الرقا
بالش
تسلط
خسرتج

الزباب

الزباب

Opposite: Like mapmakers today, geographer al-Istakhri developed a system of simple shapes and illustrations to indicate major features such as mountains, rivers and cities: In this map showing what is today northern Iraq, Baghdad can be seen near the top, astride the Tigris river. **Right:** Doors open into the courtyard of the Bodleian Library, founded in 1601.

“I looked at the entire book, basically looking at the way he organized and arranged things and how he translated his ideas of space into the maps,” says Danilenko. “A combination of textual and visual.”

Then she set out to gather as many manuscripts as possible based on al-Istakhri’s work worldwide—she found about 60, the most recent dated 1898—to establish how the transmission changed through a millennium of copying.

Throughout, she found very few differences from the early versions. But that’s not always the case with map copying in general, she says.

“Al-Istakhri used lines that probably marked administrative borders and water bodies such as rivers and seas to delineate each region. Within the region, he used circles and polygons to represent cities,” she says, noting the cloud-like and triangular shapes he used for mountains and large circles for deserts. Blue bars represent rivers, and larger circles are seas. He captioned every item.

“As al-Istakhri arranged most items in a regular fashion, some symmetrically, some aligned etc. He aimed to communicate a sense of order through his maps.”

The maps were, she concludes, designed for anyone to use without needing expertise. Al-Istakhri used common icons for buildings and cities, for example, and he kept the references to other material easy to understand.

Illustrators as well as copiers had leeway sometimes to adjust the material if they were unable to read it properly or struggled to find the names of places they were not familiar with, she explains. Comparing details repeated from the early copies over time can get close to al-Istakhri’s original. Danilenko emphasizes, however, that differences do not always indicate mistakes.

“It is always important to realize the changes can come from new contexts, too,” she says. She found that previous studies of Islamic maps often tended to judge the maps’ scientific value rather harshly, in later, Western terms, and so she searched for ways to understand the maps on their own.

She turned to the fields of not only historical cartography, but also semiotics, the study of culturally determined signs.

“Usually you differentiate between three things: symbols, icons, and indices,” she explains. “Symbols are the most complicated because they draw on cultural connotations of



The way mapmakers have designed maps has always been informed by their own cultural, social or scientific perspectives.

African kingdom or an Andalusian kingdom. You only see topography and cities.”

This allowed the maps to carry through time, and still be read and understood today.

“Once you figure out the first regional map, you would easily understand the others. If you compare it to the other 19 regional maps, you realize that he depicted every region in the same fashion,” she says.

This simplicity and continuity, however, raises its own

questions. For example, how representative of its own time is the information on a given map? Karen Pinto, an Islamic maps specialist, cautions that the maps “can tell us about the time period in which they were copied, and lead to greater knowledge of the period in which they were originally conceived,” she writes in her 2016 book *Medieval Islamic Maps: An Exploration*. “The problem is that with the exception of Balkhi virtually no biographical information exists on the other authors.”

“Maps are not territory,” she writes. “They are spaces, spaces to be crossed and recrossed and experienced from every angle. The only way to understand a map is to get down into it, to play at the edges, to jump into the center and back out again.”

As each map is newly questioned and appreciated, new insights follow, with each turn of the page.

“They are a rich source of historical data that can be used as alternate gateways into the past,” Pinto writes. 🌐



Writer **Graham Chandler** (www.grahamchandler.ca) focuses on topics in archeology, aviation and energy. He received his doctorate in archeology from the University of London. He lives in Calgary, Alberta.



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Al-Idrisi: Jul/Aug 1977



Washington's Museum of Palestine

Written by **LARRY LUXNER** | Photographed by **ERIC KAYNE**

A glazed ceramic vase that dates from 300 BCE; a blue glass pitcher made in Hebron around 1960; worn identity cards marked “Palestine;” a crisp sheet of orange postage stamps; and an intricately embroidered silk dress, all from the early 1900s—these are a few of the evocative artifacts on view at the Museum of the Palestinian People, or MPP.

One of the newest cultural attractions of Washington, DC, the MPP is home to dozens of cultural items collected and donated from around the globe. Together they tell a story of a diaspora and the determination and pride of Palestinian culture scattered across nearly every country in the world.

Located along 18th Street in the eclectic and fashionable Adams Morgan neighborhood, the MPP’s neighbors offer a similarly global mix of food, music and art.

Businessman Bshara Nassar, 31 and a native of Bethlehem, came up with the idea for the MPP shortly after moving to the capital in 2011.

“I was really astonished by all the museums, memorials and monuments here. So many immigrants have come to Washington and built institutions that would tell their stories,” says Nassar, who also serves as the MPP’s director. “But I could not find a museum or space that would share our story as Palestinians, so I started working on the idea and questioning what it would take.”

In June, Nassar opened the MPP to the public as one of only three museums in the world dedicated to the history and culture of an estimated 13 million Palestinian Arabs. The Palestinian Museum near Ramallah in the West Bank and the



Along with Palestinian artworks that speak to both historical and personal experiences, portraits of Palestinians notable for their contributions in diverse fields fill a wall in the Museum of the Palestinian People. The museum began as a traveling exhibit in 2015 before finding a home in a converted residence, **top, inset**, in Washington, D.C.’s Adams Morgan neighborhood.

Palestine Museum us in Woodbridge, Connecticut, are the only other locations where comparable artifacts are on display.

To showcase the range of Palestinian artistic expression in addition to historical artifacts, Nassar invited donations from Palestinian artists around the world. Among those who contributed is mixed-media artist Ahmed Hmeedat, who grew up in Dheisheh, a refugee camp south of Bethlehem, and holds degrees in human rights and international law. Other artists include Manal Deeb, Mohammad Musallam, Dalia Elcharbini and Haya Zaatry, each of whom offer colorful, thoughtful interpretations of Palestinian culture.

Nassar says the MPP began with an exhibition in 2015 in Adams Morgan that featured photography, paintings, stories and videos of Palestinian life. A couple of weeks later, universities and



Founder and director Bshara Nassar stands alongside messages from museum visitors. **Right, top:** Early-20th-century glass pitchers, handblown in the city of Hebron, are among the displays. **Right:** “Oranges in the Sun, 2018” is a painting donated by artist Ahmed Hmeedat of Dheisheh refugee camp.



churches throughout the us began asking about sponsorship.

It expanded, and it became a traveling exhibit that visited more than 50 locations across the us before returning—permanently—to the neighborhood where it debuted.

The MPP’s home is now a multistory brownstone at the corner of 18th and T streets. It was donated, Nassar says, by an anonymous us family who “really cares that Palestinians have a voice in Washington.” Other donors have contributed some \$200,000, and Nassar is already considering expansion. “That’s our future goal.”

Nassar’s drive to share Palestinian heritage and narratives is both longstanding and a family concern. He earned a master’s degree in conflict transformation from Eastern Mennonite University, not far from DC. In 2014 he founded the Nakba Museum Project of Memory and Hope, which became another catalyst for the MPP.

The Nassar family runs an educational farm in Bethlehem called Tent of Nations, which aims to “build bridges between people, and between people and the land,” he says. It hosts volunteers and runs camps that teach land-and-soil-centered approaches to conflict resolution.

When visitors come to the MPP, they are greeted with traditional Palestinian designs and an interior in distinctive Jerusalem stone. The exhibits are in sections: “A Remarkable People,” “Nakba and the Diaspora,” “Occupation” and “A Resilient People” look at history. (*Nakba* is Arabic for disaster, and Palestinians use the word to mark the 1948 war that resulted in the flight and expulsion of some 700,000 Palestinians.) The final section, “Making Their Mark,” honors Palestinian scholars, historians, poets, entrepreneurs, feminists and comedians.

Ari Roth, founding artistic director of the nearby Mosaic Theatre Company and one of the MPP’s leading supporters,



called it “a space for sowing seeds of transformed perception and empathic connection.”

Nassar hopes MPP will prove inspiring to new generations of Palestinians and others around the world.

“It’s hard for us to imagine a future that’s different from what we’re living right now,” he says. “So we want to challenge Palestinians and visitors to look at the future in a different way.”



Larry Luxner is news editor of *The Washington Diplomat* and a freelance journalist and photographer. Photographer **Eric Kayne** is a native of San Antonio, Texas. He earned a Bachelor of Arts in studio art from the University of Texas at Austin and a Master of Arts in photography from Ohio University. He has worked for numerous publications including the *Houston Chronicle*. He lives in Washington, DC.




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Palestinian photographers: Mar/Apr 2019
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A Palette *in White*





“Cheese is milk seeking eternity.” This is what Jordanian artisan cheesemaker Nisreen Haram says as she leans all her arm strength into stirring a waist-high aluminum cauldron of curdling milk. “It is milk poetry,” she adds.

WRITTEN AND

PHOTOGRAPHED BY

A L I A Y U N I S

I stand nearby as her cheese poem moves closer to eternity with each swirl, her hair and shoes covered in protective mesh, her waist wrapped in a pinafore as white as the curd. As she hovers in front of the cumbersome vat, I am beguiled by white: this basement room of all-white tile flooring and walls, the white tables covered with ingredients, all white, in organized rows.

Nisreen is not merely a cheesemaking traditionalist producing mainstream dairy varieties. She is a guardian of a centuries-old tradition of Arab cheese, a staple throughout the Middle East and North Africa to this day that is, almost without exception, white. In Nisreen’s kitchen, making cheese is an expression of Arab culinary culture. And because each cheese creation is unpredictable in its formation, she executes dual roles as maestro and spectator. Cheese, she explains, is complicated.

Nisreen is one of many milk poets in Jordan. They are not only cheesemakers, but also food activists, chefs and shepherds. Together they taught me how to love these monochrome cheeses, how to appreciate their complexity in spite of their limited color wheel. When one thinks of a cheese deli in Europe or the us, it’s a palette of yellows, oranges, blues and a few whites. But cheese at any grocery throughout the Middle East is as white as an artist’s blank canvas, with only the occasional spattering of nigella or sesame seeds. Call it minimalist at best. To outsiders it’s bewildering. Or boring.

“Just calling it ‘white cheese’ is offensive to cheese,” Nisreen warns me as the sweet aroma of warm milk envelops her kitchen.

Every Saturday Nisreen runs an open workshop in the basement near her cheese cellar, where she sells her cheese and encourages customers to sniff and taste to give their senses a chance to appreciate the complexity of Arab cheeses. The most-asked question by the often-European visitor: Why *is* every Arab cheese white?

Popular *halloumi*, *nabulsi* and *majdoule* cheeses highlight a diversity in taste, texture and shape among Arab cheeses.

Visitors and prospective customers sniff, eye and taste cheeses by Jordanian artisan cheesemaker Nisreen Haram, center, during one of her monthly cheese workshops at her home in Amman. Sourcing milk and other ingredients locally, she says, encourages sustainability and makes for a farm-to-table experience. “Just calling it ‘white cheese’ is offensive to cheese,” she says.



Her explanation circles back to the environment and the land as many of her cheese lessons often do. The hot weather of Jordan, she says, creates a fast fermentation process. This prevents cheese from aging slowly, which is what changes the color.

There is no official count of how many cheese varieties are produced in the Arab world. However, one can break them down into three types: yogurt-based, fresh and fermented. Whether it is 20 or 200, these cheeses are often nearly impossible to tell apart at the deli counter. There is no off-white or ecru, no pearl or soft gray. There is only white cheese—and each offers its own unique flavor, shelf life and appropriate culinary pairing.

Nisreen begins to teach me the intricacies. My first lesson: Assuming that varied colors of cheeses indicate grades of quality is a sure mark of an amateur.

And Nisreen is no amateur. Educated and entrepreneurial, she views cheesemaking as one of the original farm-to-table experiences, and her craft underscores a greater mission to reinforce sustainability opportunities throughout the Levant by maintaining close ties to the land and its milk-yielding animals.

My second lesson: To experience the mystique of Arab cheeses, one must understand its relationships with other foods. Cheese is tethered to savory pastries and flatbreads, grilled appetizers and gooey deserts. It’s a staple of breakfast and supper tables, where it is often served among a tableau of cucumbers, tomatoes and olives. While it is true each cheese has its own flavor profile, truer still is that each cheese has its own texture profile that determines its purpose: some are eaten with bread, while others are exclusive to dessert. Yogurt-based cheeses, such as *jameed*, are most often used for sauces and stews.

Sometimes, two cheeses have the same purpose, but a slightly different texture, she explains.

Take, for example, the two most popular cheeses in the Levant: *halloumi* and *nabulsi*. These are both firm, salty cheeses that are often soaked in water for several minutes before being eaten to lessen the saltiness.

