

MAY JUNE 2016

AramcoWorld





4 50 Years Behind the Lens

*Photographed by Tor Eigeland
Interviews and video by Jeroen Wolf*

In 1966, a Norwegian-born, Mexico-educated, Beirut-resident photographer and journalist named Tor Eigeland took his first assignment for this magazine. Since then, his byline has appeared more than 50 times on some of our most popular stories from around the globe. Now living in England, he reflects on a few of his—and the editors’—favorite images, which include this unpublished photo of a boy sailing a model wooden dhow on Lake Manzala near Port Said in Egypt, photographed in 1981 for “The Lakes of Egypt.”

18 The Islamic Roots of Modern Pharmacy

Written by David W. Tszanz

Testing, producing and refining from as early as the seventh century CE, alchemists in the Middle East who championed empirical methods developed, over some 500 years, the foundations of chemistry, pharmacology and the modern drugstore.

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AramcoWorld

aramcoworld.com

May/June 2016
Vol. 67, No. 3



We distribute *AramcoWorld* to increase cross-cultural understanding by broadening knowledge of the histories, cultures and geography of the Arab and Muslim worlds and their global connections. In print, *AramcoWorld* is distributed six times a year, without charge, to a limited number of interested readers. Online, it is archived from 1960 on. A free tablet/mobile app is now available.

Front Cover: To the rhythm and hum of a wooden wheel, a spinner’s fingers tease Bengal cotton into threads so fine 500 or more can be woven into a single inch of muslin that yet remains transparent. Photo by Tapash Paul / Drik.

Back Cover: “With a human rights background, I am most interested in stories where justice is lacking at perilous personal cost,” says attorney-turned-author Ausma Zehanat Khan, creator of cop characters Esa Khattak and Rachel Getty. Photo by Bear Gutierrez.



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Written by Khademul Islam

Along the fertile banks of a few rivers in Bengal, there once grew the world's finest cotton. From it were woven the original, gossamer cloths called *muslin*, prized by Mughal emperors, envied by British industrialists and, by 1900, forgotten by all. Until now.

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Deftly symbolizing an aggrieved citizen's quest for justice, the rightful heir to the Sultanate of Delhi donned a red robe on the eve of battle. She won the people's support for four years of prosperous rule, but her rivals proved insatiable.

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Publisher: Aramco Services Company | President: Basil A. Abul-Hamayel | Director, Public Affairs: Jamal K. Khudair | Editor: Richard Doughty | Assistant Editors: Arthur P. Clark, Alva Robinson | Digital Media Editor: Johnny Hanson | Circulation: Melissa Altman | Administration: Sarah Miller | Print Design: Graphic Engine Design Studio | Printer: RR Donnelley/Wetmore | Web Design: eSiteful Corporation | Tablet Design and Mobile App: Herring Design | Online Translations: Transperfect

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Mail: *AramcoWorld*, Post Office Box 2106, Houston, Texas 77252-2106 USA

ISSN: 1530-5821

aramco



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FIRSTLOOK

Aswan, Egypt, May 14, 1964

Photo by Tor Eigeland

Two years before my first assignment for *Aramco World*, I was standing in the middle of the Nile with two presidents looking on, and I nearly died making this shot. Gamal Abdel Nasser of Egypt and Nikita Khrushchev of the Soviet Union were inaugurating the first stage of the Soviet-financed Aswan High Dam.

After the signing ceremony, the heads of state boarded an old ship. From the top deck, they and their retinues watched as bulldozers pushed the last piles of rocks into the river. When it was nearly done, workmen gathered to shake hands across the gap, and I had to get close for a good shot.

A large floating hose that carried sand pumped from the desert to the base of the new dam reached out into the river. I had seen workmen walk on it. I could feel it throbbing as I made my way out to where it was anchored. The boat with the presidents floated behind me. Feeling triumphant, I made this image, and a moment later, the hose jerked loose. I dropped flat with nothing to hold onto and fought to stay on as it began swinging like a garden hose. How long this lasted I don't remember. When the power was switched off, the hose came to rest, and I made haste for shore. To this day I wonder if it was President Nasser who shouted the order to turn off the pump.