“Both are fresh cheeses. Neither melt. Both are preserved in brine,” explains Nisreen, describing fresh cheese as one that doesn’t ferment and, thus, over time its taste doesn’t change. “But with halloumi, when you boil the milk and the curds start to separate from the whey, you cut up the curds before pressing. That is what gives halloumi its unique squeak. With nabulsi, you just scoop up the curd and press.” (She really says “squeak.” Halloumi is, well, rubbery.)

While halloumi is generally assumed to have originated in Cyprus, some research indicates it more likely started in Egypt. Nabulsi gives away its origins in its name—the city of Nablus, Palestine, from which it came to Jordan with the country’s large Palestinian population.

After many hours with Nisreen, I’m prepared for the next lesson: to set out further across Jordan to learn about the ties among cheese, land and people.

Later, I arrive in Madaba, a bustling town surrounded by

CHEESE	TEXTURE	PAIRING
Halloumi	Rubbery	Fresh or grilled, with vegetables and bread
Nabulsi	Firm	Fresh or boiled, with fresh vegetables and bread
Akkawi	Stringy	Melted: in desserts and with savory pastries
Labaneh	Creamy, spreadable	Drizzled with olive oil
Feta	Soft, crumbly	With watermelon and mint or fresh vegetables and bread



Adapted over centuries to the semiarid grazing of the rough hills north of Madaba, Jordan, a herd of Awasi sheep follow their shepherd. Bred for milking, the sheep's seasonally and locally variable diet of grasses, olive leaves, desert plants and seeds gives their milk—and cheese—a range of flavors.

Each sheet of cheese is drying on a large cake pan, readying to be sold and eaten. Half of the cheeses are peppered with black nigella seeds, which impart their subtly licorice-like flavor to the cheese.

picturesque fields about 30 minutes outside of Amman. The small city is known for its fresh cheeses, as well as the Orthodox Byzantine Church of Saint George, in which a sixth-century mosaic map is credited as the oldest surviving cartographic illustration of the eastern Mediterranean. Tourists come to view the mosaic, and Jordanians come to sample local cheese.

In an area of scattered houses and gardens just off Madaba's main road, Amubarak Abu Qoad, a local tribal leader, and his wife, Manal, run a women's cheese cooperative in a small room built near their family's large main house. Manal escorts me to the cooperative and offers a welcoming glass of yogurt-based *jameed* made from sheep milk. It's pungent, to say the least. But it's traditional, so I sip politely.

Even with limited lighting, it is easy to see the sheets of bright-white nabulsi cheese running the length of the room.

"Nigella seeds have magical medical powers," Manal tells me, listing the qualities of the seeds that include the prevention of stomach ulcers, relief from inflammation and many others. She tells me as if I had never heard this before, but I smile and listen, enchanted by her hospitality.

With a long knife, Manal lets me help her cut the tender sheets of cheese into cubes. These will later be placed in brine, then into five- to 10-kilogram tins called *tanakats*, in which the cheeses can keep for a year without refrigeration. The *tanakats* preserve the flavor, too, and this allows the cheeses to travel farther to potential buyers.

One buyer is Hazem Malhas, owner of a popular, Amman-based vegetarian café called Shams El Balad. He buys his cheese from Manal's cooperative to help support sustainable agriculture.

"Nablus, along with Damascus, used to be the industrial

Left: Nisreen's employees strain *quraish*, a curded cheese similar to ricotta. **Right:** In Madaba, outside of Amman, a Bedouin woman shows a similar process of making *jameed* cheese.





Jameed is made from sheep, or goat milk, thickened through fermentation into a yogurt dense enough to shape into egg-shaped balls. These at left are ready to be dried. If this is done in shade, the jameed will be white; if it is dried in the sun, it will take on a yellow cast.

sheep breed in the world, the Awasi,” he says with pride, adding that Awasis are most numerous in Syria, and probably originated in Iraq.

Spring, when the lambs are born, is the start and peak of the cheese-making season, and it continues until August. The udders of the females (ewes) are at their fullest this time of year, and the land is at its most lush for grazing.

“In Lebanon and Syria, you have more rain, so there is one spot that a

center of this region, so the tanakats are probably a product of that,” he says. In his opinion cheese quality began to decline for larger cheese enterprises as cheese began being mass produced. In nabulsi cheese, for example, salt and mastic—a refreshing resin from the mastic tree that originally was added to sheep-milk cheese to remove the gamey animal flavor—are now used to mask poor quality, he says.

Hazem is also the founder of al-Hima, a not-for-profit dedicated to preserving an agricultural heritage that is also a throwback to the historic process of cheesemaking.

“We traditionally had the *hima* system here,” Hazem says, describing it as a sustainable grazing method in which shepherds rotated sheep around open, common pastures so vegetation would not be overgrazed.

Hima has been mostly lost in recent decades, however, in this region. A modernizing state is no longer as concerned with its shepherds, let alone its *hima*, even in a region celebrated as “the land of milk and honey.”

“We don’t have a history of drinking milk here,” he adds. On its own, he explains, milk was not easily digestible for Arabs throughout the centuries. Therefore, it was used for cheese and yogurt. So began the early tradition of white cheeses.

After several hours with Manal and her Bedouin assistants, her husband, Amubarak, drives me about 45 minutes to a mountainous grazing region. The land is open, vast and dotted with hundreds of sheep scattered across the green and brown expanses. His herd

includes about 600 head of sheep, he says.

“This area is the home of the oldest

Nabulsi is a brined cheese with origins in the Palestinian city of Nablus. It can be made from goat or sheep milk, or a blend of both; it is also speckled with nigella seeds.



sheep can graze for a season. But Jordan is not so green. So sheep wander and eat different things on the ground, like olive leaves and seeds. The milk, and thus the cheese, will have different flavors, depending on what the sheep eat,” he says.

Amubarak maintains the *hima* system on this land that adjoins the east coast of the Dead Sea. Sheep are milked twice a day, and they are herded around the land by shepherd families from Syria, some of whom have been with his family for more than 60 years. Witnessing the intricacies of caring for the sheep, selecting the milk and understanding how it all plays into the land-based essentiality of the cheese, is revelatory. It is now that I could see all the ingredients coming together, many steps before the ingredients will be ushered into the kitchen. I spend a few hours with the sheep. Amubarak and I talk about *hima*. As the sun sets, Amubarak announces our departure.

Returning to Madaba, we approach a small, roadside house. It is another cooperative, and I immediately catch a whiff of the acrid jameed. Jameed is the Bedouin cheese, originally made centuries ago to be transported across the desert for long periods of time. It is reconstituted with water to form the sauce for mansaf, a lamb stew that is Jordan’s national dish.

Inside, Bedouin women are busy stirring cauldrons of milk in the crowded room. They have been working in shifts, all day and all night, to make enough jameed to serve the high customer demands throughout the year.

Drying yogurt is not solely a Bedouin concept. The closest

Tamrkhain “Taymour” Shisani and his business partner, Dalal Shoumen, assist a customer in their specialty-cheese shop in Amman. “I like the patience making cheese takes,” he says. “And the precision. If you are two minutes late, it’s all over.”

example to jameed is *shanklish*, dried yogurt balls rolled in zaatar, the region’s popular mix of thyme, sesame seeds and sumac. With bread, the yogurt balls are broken up with a fork and mixed with tomatoes, parsley, onions and olive oil to temper its strength.

Because Jordan is comprised culturally of both Eastern Mediterranean and desert, parts of its culture favor Levantine ways, while other parts favor Bedouin ones.

Jordan has also been a long-time haven for refugees, and through the years, with new influxes, new varieties of white cheeses have emerged.

Back in Amman, I visit Tamrkhain “Taymour” Shisani and his business partner, Dalal Shoumen, who own a specialty-cheese shop nestled in the back of an Amman industrial zone. Before taking me to the tiny kitchen upstairs, Taymour assists a customer who is sampling three kinds of *labaneh*, a fresh yogurt cream cheese. The difference in the labanehs is the amount of water removed from the yogurt, and Taymour’s customers have discriminating palates. I overhear a 30-something American Jordanian tell him while buying the driest of Taymour’s labanehs that his cheese is the best in town.

Taymour is only three years into his cheese business following a lengthy career as a civil servant followed by a stint in tourism. He’s now committed to his shop and to expanding his knowledge in cheesemaking, which currently includes learning to smoke cheese—a novelty in the Middle East.

We enter his kitchen, and he shows me his favorite blend of white cheese: the Circassian. He has two pots on the stove, one of whey from an earlier session and one of fresh milk that was hand delivered by a farmer earlier in the day. We wait for the milk to boil, making small talk in the interim.

“I like the patience making cheese takes,” he says, “and the precision. If you are two minutes late, it’s all over. Same for too much or too little salt.”

When the milk has curdled just right, he ladles it into individual sieves. These give the cheese its recognizable pattern. Then he mixes in the salt, and he covers the cheese with a plate, leaving them to drain. They will be ready in three hours, he tells me, and in the refrigerator they will last up to two weeks. Taymour also makes *berm*, a Chechen cottage cheese, and informs me he’s considering making the Arabic ricotta cheese, *aaresh*, later in the day by boiling the whey again and adding some yogurt. Unlike Nisreen and Manal, Taymour uses cow milk, even though it requires seven kilograms of cow milk to make one kilo of cheese as



opposed to four kilos of sheep milk.

Taymour, like other cheese artisans, struggles to win over every customer because, like everywhere, many would rather buy inexpensive cheeses, unaware the quality is markedly less when they pay a cheaper price. I observe several customers enjoy his cheese, comment on its superiority and yet remain dissuaded by the price tag.

“I have a responsibility to you and myself to sell a pure, clean product,” he tells one customer. “I can’t stay in business if I charge less.”

He turns to me and sighs. “Everyone wants quantity, not quality,” he says, as the customer keeps trying to negotiate the price.

After venturing among the kitchens, shops and fields, I feel like I am beginning to hear the rhythm and rhyme of the milk poets. Though limited in appearances, these cheeses are anything but limited in taste and experience: sweet and salty, spicy and stinky, firm and supple—and everything in between. It is appropriate for breakfast, lunch and dinner; it pairs heavenly with dessert. Mostly, I learned the land, its milk producers and those shepherding the ingredients to the kitchens play no peripheral role. Arab white cheeses have thrived through the ages because of their ties to the land. It’s a culinary mythos that will stay safe as long as Nisreen and others like her continue to serve as its guardians. Maybe all the way into eternity.

“Nature leads you to the best cheese for you,” says Nisreen. “Most cheeses are accidents. They are serendipity for a particular environment.” 🌍



Alia Yunis, a writer and filmmaker based in Abu Dhabi, recently completed the documentary *The Golden Harvest*.



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THE STORYTELLER

WHO LISTENED

WRITTEN BY
RAMI G. KHOURI

PHOTOGRAPHED BY
GEORGE AZAR

“One thing I’ve tried to do in covering the Arab world is never to tell someone they’re wrong. Instead, I’ve tried to listen and to understand.”



These words journalist Anthony Shadid wrote in April 2003

in accepting the annual George Polk Award for Foreign Reporting. He was 34 years old, an Arab American from Oklahoma City, and he wrote them from Baghdad, where weeks earlier he had begged his editors at *The Washington Post* to allow him to remain to cover the US invasion even as most global media personnel evacuated.

His focus in Iraq was on Iraqis—in homes, neighborhoods and workplaces. “Our responsibility as journalists to cover events is to witness historic events and bring meaning to them, to see how they impact ordinary people,” Shadid later recalled.

The next year, he would receive a Pulitzer Prize in International Reporting, the first Arab American to achieve the honor. He would earn a second in 2010 for work at *The New York Times*. Two years after that, crossing the mountains between Turkey and Syria, he would suffer a fatal allergic reaction to horsehair.

“Anthony showed us—reminded us—how a lone reporter can transform our understanding of history by revealing something true of human experience,” said Phil Bennett, one of his editors. Leading US media publication *Columbia Journalism Review* called Shadid “the most honored foreign correspondent of his generation.”

To gather a full picture of Shadid’s craft as well as his impacts on his profession and the role of Arab Americans in media, the American University of Beirut in 2017 began

to study his personal papers and has conducted more than 50 interviews with Shadid’s friends and colleagues. These now offer records of both Shadid’s mind and his mechanics: why he insisted on covering the Mideast region so deeply from ground-level, human perspectives; how he captured what proved to be the trajectories and fates of countries in the

Opposite: Shadid, at center, converses with residents in Imbaba, a working-class neighborhood in Cairo, in 2011. **Right:** Notes taken by Shadid while covering Iraq.

words of ordinary people.

In many ways, his life was a story of an Arab American seeking connection to his roots while also seeking to tell an authentic story. During his youth in Oklahoma City and as a student first at the University of Oklahoma and later at the University of Wisconsin-Madison, he explored the legacy of his family that had migrated from Lebanon to the US in the 1920s. From that age he knew he wanted to become a correspondent in the Middle East. He recalled in 2001, “I got into journalism because I didn’t like how people wrote about the Middle East.” Explaining his approach, he said, “Understanding people’s humanity and keeping it at the center of stories is the most important thing in the way I work.”

In college he taught himself Arabic from cassette tapes. In his junior year, he spent the summer of 1989 as an intern at *Al Fajr* newspaper in Arab East Jerusalem. He spent a year in Cairo studying Arabic. After starting with the Associated Press (AP) in the US, he reached his goal in 1995 when the AP sent him to its Cairo bureau.

He referred often to how his draw to the region also was about “how gentle it could be in many ways. When you walk into a room anywhere in the Arab world, there is always a hello, always a sense of community, almost intimacy in how you deal with each other.” But in most reporting, he added, “I think this is often lost.”

He then moved in 2000 to *The Boston Globe*’s Washington, DC, bureau, and from there covered Arab- and Islamic-world politics in the capital and abroad. A story from those years particularly foreshadowed the profound



impacts of his people-centered style.

Leila Fadel, now a National Public Radio (NPR) correspondent, recalls how a story Shadid wrote from Ramallah, Palestine, explored how ordinary Palestinians felt living under Israeli occupation. It so struck her that she turned to journalism as a career. “I was 19 years old and in college, and had never, ever, read anything like this. I had never known exactly what I wanted to do until I saw this person doing it so boldly in this article.”

In her first job after graduation from Northeastern University, McClatchy news sent Fadel to cover Iraq—where she met Shadid. “He was a great mentor who was always ready to take a few minutes to answer a question or offer suggestions,” she remembers. “He was like a guide to us. He changed so many lives.”

Other young Arab American journalists whom Shadid assisted include Alia Ibrahim of Al Arabiya television; Hannah Allam of NPR; novelist Alia Malek; Nour Malas of *The Wall Street Journal*; Ayman Mohyeldin of MSNBC and Ashraf Khalil at the AP. They recall his tips: Focus on getting the essence of a story right; don’t waste time chasing big quotes; scan culture and arts pages of Arabic newspapers for story ideas and characters. Allam recalls Shadid telling her, “If you can say it better than the people you report on, then say it. Otherwise, let people speak for themselves.”

Colleague Anne Barnard says Shadid “looked at all people’s lives as having equal value.... His early work in Afghanistan for *The Globe* and then his Iraq reporting for *The Washington Post* opened the way for other correspondents to cover the region from all perspectives.”

Analysis of Shadid’s work shows three keys to his success: time, attention, and sincere caring. He spent hours and hours, sometimes days and weeks, listening to people—in a village in Iraq, in a café in Casablanca, in a struggling neighborhood in Cairo. People trusted him. People shared their innermost feelings with him.

“He never closed his notebook or put it down,” said one

A cart loaded with roughly half Shadid’s 650 reporter’s notebooks, right, is part of Shadid’s archives currently on loan from his family to the American University of Beirut for research and study.



A sandstorm always makes a dreary Baghdad drearier. The sun turns to a moon in a funereal gray sky. Time surrenders its procession, as dawn melts into a cloudy day that feels like dusk. Common these days, the storms bring a gauze of grit that settles over everything, and the eyebrows of Pvt. Bassem Kadhim were no exception.

Standing at a checkpoint at the entrance of the Baghdad Central Railway Station, he leaned toward a car. His eyes narrowed, as he cocked his head in recognition.

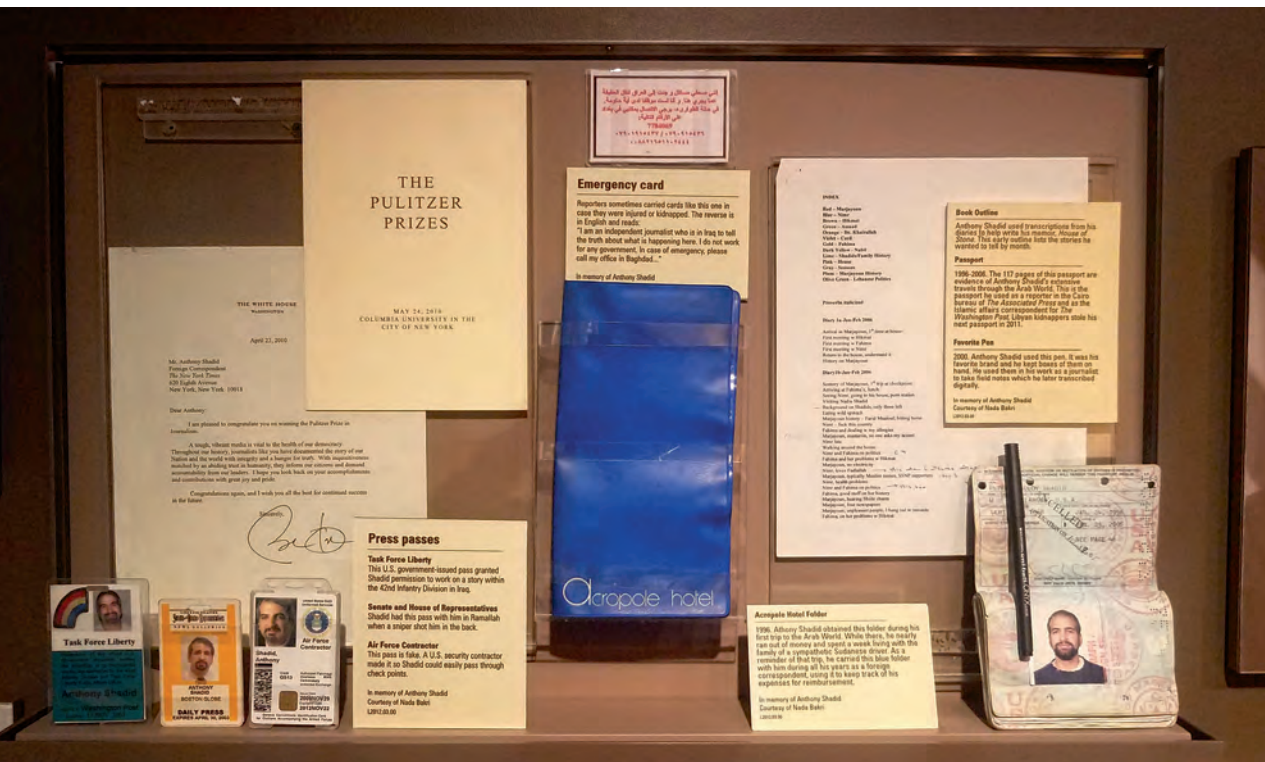
Um Kalthoum, the Egyptian diva of another generation, played on a scratchy cassette. It was the song “Siret al-Hob,” her peerless voice soaring over the strains of a forlorn violin.

“Let me listen for just a moment,” Kadhim told the driver, “then I’ll let you pass.”

He listened. “From a whisper of love, I found myself in love,” Um Kalthoum sang. “I melted in love, spending morning and night at its door.” And he let the car pass.

—excerpted from “A Journey Into the Iraq of Recollection: Baghdad-to-Basra Train Offers Respite From Divisions and Pain,” *The Washington Post*, March 31, 2009

editor who worked with him in Iraq. Shadid ignored most press conferences. He preferred to wander, work local leads, because he knew that stories lay everywhere people lived and



In Dearborn, Michigan, the Arab American National Museum displays artifacts highlighting Shadid's life in the museum's "Making An Impact" gallery. Items include his 117-page passport; an outline of his memoir, *House of Stone*; his favorite pen; press passes and a letter from former President Barack Obama congratulating Shadid on the first of his two Pulitzer Prizes.

interviews, identified the theme and chose the words, gestures and actions of the main characters

worked. He looked people in the eye, repeated their names several times, nodded to acknowledge their thoughts and wrote down every word they uttered while also cataloging physical items—clothes, beads, religious symbols, artwork, garden trees—that spoke to their identity. Nothing was too big or too small to mention—a discarded cigarette box, a vase of plastic flowers, old newspapers and faded books, broken windows, chipped paint, dried patches of blood on the sidewalk, a row of BMWs in front of a trendy café.

When he finished reporting, he transcribed his notes and

who would tell the story along with the settings. From these he scripted a detailed outline, along the way adding more comments, glances, hand gestures, or a long sad sigh or a laugh that would produce a short film of human actions, clothes, home decor, memories, worries, music and poetry. "We chronicle; we tell stories, and we try to understand," he said.

When Shadid's colleagues discuss what struck them most about his work they make references to no fewer than 10 art forms. His methodology mimicked oral history, one journalist said. Several colleagues described him as a poet. Some said he used the tools of a novelist or an author of vignettes. Others saw in his depictions the hand of a painter, or a photographer. In stories' drama and action, there lay the work of a dramatist, a filmmaker, or a documentarian.

Shortly after Shadid's death, Columbia Graduate School of Journalism Dean and former colleague Steve Coll wrote: "Anthony was always interviewing, nodding, and scribbling. He was respectful and humble, determined, sympathetic, emotional, clear, and professional. I remember thinking, 'this is how a journalist should be.' He taught us all, and he taught us about the things that matter most." ☺

In the distance, I could hear the rotors of a helicopter beating against the air.... As I sat next to a tree, an olive dropped next to me. It was a tap on the ground. The fruit nestled itself in brown olive leaves and waited. It fell naturally, peacefully, its movements dictated by time, not will, malice or the menace of war. For the first time in a month, I felt a moment that was tranquil, welcoming. Planes were overhead. A helicopter rumbled by. And all that dropped was an olive. Allah karim, I have often heard. "God is generous." Perhaps He is.

In a few sentences, drafted for his 2012 book *House of Stone*, Shadid transformed a single olive into a protagonist that captured what mattered most in the village where he sat, which can be taken as a metaphor for the entire Arab world: time, history, nature, conflict, tranquility and a faith in divine generosity.



Rami G. Khouri (@ramikhouri) is a journalist, internationally syndicated columnist and book author. He is a professor of journalism as well as Journalist-in-Residence at the American University of Beirut, where he is developing a course on the reporting methods of Anthony Shadid. He is also a nonresident senior fellow at the Kennedy School of Harvard University. **George Azar** is author of *Palestine: A Photographic Journey* (University of California, 1991), coauthor of *Palestine: A Guide* (Interlink, 2005) and director of the films *Beirut Photographer* (2012) and *Gaza Fixer* (2007). He lives in Beirut.





COOLING DUBAI

WRITTEN BY BELIZ TECIRLI



It's the kind of industrial neighborhood where you don't expect to encounter a soul. Hulking steel-walled factories studded with air conditioning units, reinforced road surfaces built for heavy trucks, a maze of concrete and glass, all baking under the Dubai sun.

But Alserkal Avenue this morning is filled with life.

Office workers eat lunch at an eclectic café whose chairs and tables are made from car tires and packing cases. In front of art gallery windows, young professionals browse for one-of-a-kind home decor. A family, mom and dad with kids in tow, exudes high excitement about a day out. They're all here for what Alserkal Avenue brings to this city in the desert.

It's especially lively because it's spring, Dubai's "art season," which includes not only Alserkal Avenue's Galleries Nights, but also the much more well-known Art Dubai festival, Art Nights at the Dubai International Financial Centre (DIFC), and the SIKKA Art Fair.

Green Art Gallery is one of the district's most prominent venues. It was founded in 1987 in Syria and it has been part of Alserkal Avenue since 2011. It's a white cube of space hidden behind a flat concrete facade.

"You're building a scene from scratch," says Green Art's director Yasmin Atassi. It's the task of building a sustainable art scene in a city not well known for art and culture, she adds. "Artists love to show in Dubai. It gives them access to art markets—contacts, shows, agents and more—over the whole of Asia."

Alserkal Avenue is not, strictly speaking, a road: It is a labyrinth of narrow streets, a self-contained district. Its 90 warehouses offer a



From top: On the site of a former marble factory, a 20-minute drive from downtown Dubai, 90 former warehouses are now creative spaces. Walls surrounding the plaza of Concrete can open to expand the outdoor space for events. Gulf Photo Plus is the only dedicated center for photography in Dubai.

From top: A family walks through one of Alserkal Avenue's formerly industrial alleys. Street artist and "calligrafitti" painter eL Seed opened his studio here four years ago. An eclectic cafe mixes traditional with contemporary art.

palette of mixed-use creative spaces, a dozen contemporary art galleries and 60 creative businesses, from architectural firms, chocolate makers, free coworking and nonprofit arts spaces to an independent cinema. All helped the Avenue attract 570,000 visitors last year.