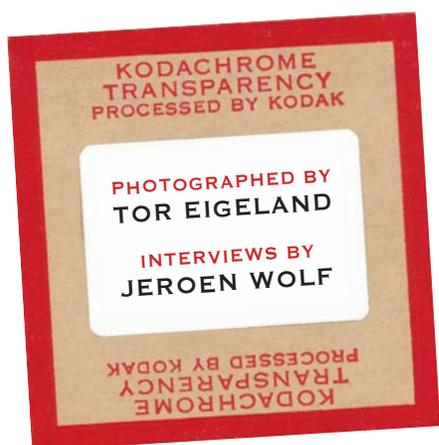
Half a century of unimaginably rich experiences in the Arab and Islamic-related worlds followed. There was so much to learn, and along the way, I have always tried to pass on my impressions, usually in photos and sometimes in words, to bring alive, positively, some of the people and places I came to love. —Tor Eigeland





50 YEARS

BEHIND *the* LENS



INSET: JEROEN WOLF; OPPOSITE: COURTESY TOR EIGELAND

As a boy, walking along the docks near his home in Oslo, Norway, Tor Eigeland watched ships and sailors from around the globe, and he dreamed of adventure. At home, “curled up in a cozy chair, I devoured everything from Tolstoy and Dostoyevsky to Ibsen and Hemingway,” he recalls. Soon he was “desperate to smell the tropical world and see palm trees. I knew there was a lot more out there, and I wanted to see it.”

It didn't take long. In the summer of 1947, at age 16, Eigeland convinced his skeptical parents to allow him and a friend to take a sabbatical from school to work aboard a merchant ship. The *M/V Tricolor* took the pair down the coast of Europe, across northern Africa, through the Suez Canal, along the Arabian Peninsula and on to India, the Philippines and China, ending in Shanghai.

Back in Oslo, to keep his pact with his parents, he passed his school exams, but it wasn't long until another ship job landed him in Canada where he worked in a gold mine, attended university and, in 1954, purchased his first camera, a Rolleiflex.

From there, he says, “I decided on going to university in Mexico. Kind of a wild idea, but that's what I wanted to do.”



In Mexico, he began writing and taking pictures for local magazines and public relations firms. Then, he recalls, he wanted a location where he could earn a living as a photojournalist.

“I checked how many foreign correspondents and photographers of an international standard were based in Beirut, and I found

there was a total lack. So I thought there'll be lots of work if I go there. So I took another chance.

“Beirut was really an international meeting point. It was the most practical place to operate in the Middle East for journalists, photographers, spies and businessmen.”

In 1965, one encounter at the foreign press club introduced him to Paul Hoyer, hired by Aramco the year before to edit *Aramco World* and establish its office in Beirut after 15 years in New York. Hoyer gave Eigeland his first *Aramco World* assignment: a cover story on the centennial of the American University of Beirut.

So began a 50-years-and-counting relationship with the magazine, which has sent him to more than two dozen countries over more than 50 assignments, 27 of which were cover stories and two of which were full issues that he shot and wrote.

The magazine “helped me live the kind of life I like,” he says. “It's enabled me to meet great people around the world.”

What follows are a few selected highlights of Tor Eigeland's half century as witness to daily life for *AramcoWorld*. —The Editors

OCCASIONALLY, WHEN I GET A REALLY GOOD SHOT, I CAN FEEL IT. IT'S ALMOST LIKE GETTING GOOSEBUMPS. “THIS IS TOO BEAUTIFUL TO BE REAL. HOW DID THIS HAPPEN? HOW WAS I SO LUCKY TO BE HERE?”

—TOR EIGELAND

the 1960s

“WHEN ALL THE LANDS WERE SEA”