But one does not just move in: Alserkal Avenue is itself a kind of grand, curated metagallery whose members have been selected. Many are enterprises that might struggle to take root amid the commercial rents of Dubai's high-traffic shopping districts. Alserkal Avenue, however, is privately funded by Abdelmonem Bin Eisa Alserkal and the Alserkal family to create a self-sustaining community. Additionally, Alserkal Avenue offers grants, and it supports artists to publish and attend global art fairs.

"The support of Alserkal Avenue has been wonderful," says Atassi. "They are very kind with support when we need it. They make everything possible to make sure we don't have extra overhead."

What do arts and culture bring to a city?

Street artist eL Seed, famous for his public "calligrafitti" art, is one of the Avenue's most acclaimed residents. His studio, open since 2015, is far larger than what he could have in his former Parisian base. He keeps it open to the public for most of the year.

"Alserkal offered me a dream space," he says. "The great advantage to be in a space like this is the fact that I am able to have such a large footprint."

eL Seed's artworks can be very large, building on his early days as a graffiti and street artist, combining the style and scale of spray-paint murals with the traditions of Arabic calligraphy to express messages of peace and unity.

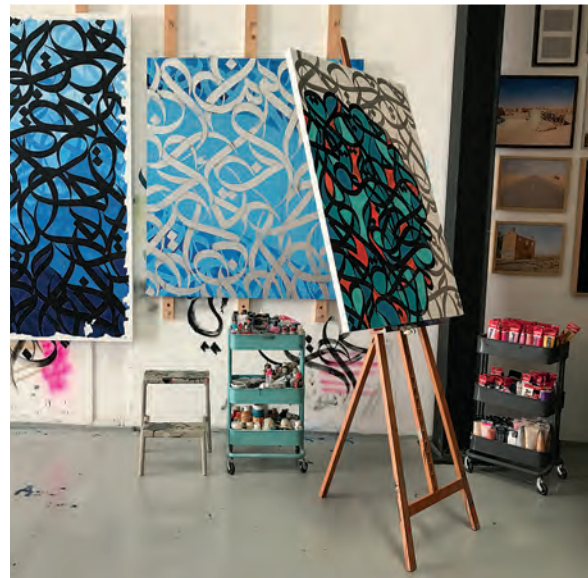
"Throughout the year, I invite school children to come to my studio to experience what a day at the studio is like. It is important because when I was about 16 years old, an artist came to my school in Paris, and I was very influenced by him. I owe him for the inspiration," he says.

Art pulled eL Seed out of the streets of 1980s Paris, away from a life that might have turned out very differently. Because his life was transformed by contact with art, eL Seed is using his Avenue studio to offer that to young people today—just as the Avenue does for the entire city. It's a pattern of transformation, and it's one that takes place in many cities across the globe, each in its own way.

First come artists and creative entrepreneurs, usually to low-rent, often formerly industrial areas. Along with the color and life of painting, dance, fashion and digital arts, they bring that elusive-but-essential quality that defies easy definition: the arts make the place cool.

Then things follow. Educated, high-skill people come to live in the cool places. They draw in businesses that want to hire top talent. Prosperity brings services, with more people. Arts and culture become the foundations for an economic ecosystem. The city becomes a better place to live.

The most dramatic example is 1950s San Francisco, a port city whose low rents and mild weather drew artists of the Beat Generation, and then the counterculture creatives of the 1960s. The city



developed its legendary aura of cool that, in turn, attracted the thinkers and technologists who built the computer age. Seattle, New York, Berlin, Istanbul, London, Beirut, Shanghai and more can all tell similar stories.

But the cool that art brings soon skyrockets rents, and today few artists can afford the creative neighborhoods of San Francisco, London or Paris. Cool moves on. It's a cycle seen across the globe, and it presents a challenge to politicians, planners and property developers: how to keep cool sustainable.

Making Culture Work

It's to this challenge that Alserkal Avenue brings its own unique cool to the desert of Dubai, just as cultural districts have become parts of the growth strategies of ambitious towns and cities worldwide. Most reflect growth trajectories that are somewhere between unplanned, or "bottom-up," and centrally planned, or "top-down."

The top-down model can be seen, for example, in Hong Kong's West Kowloon Cultural District, an area that had been famous for heavy industrialization that was redeveloped into a world-class cultural district. Similarly, in East London's Queen Elizabeth Olympic Park, greenfield land and nearby neighborhoods are being developed with government funds following the 2012 Olympics.

The bottom-up model is the more prevalent. The Village Underground Lisboa has developed, in the past decade, from a cooperative of creative businesses seeking a shared space for events and coworking. Established with little support from the city of Lisbon, it has more recently attracted major government funding.

In 2013 cultural district developer Adrian Ellis founded the Global Cultural Districts Network, which he currently leads.

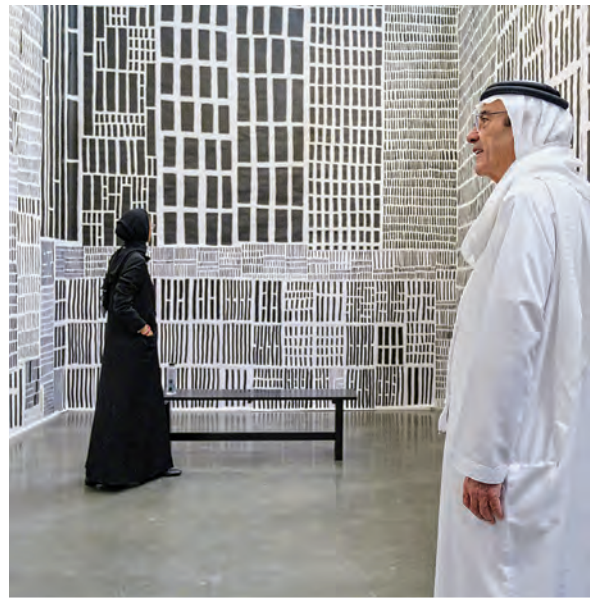
Success in any cultural district development, he says, "is an essentially contested concept. Is it the often epic task of just getting it built? Is it the global reach of the art it showcases? Or is it the impact on the social and economic development of the area in which it is located?" Does it raise property values? Has it enhanced the neighborhood, the city—and by what does one measure that?

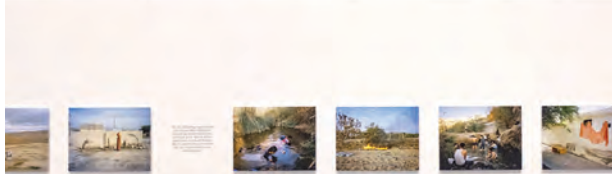
Essential, Ellis adds, is local consensus on the criteria. It may seem unduly risky to invest large amounts of time and money if the objectives are fuzzy, he explains, but it's common. Alserkal Avenue's success so far has come from a blend of gradual experimentation with a factor Ellis is keen to emphasize: supportive leadership.

The Alserkal view

As the sun sets overhead, Alserkal Avenue takes on some of the atmosphere of a movie studio backlot during the golden age of cinema. The architecture may be industrial, but it's studded with painted scenery from art installations and unexpected blooms of color, light and activity. One of its newest landmark constructions, the graphite-gray box exhibition and forum space called Concrete, stands out, and was a finalist this year for an Aga Khan Award for Architecture.

From top: Contemporary art by Mohamed Ahmed Ibrahim at the Lawrie Shabibi gallery. People gather at tables outside the arthouse Cinema Akil. Industrial-scale doors open up along one of Alserkal's gallery alleys.





From top: Tunisia’s Elmarsa Gallery features contemporary art from North Africa. Visitors take in a photo exhibition. Alserkal Avenue founder Abdelmonem Bin Eisa Alserkal with Alserkal Avenue Director Vilma Jurkute.

It’s all a long way from its roots in merchant families who have, in less than a half century, built Dubai, explains Abdelmonem Alserkal, who founded the Avenue in 2008. The physical core of the Avenue, he says, was once a marble factory, one of Dubai’s major imports in the days before its boom. When the factory came to the end of its utility, the Alserkal family saw a chance to build something new in its place.

“The city had reached the stage of growth where it was ready for new development. For culture,” says Alserkal. In 2015 Alserkal initiated the next phase of the district’s development, which added the warehouses that became Concrete. “The Avenue is a promise and statement of belief in the creative talent of the region. But the credit for Alserkal’s success must go to the art galleries, to the creative businesses, to the artists that took the risk of coming into this former industrial area. Through them came the momentum,” he says.

Vilma Jurkute, Alserkal Avenue’s director since 2011, has witnessed and guided the creative flourishing. Under her direction the Avenue’s sense of community and identity has matured, starting from a shared website to orchestrating Avenue-wide events and global partnerships with major arts and culture brands.

“It would have been very easy to create an outpost of Western arts and culture. To grow an authentic culture of Dubai requires tenacity. It requires a belief in your own regional talent.”

As the evening deepens, audiences begin to arrive at Concrete for “Fabric(ated) Fractures,” an exhibition curated by the Samdani Art Foundation, based in Dhaka, Bangladesh. The experience of global, high-end cultural venues, long taken for granted in the world’s established “capitals of culture,” is still relatively new in Dubai. While Alserkal Avenue has much in common with other world initiatives, its success story so far stands on its partners and leadership sharing both its aspiration and its practical mission—to bring cool to Dubai and, with it, further economic vitality, even sustainability.

Together, they deeply trust the value of art. The result blends both the consumption and production of the arts, offering a home to makers and to their market, to venues and to audiences. As obvious as these might sound, a healthy balance among these is much to the Avenue’s credit. It bodes well for its future.

Alserkal Avenue shows that risks taken on the work of artists and culture can be worthwhile investments in long-term sustainability and quality of life—even in a city that since just 2016 has added no less than \$80 billion to its economy.

“We took a risk on the risk takers,” says Alserkal. “And we have all become richer for it.” 🌐



Beliz Tecirli recently completed her Ph.D. on urban cultural development. She writes about art, culture and the creative economies in the Arabian Peninsula and beyond.

ROBOTS

OF Ages Past

Written by
ROBERT W. LEBLING

Two milestones are upon us that reflect the enduring human fascination with the idea of artificial counterparts—robots. The year 2019 marks the 500th anniversary of the death of Italian scientist-artist Leonardo da Vinci, whose designs and models of humanoid robots still inspire experts in robotics and Artificial Intelligence (AI). The year 2020 marks the centennial of the term *robot* itself, coined by Czech playwright Karel Čapek to describe artificial humans who could serve as a new class of workers.

Yet the ancestry of robots reaches back much further, to Egypt of the Pharaohs, classical Greece and the Islamic world of the early Middle Ages, upon which da Vinci based the development of some of his creations.

Today, *smart* is no longer a word used exclusively for people. From cars to vacuum cleaners to fully automated factories, robots—or programmable machines that accomplish tasks generally reserved for humans—are increasingly ubiquitous. Some are AI-enabled refrigerators that can order food for you; some are “digital assistants” such as Amazon’s Alexa and Apple’s Siri. Others are humanoid, such as Sophia, designed by Hanson Robotics with a face modeled on mid-20th-century actor Audrey Hepburn and equipped with AI and facial recognition to interact with humans. (In 2017 Sophia became the first robot ever to be granted national citizenship—by Saudi Arabia.)

Eventually, some futurists expect that some robots will look more and more like us, having synthetic skin and hair, individual (or not) faces and bodies. They will increasingly become *androids*, or virtual humans. Others will remain disembodied but capable of complex tasks (“Alexa, if it’s raining this

afternoon, arrange a ride for the kids from school.”) And ever since the dystopic *Metropolis* in 1927, movies and television have asked whether robots would someday try to overthrow us (*Bladerunner*; *The Terminator*; *I, Robot*; *Ex Machina*) or whether they would be nice and helpful (Commander Data of *Star Trek: The Next Generation*; C3PO and R2D2 of *Star Wars*)?

Surprisingly, our ideas about robots being so futuristic are built on ones that began long, long before electric circuits and

Serving as an engineer during the late 11th and early 12th centuries at a court in Anatolia, Ismail al-Jazari was a polymath whose interests spanned art, mathematics, engineering and design. In 1206 he wrote *The Book of Knowledge of Ingenious Mechanical Devices*. The book is a masterful collection of more than 50 mechanical and automated devices, including water and candle clocks, automated basins for washing and pouring, and the earliest renderings of automatons such as this one, **right**, which combined hydraulics, cranks and pumps, as well as valves and pistons.