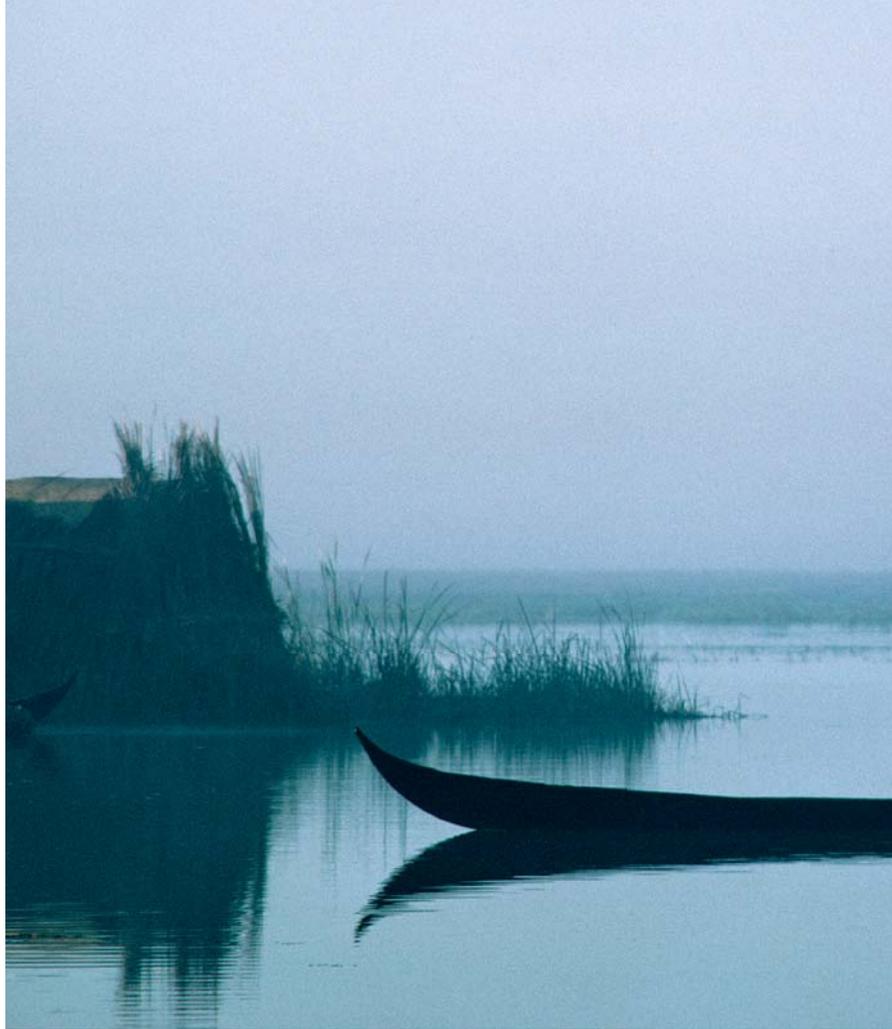
NOVEMBER 1967 ▶

This assignment was certainly one of the most memorable in my life, even though the photos weren't published until 2013, and then they became a book, too.

The Marsh Arabs lived in the central marshes of southern Iraq, between the Tigris and the Euphrates Rivers. A vast area of marshes. This particular photo—I remember taking it one morning, probably about four a.m. I was staying on a little island with some of these people. I saw this canoe just gliding by. I thought I was totally in another world 2,000 years ago. It was unreal. My whole experience there, I didn't feel alien, but it was like living in a world totally, totally different from what I'd known before. A watery world, indeed.

At the time, there were somewhere between 350,000 and half a million people living in the marshes. Their civilization was thousands of years old. They turned out to be extremely hospitable and fun-loving.

Looking back on it, I think what has made it even more memorable is that this way of life is nearly extinct. Saddam Hussein drained the marshes.



▼ “ISTANBUL—QUEEN OF CITIES” JANUARY/FEBRUARY 1970



The assignment was on Istanbul—an immense, lively city. You do a little research, and then you talk to some of the people there who really know the city. You find a driver who also really knows the city and sort of understands what you're trying to do, so you make a plan and off you go in many different directions. This picture was not at all part of the plan. There was one carpet in the image of President John F. Kennedy. I was quite touched by that, that people in Istanbul would bother to do something like that.

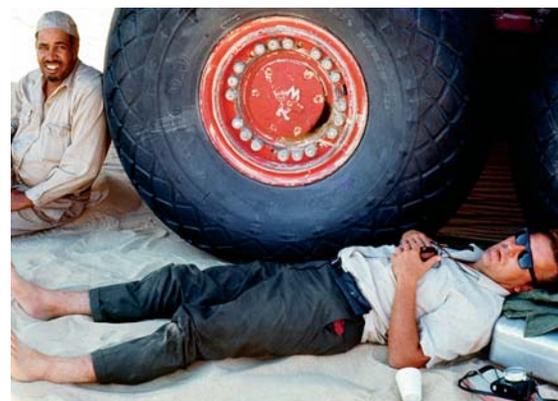


“CONVOY TO NOWHERE”

MAY/JUNE 1969 ▼

What I remember most was the incredible skill of the drivers in getting through or around the dunes. They were all Bedouin, born and bred and at home in this sandy world. I would have got stuck in five minutes.

The other thing I remember from that trip was sleeping in the sand one night when there was a minor sandstorm. I must have been very tired as I slept right through the night. I woke up and, to my horror, I couldn't move anything. Except for my head, my nose, I was buried in the sand. Panic is what I felt until one of the truck drivers spotted me and helped dig me out. Much relieved, I got dusted off and had a breakfast of sweet tea and bread with the drivers before we set off again.



the 1970s

“ISLAM IN AL-ANDALUS” SEPTEMBER/OCTOBER 1976



This was quite a large assignment ► involving a lot of travel. I have a very special relationship with Spain. The Spanish culture, way of life, is what attracted me to Spain. I love even the sound of the Spanish language. I find the Spanish a warm and lively people. Very approachable. And the food! Generally speaking, I'm sort of infamous for enjoying good food. I love Spanish food.

When I was at university in Mexico, I specialized in Spanish and Latin American literature and philosophy, most of which I've forgotten. I developed a real desire to go live in Spain, and I did in 1970, for nearly 20 years. Another reason for moving to Spain was to get away from the tensions in Beirut and, also, life was much cheaper in Spain. I still feel very much at home in Spain.



“SCENIC ARABIA: A PERSONAL VIEW”

JANUARY/FEBRUARY 1975 ▶

This was the cover of the first whole issue I did for *Aramco World*. [Editor] Paul Hoye and I were talking about Saudi Arabia, and I said, “Well, I can do a whole issue for you on Saudi Arabia, Paul.” And that’s what happened. Then, of course, once I got into it, I thought this was completely mad.

The big idea was to present a different picture of Saudi Arabia from what was in the news. There were so many positive things, culturally, historically, and that’s what I wanted to try and show people. I was amazed at how helpful everyone was. I must say everyone at Aramco in Saudi Arabia was extremely helpful. I couldn’t have done it without them.

It was quite overwhelming, the challenge. When I sat down to start writing it, I felt completely swamped, overwhelmed. Endless tape recordings with a lot of my impressions. I spent endless hours transcribing it. You do it bit by bit, and the magazine came off in the end.

◀ As part of the assignment on Islam in Al-Andalus, I found this particular dome, the one over the famous *mihrab* in the Great Mosque of Córdoba, incredibly beautiful. There was only one good way to photograph it, and that was to lie down on the floor. To the great surprise of the mob of tourists, I asked them to step aside, and I spent the next 15 minutes plonked down on my back trying to get this photo just right.



“A DUTCH TREAT”

◀ MAY/JUNE 1977

I did a story on the tulip bulb industry, for which Holland is famous, because of course all those tulips originally came from Turkey. Being in Holland was logical at that time as *Aramco World* had moved there because of the civil war in Lebanon.

I rented an airplane and photographed tulip fields from where they looked like beautiful carpets. What I most remember from that assignment was flying and seeing these magical colorful patterns. Another thing I remember were the gardens called Keukenhof, where they display the most fantastic variety of tulips. In season it gets totally overrun by tourists, but one day I asked to come in before the gardens opened, and I spent some magical early hours with just the tulips and me.

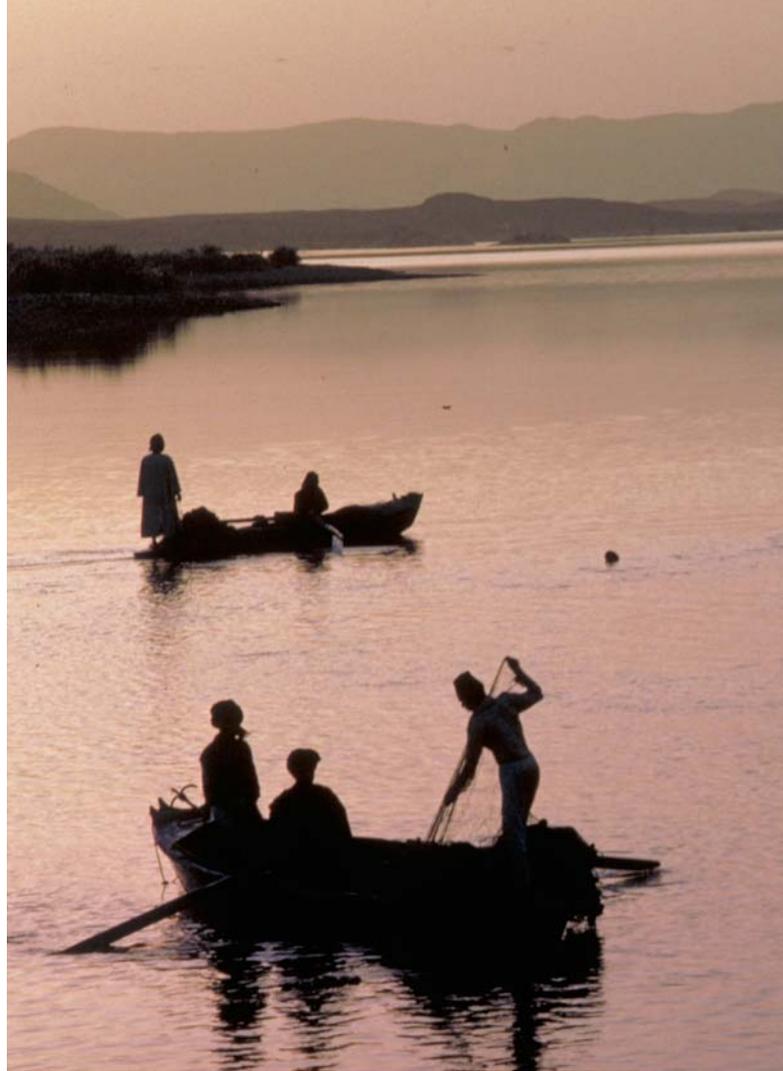
the 1980s

“OMAN: A NEW DAWN”

▼ MAY/JUNE 1983

When you have to take fairly intimate people photos, you have to somehow put people at ease, which may take time, talking, laughing, showing an interest in the person, often telling him or her why you're taking it.