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لِيَجْرِدَ طَرَفَ الشَّطِيه بِزِ الرِّقِيه وَ الزَّبِقِ وَأَمْتًا لُصُورَه الْعِلَامِ وَ جَمِيعَ مَا فِي بَاطِنِه وَ بَاطِنَ الْبَرِّ



This woodblock print, **right**, shows the workings of a tea-serving automaton. It appears in Japan's oldest manuscripts of mechanical engineering, the 1796 treatise *Kiko zui* (Illustrated Compendium of Clever Machines) by Hosokawa Hanzo Yorinao. Other pages detail the structure and the construction of clocks and mechanical dolls.

computer processors. The field of robotics began centuries—*millennia*—before the digital era. Ancient Egyptians built automatons that gave not just form but motion and voice to deities. Greeks speculated in early biotech. Muslims of the medieval scientific Golden Age devised complex automatons that helped inspire the drawings and designs of Renaissance polymaths like da Vinci.

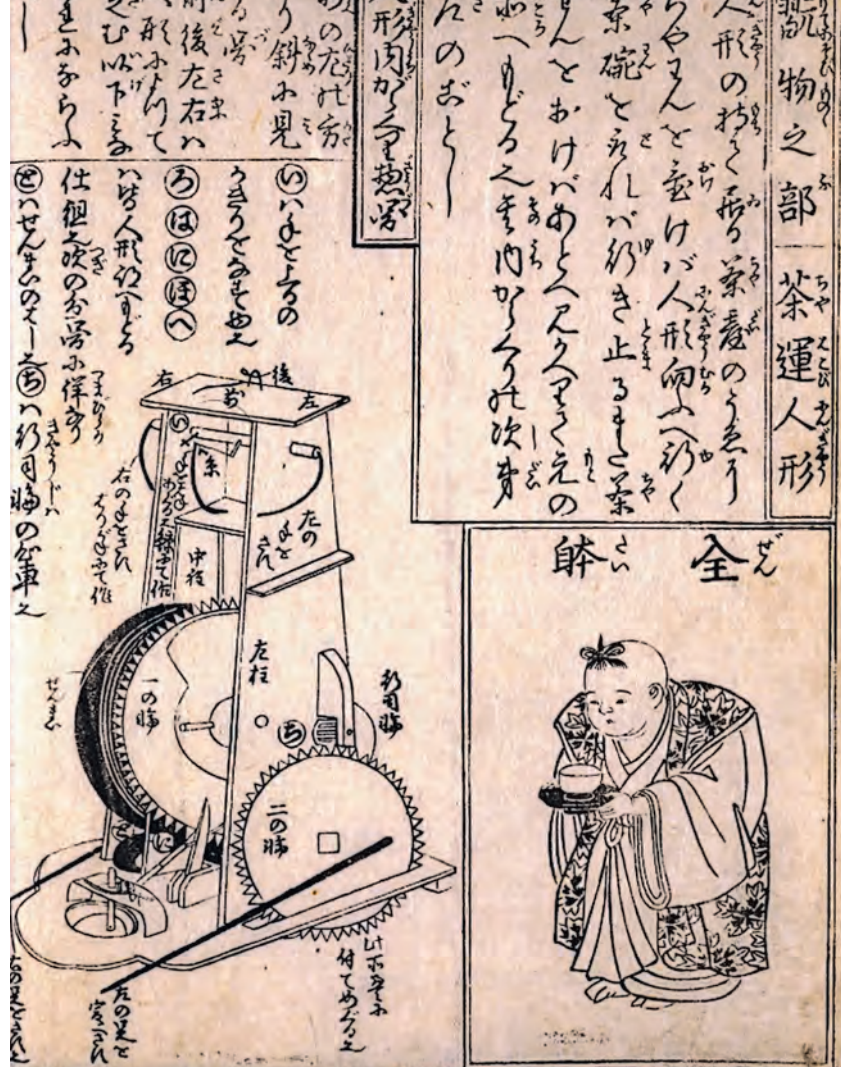
Around the world, animated statues and automatons have appeared in early legends from the Americas to Africa to east Asia, often as minions or representatives of gods. And of these, the most influential to our world today were those that began in Egypt, in the second millennium BCE.

French Egyptologist Gaston Maspero (1846–1916) tells us the Egyptians had “speaking statues,” images of their deities, made of painted or gilded wood with jointed limbs and voices operated by temple priests. The statues responded to questions and sometimes made lengthy speeches. One statue in the temple of Amun in Thebes was said to raise its arm and select the next pharaoh from among male members of the royal family. Maspero tells us the priests saw themselves as intermediaries between gods and mortals, and they firmly believed the souls of divinities inhabited the statues and guided them in producing voices and movements.

Asim Qureshi, an Oxford-educated tech entrepreneur who writes about the history of engineering, notes that Egyptians of that time “had enough knowledge of mechanics to develop a non-digitized [robotic] machine based on a system of ropes and pulleys.”

This Egyptian tradition appears to have passed north across the Mediterranean to Greece, where it infused myths and legends—and eventually science. Ian Rutherford, classics professor at the University of Reading, points out that “Egyptians and Greeks are known to have been in contact already in the second millennium BCE, though we don’t know much about it. The picture becomes clearer from about 600 BCE, when the sea-faring Greeks were frequent visitors to Egypt.”

Greek intellectuals of the day developed a solid understanding of Egyptian culture, according to Rutherford: “[They] saw it as a source of knowledge and esoteric wisdom. Some of them believed that Egypt had influenced Greece in the distant past; for the historian Herodotus, Greek religion



was mostly an Egyptian import.”

Perhaps the oldest Greek tale involving AI and robotic figures is Homer’s eighth-century epic about the Trojan War, the *Iliad*. The inventor Hephaestus, god of metalworking, creates intelligent female automatons, made of gold, to assist him in his forge: “In them is understanding in their hearts, and in them speech and strength, and they know cunning handiwork.”

In the fourth century BCE, Apollonius of Rhodes penned the *Argonautica*, the epic poem about Jason and the Argonauts, in which Hephaestus constructs a giant bronze automaton named Talos to protect Zeus’s beloved Europa from pirates on the island of Crete. Talos—in effect a “killer robot”—patrolled the beaches of Crete, circling the island three times a day.

Greek mythological notions of robots evolved into more-detailed (and practical) engineering concepts. Greek scientists and inventors developed techniques for simulating the actions of the human body.

Greek inventor Ctesibius of Alexandria, in the third century BCE, pioneered compressed-air and hydraulic devices. He built an automaton operated by cams, or rotating mechanical links that transform rotary motion into linear motion. His robotic statue could stand and sit, and was used in processions. Though

Automatons have appeared in early legends from the Americas to Africa to East Asia.

وهذه صورة ذلك واضحة



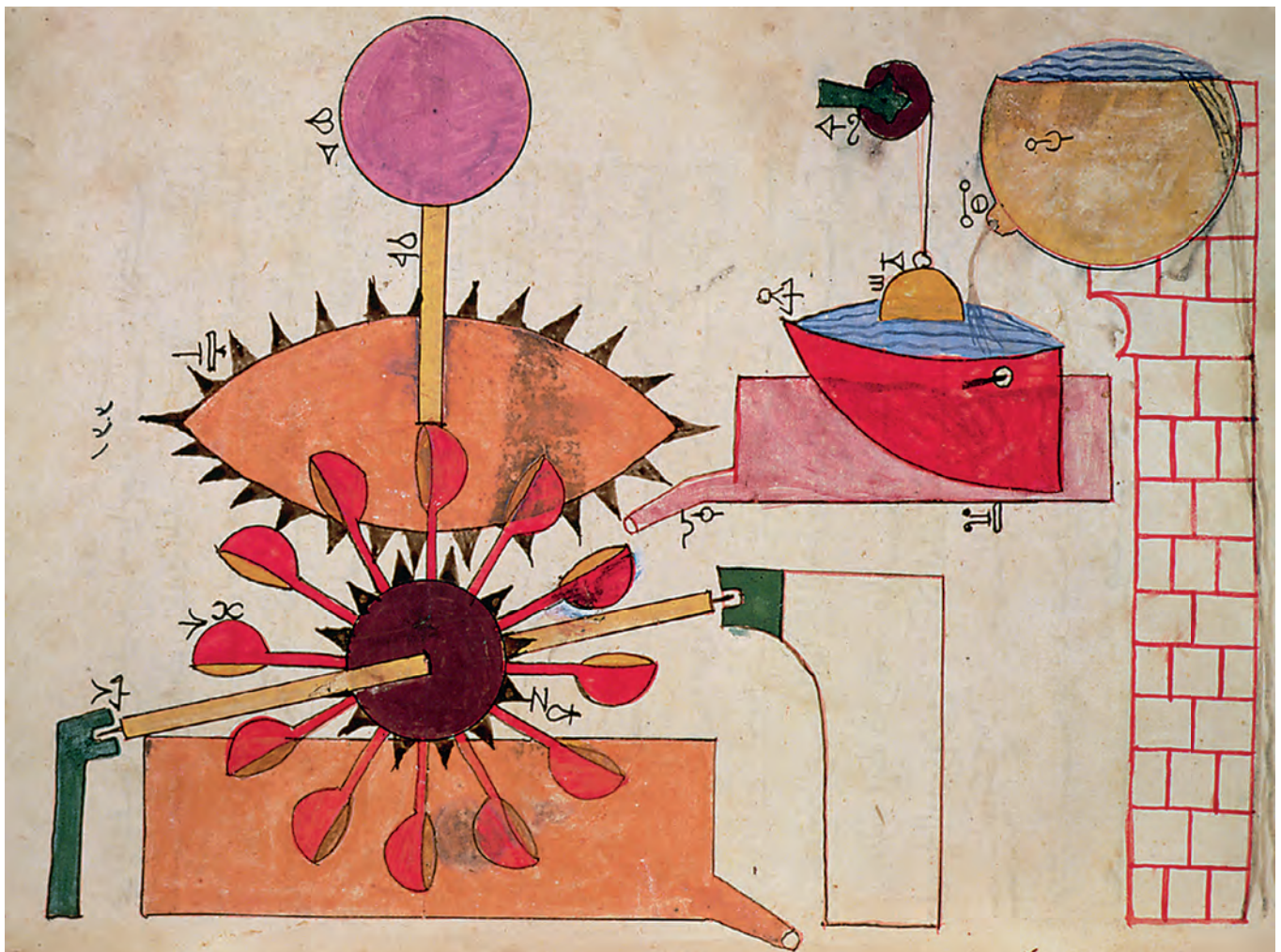
التي السابعة في كيفية عمل

Ctesibius's writings have not survived, later inventors and engineers adopted and improved upon his techniques.

Inventor Philo of Byzantium, who died around 220 BCE, was known as "Mechanicus" for his engineering skills. His book *Compendium of Mechanics* describes a female robotic servant that could mix different liquids to make a drink when a cup was placed in her hand.

In the first century CE, Hero of Alexandria was influenced by Philo. He designed vending machines, automatic doors and an early steam-powered mechanism called the *aeolipile*, developed 1,700 years before James Watt's engine, which used steam ejected through angled nozzles on a metal sphere to set the globe spinning. In his treatise *On Automaton-Making*, Hero describes an automated puppet theater that employs a combination of weights, axles, levers, pulleys and wheels to enact an entire stage play. A programmable robotic cart carried other robots on stage to perform for the audience. Falling weights pulled ropes wrapped around the cart's two independent axles. Noel Sharkey, professor of AI and robotics at the University of Sheffield, compares this control system to

Left: In his *Book of Knowledge of Ingenious Mechanical Devices*, al-Jazari used a wire, spring and pulley to put the arms of this humanoid elephant driver in motion as part of his design of a clock. **Lower:** Driven by a water wheel, al-Jazari used a piston rod to create suction and pump water.



TOP: CULTURAL ARCHIVE / ALAMY; LOWER: WERNER FORMAN ARCHIVE / BRIDGEMAN IMAGES; OPPOSITE: THE BRITISH MUSEUM

modern-day binary programming.