This lovely old guy does not in any sense typify Oman. Oman is like many countries: It varies from one region to another. What typifies Oman now would be a much more modern sort of building, cars, luxury hotels, beautiful beaches, great agriculture. There are all kinds of quaint corners as well, and people of the old generation who look just as they did decades ago. I doubt that you would find someone there now looking like this. He's in full regalia with a sword and the Omani dagger on him. The photo makes a nice point of something very traditional and then a shop full of Coke and Pepsi bottles, soft drinks. Old and new, indeed.





“THE LAKES OF EGYPT”

◀ JANUARY/FEBRUARY 1981

Nobody thinks of Egypt in terms of lakes, except for the Aswan High Dam and Lake Nasser, and the effects it has on the country and its agriculture. A lot of ill effects as well as good effects. That's a book's worth of information.

The story was to tell the public about how many lakes really are in Egypt. What I remember best was the sheer beauty of many of them, as in this photo, which is actually one of my favorites.

Coincidentally, the photo was taken almost exactly where in 1964 I photographed the workers closing the Nile, exactly the same place. By now there is a huge lake that reaches way into Sudan.

“THE CUISINE OF AL-ANDALUS”

SEPTEMBER/OCTOBER 1989 ▶

This picture is very close to my heart. It was a story I had proposed about the Arab influence on Spanish food, which is great, especially in Andalucía. This photo captures quite a lot. It shows snow-clad mountains in the background, the Alhambra and the Sierra Nevada. I spent several days with a food expert in Granada, whose specialty was precisely the traditional Andalusian sweets. Yes, a good part of this job was to taste this food all over Andalucía. That was a treat!

“OMAN: A NEW DAWN”

◀ MAY/JUNE 1983

This very much describes the difference between the first Oman image and a modern Oman. Here, tourists are having a great time in the Wahiba Desert, a beautiful area of virgin sands. These people are quite typical of what would be young Omani tourists. From the mountains to the sea and the city to the desert, it's a beautiful country. Very well developed, wisely developed. Very friendly, hospitable.



the 1980s

This is in Xinjiang, western China, populated by tribesmen around Kashgar. A lot of these people can seem almost like they live on horseback. This photo, of an older man with probably his grandson with a Chinese uniform hat—I very well remember. There were horse races and also something like a polo match with a goat's head or something like that, which they pick up and sling around. In fact, very exciting. I also remember the crowd. It had got so heated up that there were Chinese policemen there, not very well liked by the locals. The police in the end asked us to leave because it was getting so heated they thought there might be a fight.



“TRAVELING THE SILK ROADS”

JULY/AUGUST 1988 ▶

The Silk Road story was pretty important. A landmark for the magazine, you might say. We were probably the first Western travelers to do the Silk Road all the way and mostly by land in a long, long time, because the borders were actually completely closed or semi-closed until a few years before. We traveled through what was then the Soviet Union and into what was a much more Communist China than it is now.

It went much better than expected because proper permissions had been obtained. From Russia into China, there's a sort of no-man's land where nobody crossed, really, until then. We walked from a train station near the border with our luggage into China. Since this was the first time this kind of tourism had been allowed, there was a great reception with dragon dancing and banging of drums. We were welcomed there with open arms. That was all very smooth.

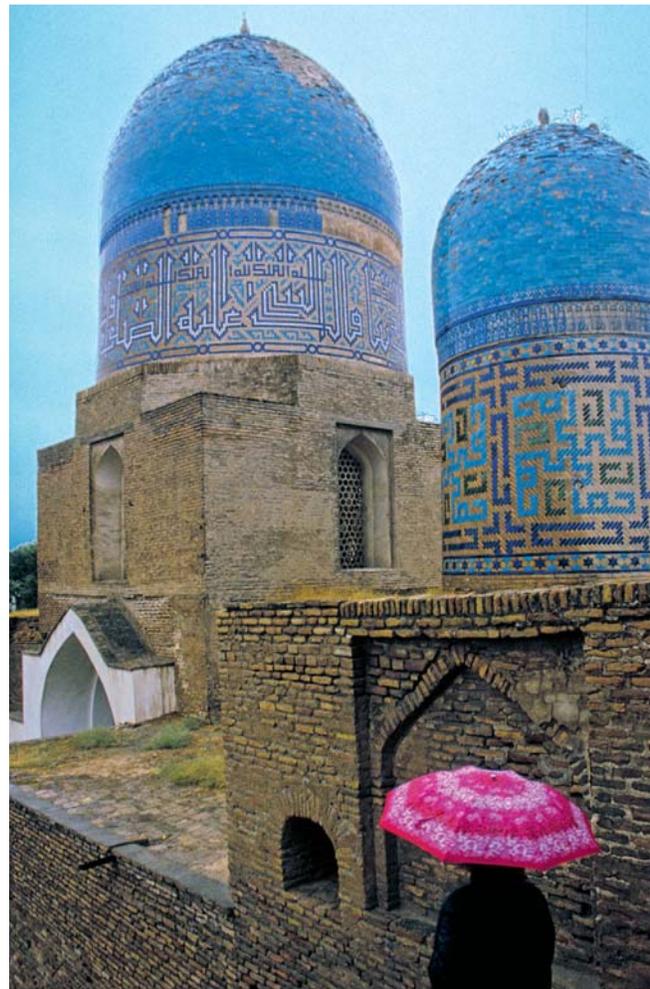
We moved quite fast, so you don't really have time to establish yourself in any one place, unless you have a year or two to do a trip like that. It's more a matter of grabbing what you can than really establishing some kind of a relationship with a place or people.