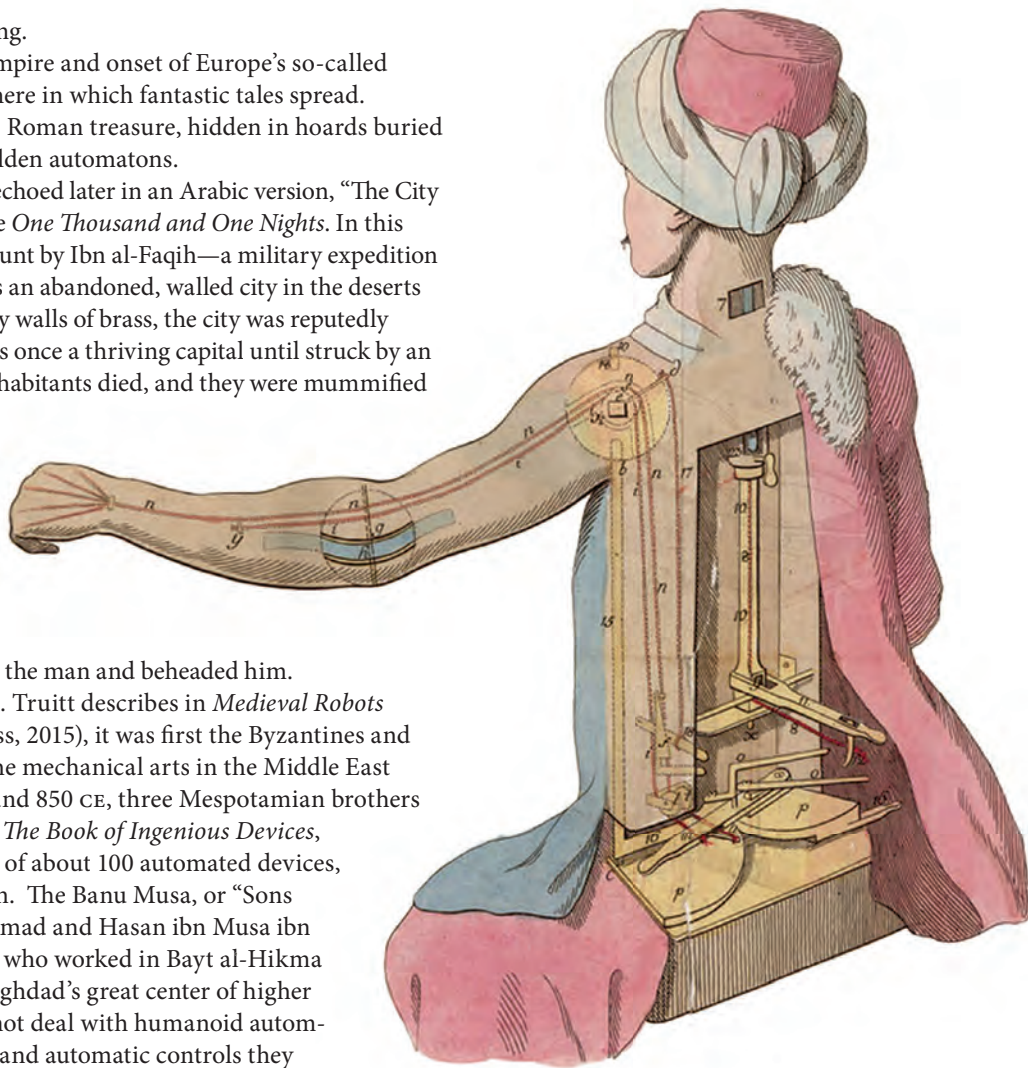
The collapse of the Roman Empire and onset of Europe's so-called "Dark Ages" created an atmosphere in which fantastic tales spread. Among them were stories of lost Roman treasure, hidden in hoards buried beneath hills and guarded by golden automatons.

These European stories were echoed later in an Arabic version, "The City of Brass," an adventure tale in the *One Thousand and One Nights*. In this story—based on a historical account by Ibn al-Faqih—a military expedition sent by the Umayyad caliph finds an abandoned, walled city in the deserts of northwest Africa. With its lofty walls of brass, the city was reputedly built by King Solomon, and it was once a thriving capital until struck by an unknown catastrophe: All the inhabitants died, and they were mummified where they fell. The city's beautiful queen, embalmed and dressed in elegance, was seated on her throne and guarded by two sword-bearing automatons. When an explorer tried to remove the queen's jewels from her body, the automatons came to life, beat the man and beheaded him.

As Bryn Mawr historian E. R. Truitt describes in *Medieval Robots* (University of Pennsylvania Press, 2015), it was first the Byzantines and then the Arabs who preserved the mechanical arts in the Middle East following the fall of Rome. Around 850 CE, three Mesopotamian brothers known as Banu Musa published *The Book of Ingenious Devices*, an illustrated work with designs of about 100 automated devices, including a water-powered organ. The Banu Musa, or "Sons of Musa," were Ahmad, Muhammad and Hasan ibn Musa ibn Shakir, brothers from Khorasan who worked in Bayt al-Hikma (House of Wisdom), Abbasid Baghdad's great center of higher learning. While their book did not deal with humanoid automatons, many of the technologies and automatic controls they developed were adopted and refined by Abu al-'Izz ibn Isma'il ibn Razzaz al-Jazari, a towering engineering talent of the 12th-century CE.

Between the time of Banu Musa and al-Jazari, Arab and Islamic science flourished. A few manuscripts by the Banu Musa and al-Jazari have survived, but for many other engineering accomplishments, we must rely on accounts by historians, travelers and visiting diplomats.

Right: Constructed in the late 18th century by Wolfgang von Kempelen and known simply as The Turk, this life-size, chess-playing automaton was actually a mechanical illusion that allowed a person skilled in the game to control the motion. As a result, The Turk defeated many challengers—among them Benjamin Franklin and Napoleon Bonaparte. **Top:** A cutaway diagram reconstructing Kempel's machine explains the mechanics of the torso and arm—ultimately a device of not-so-remote control that gave the appearance of an intelligent automaton.



Robotic achievements building on the works of Alexandrian scientists continued in Egypt during the Islamic period. One historical account tells us about 12th-century Fatimid vizier al-Afdal Shahanshah, whose guest hall featured eight robotic statues of singing girls, four made of camphor and four of amber, clad in fashionable clothing and jewelry. When the vizier stepped into the chamber, the statues bowed; when he sat down, they straightened up. This report, by Ayyubid historian Ibn Muyasser, is preserved in the writings of another Egyptian historian, al-Maqrizi.

The evolution of automatons grew in engineering sophistication over the ages, from the simple temple statues of ancient Egypt, employing basic levers and ropes for moving limbs and tubes for speaking from hidden locations, to the Greek robots, which used hydraulics, compressed air and basic cams to move body parts, to the automatons of the medieval Islamic world, which enabled more realistic movement with sophisticated cams, camshafts and even crankshafts, as well as advanced hydraulics and pneumatics.

An early cam was built into Hellenistic water-driven automatons from the third century BCE. Both cam and camshaft would later appear in al-Jazari's robotic creations. The cam and camshaft began appearing in European mechanisms in the 14th century.

The crankshaft, the next stage in this technology, translates rotary into linear motion, and it is essential to much of today's machinery, including the automobile's internal combustion engine. Acknowledged as one of the most important mechanical inventions ever, the crankshaft was created by al-Jazari to raise water for irrigation while he served as chief engineer of the Atuqid dynasty. Written in 1206, al-Jazari's *Book of Knowledge of Ingenious Mechanical Devices* includes developments in the

use of pistons and valves, as well as some of the first mechanical clocks driven by water and weights.

"It is impossible to overemphasize the importance of al-Jazari's work in the history of engineering," says Donald R. Hill, English historian and translator of al-Jazari. "The impact of these inventions can be seen in the later designing of steam engines and internal combustion engines, paving the way for automatic control and other modern machinery. The impact of al-Jazari's inventions is still felt in modern contemporary mechanical engineering."

As a result, some historians call al-Jazari the "father of modern-day engineering." Salim al-Hassani of the University of Manchester, who chairs the Foundation for Science, Technology and Civilisation, notes that al-Jazari's invention of an early programmable robot qualifies him further as "the father of robotics."

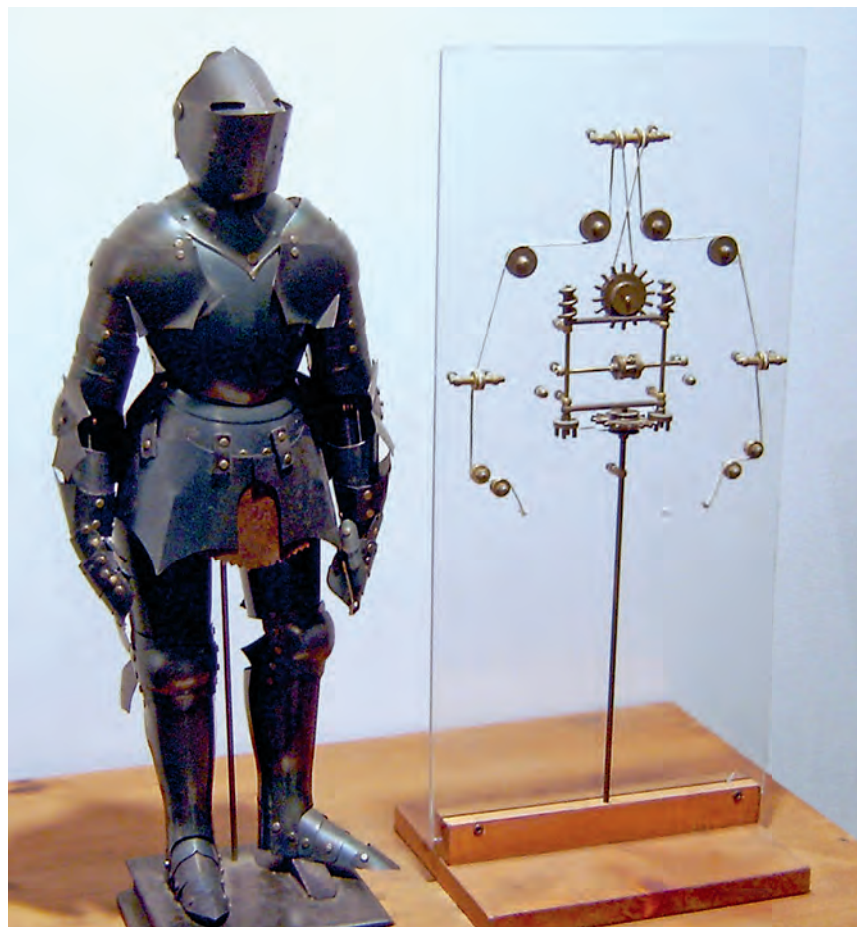
The Islamic world's robotic designs found their way west to Europe. "Throughout the Latin Middle Ages," says historian Truitt, "we find references to many apparent anachronisms, many confounding examples of mechanical art. Musical fountains. Robotic servants. Mechanical beasts and artificial songbirds. Most were designed and built ... in the cosmopolitan courts of Baghdad, Damascus, Constantinople and Karakorum. Such automata came to medieval Europe as gifts from foreign rulers, or were reported in texts by travelers to these faraway places."

Western scientists of the Middle Ages pushed these engineering concepts even further. Today, their accomplishments sometimes reach us only through the filter of legend, where the technical overlaps with the preternatural.

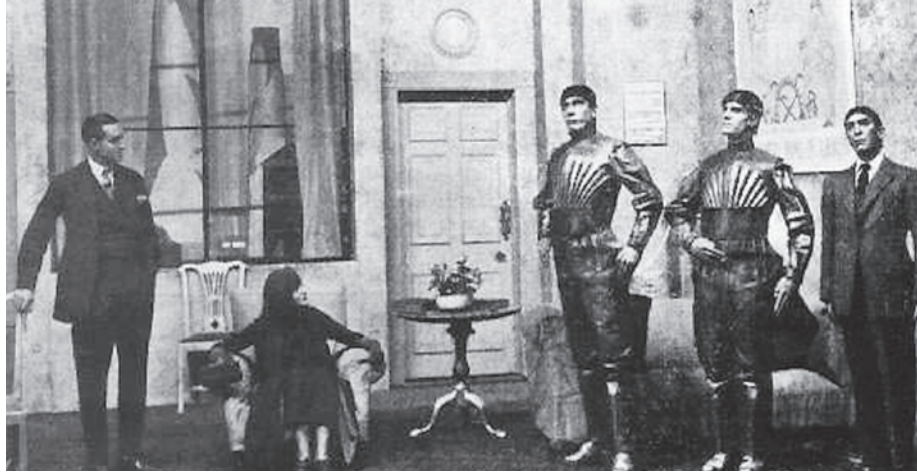
Gerbert of Aurillac, a 10th-century French priest who studied science in Islamic Córdoba, was a pioneer in astronomical observation, introducing the armillary sphere

The Islamic world's robotic designs found their way to Europe.

Roboticist Mark Rosheim reconstructed Leonardo da Vinci's robotic knight, here shown on display in Berlin. Rosheim used fragments of sketches in da Vinci's *Codex Atlanticus*. Through sophisticated arrangements of pulleys and cables, the robot-like "knight" was designed to sit, stand and maneuver its arms.



and star sphere. He brought arithmetical calculation with the abacus and Arabic numerals to northern Europe. His scientific accomplishments resulted in legends that thrived a century



England's Robert Grosseteste and Roger Bacon.