This photo was taken in Samarkand. What is most remarkable about this photo, ► to me, is that it was taken in the rain in a place where it almost never rains. In fact, I was told generally, in that area, my photos were remarkable mostly because it was raining. Umbrellas where you never see umbrellas. It was a special moment on a very, very long trip full of excitement, pleasures and lots of difficulty as well.

I DID THIS ASSIGNMENT WITH JOHN LAWTON. OLD FRIEND, GREAT JOURNALIST. IF YOU WANT TO FIND OUT WHETHER SOMEBODY IS A FRIEND OR NOT, UNDERTAKE A TRIP. IF YOU COME OUT AS FRIENDS, STILL GOOD FRIENDS DECADES LATER, YOU'RE REALLY GOOD FRIENDS.

▼ This is a market in Kashgar, in western China. That was really like being in another world. No time to really establish any relationships with anybody. You had a day to do it. You go to the market, and you get pushed around by the immense crowd. Everybody's friendly, no hostility whatsoever, but still it's a matter of grabbing what photos you can, when you can. Language there is a real challenge. If you speak Chinese, that's no use because the local people speak Uighur.



the 1990s

I DON'T THINK I EVER FEEL I HAVE AN ASSIGNMENT COMPLETELY COVERED. I'M TRYING TO THINK OF A TIME WHEN I DID, BUT NO. YOU ALWAYS FEEL THAT THERE'S MORE.

▼ **"UNDERSTANDING THE BADIA"** NOVEMBER/DECEMBER 1997



My greatest memory was being out in the Badia—that's what they call the great eastern desert there—with a Jordanian guide looking for I don't remember what. In the distance, you can see a tremendous storm, a black cloud, which was full of lightning. We were quite far from the camp. I remember thinking, "If that storm hits us now, we're completely stuck." We were not in a four-wheel drive, just a pickup. We would really have been stuck. There was a moment of seeing one of the most beautiful desert scenes I had ever observed and photographing it and worrying about getting back in the car and getting out of there.

**"TOURING
AL-ANDALUS"**

MARCH/APRIL 1999 ►

I think I am an off-the-beaten-track person. So when the Spanish government set up travel routes in Andalucía, it was an ideal assignment. I was living outside Barcelona, and I was given freedom and time to explore places that were not so obvious. This photo was taken in the small village of Pampaneira in the Alpujarras, a mountainous region in the province of Granada. Here, the same place where the Moors held out long after they were expelled from Spain, a woman walks home with flowers.

“THE ACADEMY OF THE RAINFOREST”

NOVEMBER/DECEMBER 1992 ▶

This was shot in Brunei, which is a tiny country on the big island of Borneo. It's in the most virgin of virgin rainforests. The photo is of two scientist-painters who are just painting details of things they see. Definitely not a place where you'd wander off by yourself. I knew that in this area there were more snakes per square meter or kilometer than anywhere else in the world. The whole time I was there I was looking for snakes. Not only because I wanted to see one, but you never know what snakes can do to you. I never saw even the tail of a snake. I think I was there for a week.

The man who was most helpful to me there was a very experienced Danish botanist; Carl Hansen was his name. He showed me some plants and interesting things. Hansen wandered off on his own, being very experienced, up to a hilltop perhaps a mile or so away. He knew the route very well, but he got caught by the dark. Of course, there's no way you can work your way back through dense rainforest in the dark.



He stayed there overnight. But in the rainforest, it rains. Hansen got good and wet. What he was bitten by, I don't know. It was nothing like snake bites. He came back to the camp feeling very bad. A nurse in the camp tried to take care of him. I actually left the next day, but found out before I had left Brunei that he was helicoptered to a hospital and died there. From the experience in the rainforest, Hansen himself is what I probably remember best. He was a kind and gentle professional botanist, and I became quite fond of him. Also, he was the only one there who went out of his way to help me do my job. I realized that I'd taken the last photos of him alive, and I got in touch with his wife and sent her two or three really good photos of him working in the rainforest.



the 2000s

“FOLLOWING WASHINGTON IRVING”

SEPTEMBER/OCTOBER 2008 ►

Getting off the autoroute, taking the old roads, there are a lot of beautiful little towns, full of little inns and restaurants and interesting things to see all the way. This particular photo, it's a sort of a spoof on the little terrace. Somebody made black figures, looking like real people, out of some kind of a black boards, so what you see is a silhouette of a person and the ancient town of Loja in the background.

I think the most memorable thing about this trip was seeing the room where Washington Irving lived in the Alhambra. It's not open to the public, at least it wasn't then, and there's not much in it. It's just a little corner of the Alhambra, where I'd been many times, but that I had not seen before.



“GHRAOUI AND THE CHOCOLATE FACTORY”

NOVEMBER/DECEMBER 2008 ▼

A friend and colleague by the name of Alia Yunis wrote this story about the best chocolate factory in Damascus, which also happens to be one of the best in the whole world. It was extremely memorable for many reasons. Back to my stomach slightly, it's the best chocolate I've ever eaten. I became friendly with the owner, Bassam Ghraoui, and for several years afterward, at Christmas, to my vast surprise, I'd get a box of chocolates. What made it

more poignant, I guess that is the word, was what has happened to Syria and all the good people I met since then. I think you feel a disaster like that a lot more strongly if you know the place, and you know the people, and you know how nice they are.

I phoned them about a year ago. The main factory closed down because it's part of a war zone, but they were still producing some chocolate in sort of a protected area of the Damascus. Whether they're still there or not, I don't know, but if they ever see or hear this, God bless them.





“A LEGATION TURNS TO EDUCATION”

▲ MARCH/APRIL 2015

My latest assignment was in Tangier last year, but this photo had nothing to do with the story. It happens to be a main square in Tangier where I took a break from work, and I sat there and had lunch and put a camera on my table, and occasionally as something interesting passed by, I would just click the shutter. I wasn't looking through a viewfinder or anything like that. I just propped the camera on the table. I think if this photo works, it's simply because it shows everyday life. A typical, normal scene in Tangier, typically Moroccan.

▼ My assignment was at the American Legation in Tangier, and part of that was to photograph classes in reading, writing, Moroccan cuisine and handicrafts for Moroccan women. The Legation was originally a diplomatic mission, and now it's partly a museum, partly a center of Moroccan studies. For me, the most interesting part, which was really most of my story, was on how, sponsored by the institution, Moroccans are teaching Moroccans literacy, Moroccan arts and crafts, and Moroccan cuisine. I had not been back to North Africa for some time, but the moment I arrived in Tangier, I realized strongly how much I had missed that part of the world. I was happy to be back. I felt at home, and people made me feel at home.

On the first day, I visited the different classes and their teachers, introducing myself and gently taking a few photos, always asking permission when it seemed appropriate. The classes were fascinating to observe, and gradually I grew closer to the subject, and more and more I found that the women accepted me and were quite happy and proud to be photographed.

On my last day, I photographed a lively cooking class with some 12 women. The atmosphere was great; the ladies were very helpful in the sense that they just let me get on with my often close-in photography as if I were not there.

A most extraordinary thing happened when I was about to leave. I packed my camera bag, then simply addressed the class, expressing my thanks for their helpfulness and excellent baking. To my astonishment, as I walked out the door, one of the women started clapping her hands. I turned around and suddenly they were all clapping.

A touching and unique moment. I realized that something special had happened. It was perhaps the most special of all my memories from all those years of traveling.

As it happens, at age 85, it may have been a fitting farewell for what may have been my last assignment for *AramcoWorld*. 🌐



Jeroen Wolf (www.imaginevideo.nl) is based in Amsterdam and worked as a print journalist and television researcher for Dutch Public Broadcasting until he founded his own video production company in 2003. He specializes in documentary work.



www.toreigeland.com

All articles photographed and written by Tor Eigeland are searchable at aramcoworld.com.