The tale of Bacon's "brazen head" is the best known of these, and it was featured in Robert Greene's 16th-century play, *Friar Bacon and Friar*

after his death, including one claiming he had built a robot of sorts—a talking humanoid head—that could track celestial phenomena and foretell the future. Gerbert, a scientist and humanist long before the Renaissance, became the first Frenchman to head the Roman Catholic Church (999–1003 CE), adopting the name Pope Sylvester II.

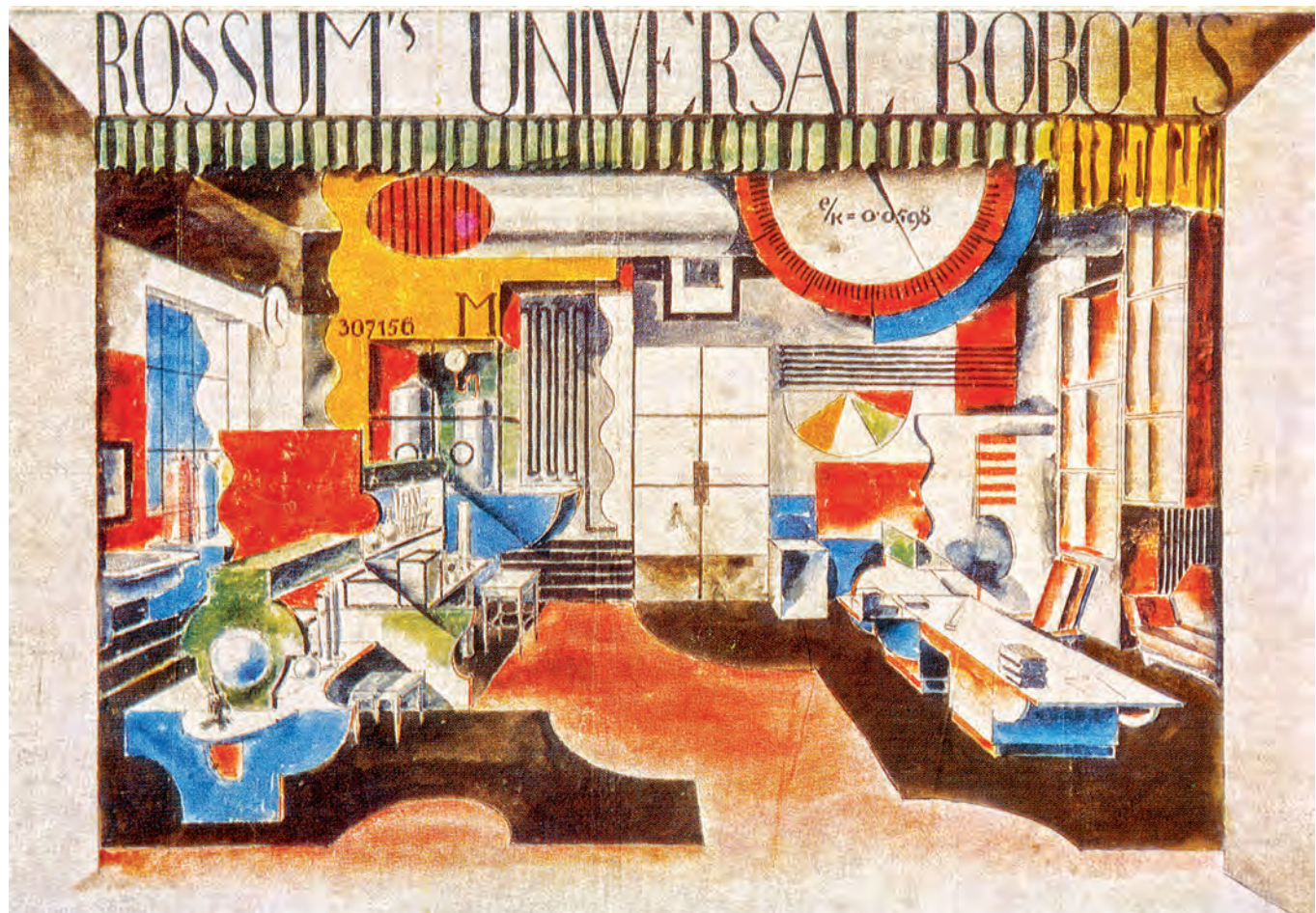
Other medieval European scientists, too, were said to have created such "talking heads." Scholars suspect the speaking-head concept originated in Arab folk tales. It became a powerful image in Europe and was linked in popular imagination with leading scientists such as Germany's Albert the Great and

Bungay. Bacon made a human head of brass that could speak and function as an oracle. While the scientist slept, Bacon's apprentice tried to question the brazen head. It spoke three times, saying, "Time is," "Time was" and "Time is past." It then fell to the floor, broken and evermore silent.

Al-Jazari's influence among European Renaissance scientists was particularly visible in the work of da Vinci, who was fascinated by mechanisms of the human body and investigated ways of simulating actions of living beings. In 1495, he built a humanoid robot with pulleys and gears allowing it to move its arms and jaw, and to sit up and stand. The automaton, dressed

"Robots" arrived on the world stage in 1920 with the publication of Czech playwright Karel Čapek's *R.U.R. (Rossum Universal Robots)*. An illustration for Čapek's work, by Bedrich Feuerstein, promoted the play for its premiere on January 25, 1921.

Above: A scene from the play showing three robots—so called by Čapek to describe a new class of servant workers.





From the imagination of visionary inventors centuries ago to today's AI: Humanoid robot Sophia takes the stage to answer questions next to her creator, David Hanson, founder and CEO of Hanson Robotics, at the Moscow Innovative Development "Open Innovations 2017" conference. A few days later, Sophia became the first robot to be granted a national citizenship—by Saudi Arabia. She uses digital neural networking and conversational language processing to simulate human behavior and response.

as a knight in bulky German Italian armor, could also lift its visor, revealing its face and its moving jaw. Da Vinci's robot employed a four-factor mechanical operating system integrated in its upper torso, and a separate three-factor system in the legs. It made its public debut at a gala event hosted by da Vinci's patron, Ludovico Sforza, Duke of Milan.

Mark Rosheim, a US roboticist whose company develops robotic systems for NASA, built a working version of da Vinci's automated knight in 2002 using da Vinci's own drawings.

Rosheim says he was inspired in his youth by da Vinci. He developed a robotic serving cart from da Vinci's sketches, which moved in programmable directions thanks to internal wooden cams. During a video interview in 2011, Rosheim revealed the workings of the cart in his company lab. Its intricate gears and cams not only served to transport viewers back to the 15th century, but also, for those familiar with al-Jazari's influence on da Vinci, carried them even further

Gerbert of Aurillac's "talking head" could track the moon and stars; Roger Bacon's 16th-century "brazen head" spoke but once.

back to the crucial Golden Age of Islamic science and engineering.

It was a tangible example of not only how far we have come, but also of how far back we go, to where

the unexpected richness of our past seeds the unimaginable potential of our future. 🌐



Robert Lebling (lebling@yahoo.com) is a writer, editor and public-affairs advisor who lives and works in Saudi Arabia. He is author of *Legends of the Fire Spirits: Jinn and Genies from Arabia to Zanzibar* (I.B. Tauris, 2010 and 2014), and he is coauthor, with Donna Pepperdine, of *Natural Remedies of Arabia* (Stacey International, 2006), soon to be published in a revised second edition by Medina Publishing. He is a regular contributor to *AramcoWorld*.



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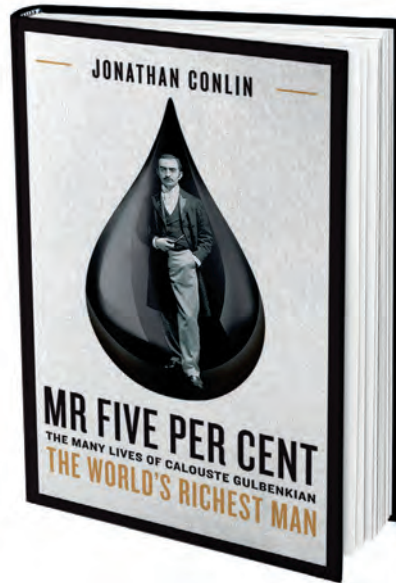
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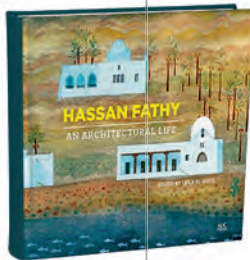
“How did a man who knew nothing of geology and who never visited Iraq, Saudi Arabia or any of the Gulf states lay claim to 5 percent of Middle East oil production ... [and] bridge divides of East and West?”

Mr Five Per Cent: The Many Lives of Calouste Gulbenkian, the World's Richest Man

Jonathan Conlin. 2019, Profile Books, 978-1-78816-042-1, \$31 hb.

When Armenian Turkish businessman Calouste Gulbenkian died in 1955, *Life* magazine described him as the world's richest man. His secretive global business machinations were the stuff of legends and he was a key figure in the development of oil in the Middle East. Today, the average person barely recognizes his name. Daniel Yergin, in his celebrated oil history *The Prize*, placed Gulbenkian on a par with figures like Rockefeller and Getty as “one of the great buccaneer-creators of oil.” This biography, marking the 150th anniversary of Gulbenkian's birth, paints a rich portrait of a shadowy global figure who was an architect of international oil as we know it. Gulbenkian's dream for the development of the world's oil industry was based on cost-saving vertical integration and international cartels that bypassed governments. His business deals introduced us petroleum companies to the Middle East and brought Royal Dutch Shell to America and beyond.

—ROBERT W. LEBLING



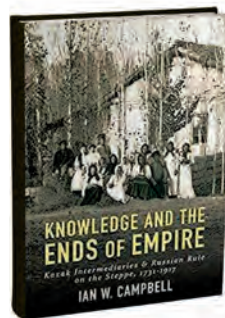
Hassan Fathy: An Architectural Life

Leila El-Wakil, ed. 2018, AUC Press, 9-789-77416-789-8, \$95 hb.

Esteemed Egyptian architect Hassan Fathy (1900–1989) regarded himself “as not simply a builder but a ‘scientist’”—a spiritual successor to ancient Egypt's most-renowned architects, such as Imhotep and Amenhotep, who, in his words, “had a profound understanding of the widest implications ... of architecture.” These ranged, in his estimation, from the practical (astronomy, mathematics) to the ethereal (philosophy).

Despite these lofty job qualifications, the project for which Fathy is most fondly and reverently remembered is his plan for the village of

New Gourna (1945–48), an affordable housing development partially built on the west bank of the Nile in Luxor. Using local materials, traditional building practices and energy-conservation techniques, Fathy envisioned what he termed “Architecture for the Poor,” also the title of his 1975 book on the project. This richly illustrated ode to Fathy's life and career features essays by 11 Egyptian and international scholars. —TOM VERDE



Knowledge and the Ends of Empire: Kazakh Intermediaries & Russian Rule on the Steppe, 1731–1917

Ian W. Campbell. Cornell up, 2017, 978-150-17007-98, \$55 hb.

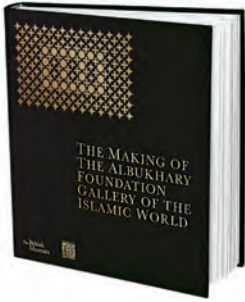
In 1731 the leader of the

smallest of the three confederations of tribes covering the Kazakh steppe entreated imperial Russia, which through traders and soldiers had begun moving into northwestern Kazakh territory, for a military alliance against roving Kalmyk tribes. The alliance quickly became a process of Russian colonial control over all three tribal groups. Prior to this dominion, the Kazakh steppe inhabitants were just part of frontier society and “unknowable ... to the tsarist state,” writes Campbell. Russian military and economic expansion continued, however, through Kazakh intermediaries, “principally the humble clerks, scribes, and translators who were the lifeblood of the imperial state.” Campbell relies on the records of ethnographer Chokan Valikhanov and researcher Älikhan Bökeikhanov for his insightful discussion of these intermediaries. This book shows how a subordinate group is able to create and affect beliefs based



on the transmission of knowledge, becoming an active participant shaping the social and political dynamics of power relations.

—ALVA ROBINSON



The Making of the Albuḳhary Foundation Gallery of the Islamic World

2019, British Museum Press, 978-0-71411-1-919, \$30 hb.

This beautiful book discusses, as its title suggests, the creation of the remarkable gallery that opened in 2018 in the British Museum. It is not a record of the new gallery's art collection itself, although there are splendid photographs of a small selection of the exhibits. The book contains sections about the scope of the Malaysia-based Albuḳhary Foundation of the Islamic World, which financed the gallery, and how the British Museum built up the extensive collection of Islamic art that is represented in it. But above all the book describes the complex process of designing and building the gallery using, on the one hand, traditional Islamic crafts and, on the other, the most up-to-date technology to provide the best-possible interactive environment to explore this stunning presentation of the history of

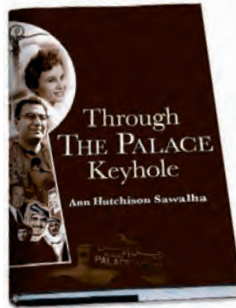
Islamic art over some 1,400 years across Asia and Africa.

Islamic art over some 1,400 years across Asia and Africa.

Through the Palace Keyhole

Ann Hutchison Sawalha. 2014, Medina Publishing, 978-1-90933-9-347, \$15.99 pb.

When Ann Hutchison met Jordanian Sami Sawalha in 1956 in Detroit, where they were students, the American had no idea of the adventurous turn her life was about to



take when, as newlyweds two years later, they would move to his home country. His family operated hotels in Amman, Jerusalem and Bethlehem, and the young couple mostly lived in those places, carving out a private life for their own growing family. Like no other family member, Ann played important roles in the business when needed. History unfolded around them, and she describes their experiences in great detail as if she is speaking to a friend. She and her husband lived in Jerusalem during the Six-Day War in 1967 and continued to run their hotel there until they sold it in 1970. The family's hotels in Amman include the Grand Palace, which continues to thrive today.

—KAY HARDY CAMPBELL



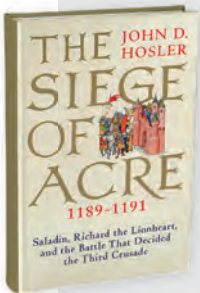
Travellers in Ottoman Lands: The Botanical Legacy

Ines Ašćerić-Todd, Sabine Knees, Janet Starkey and Paul Starkey, eds. 2018, ASTENE and Archaeopress Publishing LTD., 0-781-78491-9-153, \$95 pb. This rich and varied collection of essays, covering individuals ranging from Dioscorides

to Dame Freya Stark, is divided into four parts: "The Ottoman Garden," "Botanist-Travellers," "Bulbs and Conifers" and "Art and Botany." These focus on historical descriptions of gardens and the evidence about them drawn from manuscript illustrations; accounts of the visitors who recorded or brought back so many of the favorite plants in Western gardens today; ecology and conservation; and the influence of trees and flowers on Ottoman art and textiles. The volume is of obvious value to scholars and will also appeal to anyone interested in the history of gardens and garden design, plant transmissions and those who journeyed to the Ottoman world. The book's maps, notes and bibliography are excellent as is the biographical information about the authors it features.

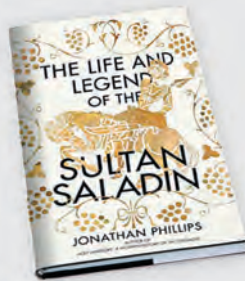
—CAROLINE STONE

Three Early East-West Encounters in the Levant



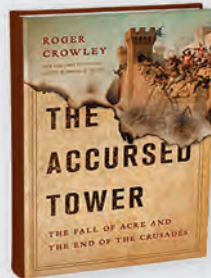
The Siege of Acre, 1189–1191: Saladin, Richard the Lionheart, and the Battle That Decided the Third Crusade

John D. Hosler. 2018, Yale up, 978-0-30021-550-2, \$30 hb.



The Life and Legend of the Sultan Saladin

Jonathan Phillips. 2019, Yale up, 978-0-30024-706-0, \$32.50 hb.



The Accursed Tower: The Fall of Acre and the End of the Crusades.

Roger Crowley. 2019, Basic Books, 978-1-54169-734-8, \$28 hb.

The late-12th-century siege of the coastal Levantine city of Acre involved armies from across Europe, the Levant, Mesopotamia and North Africa. Those who engaged in or chronicled the conflict ranged from European kings, counts, earls and bishops to Muslim emirs, shahs and poets, including the two most-iconic figures of the age: England's King Richard I (the Lionheart) and Ayyubid Sultan Salah al-Din (Saladin), who defended the city until it fell in 1191. *The Siege of Acre, 1189–1191* skillfully gathers the

diverse political, military and religious strands of the event, during which the respective sides "fought, negotiated, suffered, persevered, and rejoiced," into a digestible narrative that represents the first major study of this event. Likewise, *The Life and Legend of the Sultan Saladin* explores how Christians and Muslims "might well make a truce, switch sides, and carry on their conflict, or even exist together for a period." It is hard to find a figure from the Crusades so universally admired as Saladin, "a man of tireless energy, who always acted the role of a vigorous leader in everything," according to his contemporary, Archbishop William of Tyre. The 12th-century Muslim chronicler Abd al-Latif praised him as "a great king who inspired both respect and affection, far and near." Jonathan Phillips advises that the "most underestimated element of Saladin's career are his early years in Egypt," where he rose through the ranks as a

defender of Islam against crusading armies. The Muslim recapture of Acre, the last Crusader stronghold, is addressed in *The Accursed Tower*. A key figure in this story is Qalawun, a Mamluk sultan of Egypt who faced Mongol threats at one end of the kingdom while fending off Crusader encroachment with advantageous treaties on the other. In 1290 Christian knights broke the pact when they "indiscriminately killed ... all the Saracens they came across," including defenseless merchants and peasants. This was enough for Qalawun, who "had both religious and economic reasons for snuffing out the last remnants of the crusader state." He died before Acre finally fell in 1291 to his son Khalil. Crowley provides background on the decades leading up to the siege of Acre, drawing on a rich variety of Christian and Muslim primary sources for this lively yet detailed treatment.

—TOM VERDE



EVENTS

Highlights from
aramcoworld.com

CURRENT / NOVEMBER

Beyond Geographies: *Contemporary Art and Muslim Experience* presents the work of eight New York-based artists who employ a range of visual strategies to manifest multiple dimensions of the contemporary Muslim experience. Of Middle Eastern, South Asian and African American descent, these artists grapple with complex, hybrid identities. While drawing upon mythology, science, spiritual philosophy and ritual, and social and political history, these artists are largely unburdened by the themes and forms that have come to symbolize recent art concerned with Muslim culture—the veil, calligraphy or the events of 9/11, for example. Rather, they draw broadly on their own identities as members of disparate diasporic communities, as immigrants and as participants in the contemporary art discourse to navigate and express identities that are fluid, layered and engaged. Gallery at Bric House, **Brooklyn, New York**, through November 17.

Arrival: *Farah Al Qasimi* premieres Al Qasimi's first feature-length film,

a 40-minute horror-comedy titled *Um al-Naar* (Mother of Fire). In it, a fictional reality-TV network has produced a segment on Um al-Naar, a Ras al-Khaimah-based Jinn. Um al-Naar narrates the changes of the UAE, from its occupation by Portuguese and British naval forces to its current adoption of a national identity based around tolerance and a drive to generate culture. She pays close attention to these changes in their day-to-day iterations: the gendered pastimes of the country's youth, waning trust in traditional forms of spirituality and medicine, and the loss of history in an urgent bid for novelty. She longs for a more fluid, interconnected world in which there is ample space for the paranormal, the unseen and the absurd. The Third Line, **Dubai**, through November 23.

The 36th Emirates Fine Art Society Annual Exhibition: *Convergence*. In art, convergence is present in its explicit or concealed forms through the coalescing of the constituent elements of a single work (or artworks together) within an area and through the specific movement of lines or artistic and visual features. This shows up in the juxtaposition

of colors and flourishes within a specific area; their overlapping with one another, or through the blending and mixing of composite materials in pieces of art of varied styles and vision. In this context, expressed ideas and methods or even values may converge. **Sharjah Art Museum, UAE**, through November 30.

CURRENT / DECEMBER

Najat Makki: *Luminescence* shows the spectrum of work of leading Emirati artist Najat Makki. An abstract painter and colorist, the artist's career has been defined by her abstract paintings and experimentation with vivid colors in a unique style. The exhibition highlights her contemporary approach to the semantics of painting within the context of the UAE and the world. It reveals the artist's philosophical thought process and focus on her formal interrogations. The works show Makki as a contemporary open and experimental artist influenced by her studies, travels and social issues. Cultural Foundation, **Al Hosn, Abu Dhabi**, through December 15.

Talking Maps celebrates maps and the stories they tell about the places they show, and the people that make and use them. The exhibition showcases iconic treasures from the Bodleian's collection of more than 1.5 million maps, together with exciting new works on loan. The exhibition explores how maps are neither transparent objects of scientific communication nor ideological tools, but proposals about the world that help people understand who they are by describing where they are. It shows how cities are administered using maps and how they can also be used to deceive its attackers; how maps are used in war and drawing national boundaries; and how artists can use them to reflect on their state. Highlights of the exhibition include maps never before displayed and a 3D re-creation of the famous lost world map by 12th-century CE Muslim geographer al-Sharif al-Idrisi. Bodleian Libraries, University of **Oxford, UK**, through March 8.



This map of the Mediterranean Sea comes from *Kitab Ghara'ib al-funun wa-mulah al-uyun* (*Book of Curiosities*), estimated to date from 1190–1210 CE, Egypt.

COURTESY OF BODLEIAN LIBRARIES, UNIVERSITY OF OXFORD



Step into a Story, the opening exhibit of the Abu Dhabi Children's Library, focuses on the role that pop-up and moveable books play in literacy. A pop-up book is a type of moveable book with paper mechanisms that pop up or move when the reader turns pages or manipulates them. They are engineering marvels designed to engage readers of all ages. Three-dimensional immersive and interactive learning spaces reimagine stories from UAE authors and illustrators, sparking the imagination of children visiting the exhibition. Cultural Foundation, **Al Hosn, Abu Dhabi**, through December 15.

The Elephant (an Intermission): Babak Golkar is a solo exhibition by Canadian artist Babak Golkar titled after a chapter in *All the Blind Men* to frame the artist's three-year-long ongoing research into the role and responsibility of images in the formation of a political climate. *All the Blind Men* can read as a reference to the mass—or rather the swarm—of people who wander in the “media-landscape” grabbing at bits and pieces of truth while failing to understand a bigger picture. The exhibition represents a visualization of the artist's distrust of the retinal sphere that dissects the circularity of history in the reappearance of fascism via the simplification and forgery of facts

from the political sphere to the public. Sabrina Amrani, **Madrid**, through December 21.

CURRENT / JANUARY

Orientalism: The Allure of North Africa and the Near East—Masterworks from the Dahesh Museum of Art explores how artists from both Europe and America represented the cultures and peoples of Anatolia, the Middle East and North Africa—both real and imagined—during the 19th century. The “Orient” enchanted Romantic artists who wanted to escape Europe's urban rigors, Realists who sought to record the “authentic Orient” and others simply in search of fresh subject matter to satisfy the demands of a changing Western art market. The exhibit features 50 paintings, sculptures and illustrated books that explore themes ranging from the West's fascination with ancient Egypt, medieval Islamic architecture and design, and the exploration of biblical history to the exotic genre and harem scenes. **Huntsville Museum of Art, Alabama**, through January 19.

COMING / MARCH

Mesopotamia: Civilization Begins. Mesopotamia—the land “between the rivers,” in modern-day Iraq—was home to Sumerians, Babylonians and Assyrians. Among

their many achievements are the creation of the earliest-known script (cuneiform), the formation of the first cities, the development of advanced astronomical and mathematical knowledge, and spectacular artistic and literary accomplishments. The exhibition covers three millennia, from the first cities to Alexander the Great's conquest of Babylon in 331 BCE. The Getty Villa, **Los Angeles**, March 18 through July 27.

PERMANENT

Faces of the Crimean Tatar Deportation 75 Years Later, an exhibition by Crimean Tatar Zarema Yaliboylu, reveals the crime of deportation against Crimean Tatars (*Kirimli*) through portraits and stories of ordinary people who survived it and managed to return to Crimea in the 1990s. The people in

these photos are living witnesses to Soviet crimes against humanity. Many of them still remember those events down to the smallest detail, even though they were children at the time. Their stories are mostly similar, reflecting fear and pain, and the loss of people dearest to them. Uniting them is their overwhelming love for Crimea and a powerful belief that they would return to their homeland—a belief that the Crimean Tatars carried for more than 40 years. The Ukrainian Museum, **New York**.

Most listings have further information available online and at aramcoworld.com. Readers are welcome to submit information for possible inclusion to proposals@aramcoservices.com, subject line “Events”.

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