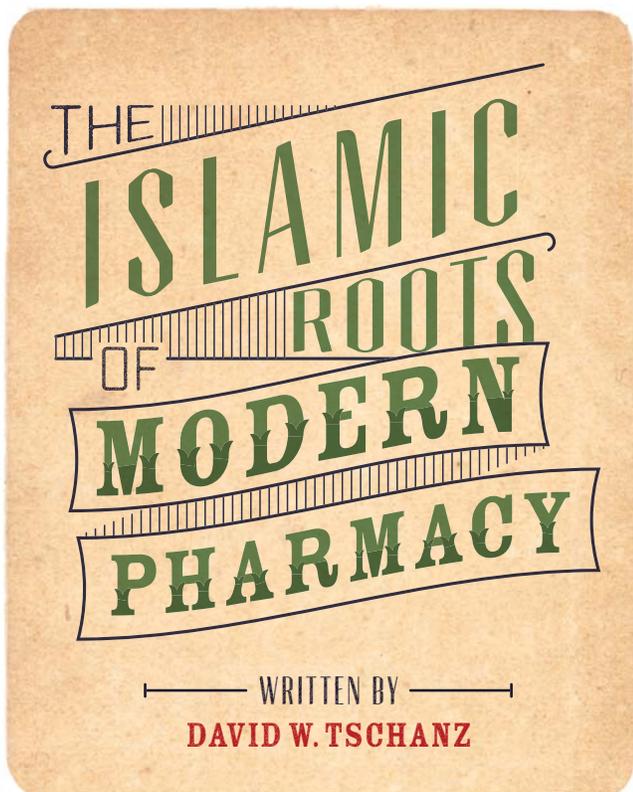


For Further Reading

When All the Lands Were Sea. Tor Eigeland. 2014, Olive Branch Press, 978-1-56656-982-8, \$30 hb.







alchemists, physicians and polymaths of the Muslim Middle East, and their rules, procedures and expectations are, to a great extent, practiced almost universally today.

In the West and the Middle East, early medicine as a whole was primarily a fusion of Greek, Indian, Persian and later Roman practices that had progressed over the better part of a millennium. Texts on medications were common, but most of these *materia medica* were simply lists of plants and minerals and their various effects. By the start of the seventh century CE, Europe and much of the Near East had weakened culturally, and those achievements of Hellenistic arts, sciences and humanities that had not been erased were on an intellectual endangered-species list.

The professional who is specialized in the collection of all drugs, choosing the very best of each simple or compound, and in the preparation of good remedies from them following the most accurate methods and techniques as recommended by experts in the healing arts.

— ABU AL-RAYHAN AL-BIRUNI c. 1045 CE

AL-BIRUNI'S DEFINITION of the pharmacist could have been written today. Along the road from sympathetic magic and shamanism to scientific method, much trailblazing was carried out over a few centuries by scholars,

Opposite: Flanked by figures indicating his tutelage from master physicians (the figure on the right may represent first-century Greek physician Dioscorides), a *saydalani*—as an early pharmacist was called—is shown at work in his dispensary, in which hang a variety of vessels for alchemical production. The illustration comes from 12th-century Iraq. Right: This page from *Kitab al-Diryaq* (*The Book of Antidotes*), a 13th-century guide to medicinal plants, also from Iraq, highlights the role of botany in early Islamic pharmacy.



By mid-century, the rise of Islam brought with it a new thirst for knowledge. This openness to discovery began the saving and, eventually, the expansion of much of what the classical world had lost. Nowhere was this truer than in the field of health, where medical practitioners took guidance from several *hadiths* (hah-DEETH), or sayings of the Prophet Muhammad, such as this related by Bukhari: “God never inflicts a disease unless He makes a cure for it.” Similarly, Abu Darda narrated that the Prophet said, “God has sent down the disease and the cure, and He has appointed a cure for every disease, so treat yourselves medically.” Such words placed the responsibility for discovering cures squarely on the medical practitioner.

Within a century of the death of the Prophet in 632 CE, one of the earliest systematic approaches to drugs was under way in Damascus at the court of the ruling Umayyads. Snake and dog bites, as well as the ill effects of scorpions, spiders and other animals, were all causes of concern, and the poisonous properties of minerals and plants such as aconite, mandrake and black hellebore were exploited. As with most

most areas of medicine at the time, Greek physicians Galen and Dioscorides were considered the ancient authorities, and building off their works, Muslim writers discussed with particular interest poisons and theriacs (antidotes).

Sudden death was not uncommon in royal courts, and it was frequently attributed, often erroneously, to poison. Not surprisingly, fear of poison convinced Umayyad leaders of the need to study them, detect them and cure them. As a result, much of early Islamic pharmacy was done by alchemists working in toxicology.

The first of these was Ibn Uthal, a Christian who served as physician to the first Umayyad caliph, Mu'awiyah. Ibn Uthal was a noted alchemist who had conducted a systematic study of poisons and antidotes. He was also reported to be Mu'awiyah's silent executioner, and in 667 he was himself poisoned in an act of vengeance by the relatives of one of his alleged victims. Another Christian physician-pharmacist, Abu al-Hakam al-Dimashqi, served the second Umayyad caliph, Yazid.

ALCHEMY AND SCIENCE

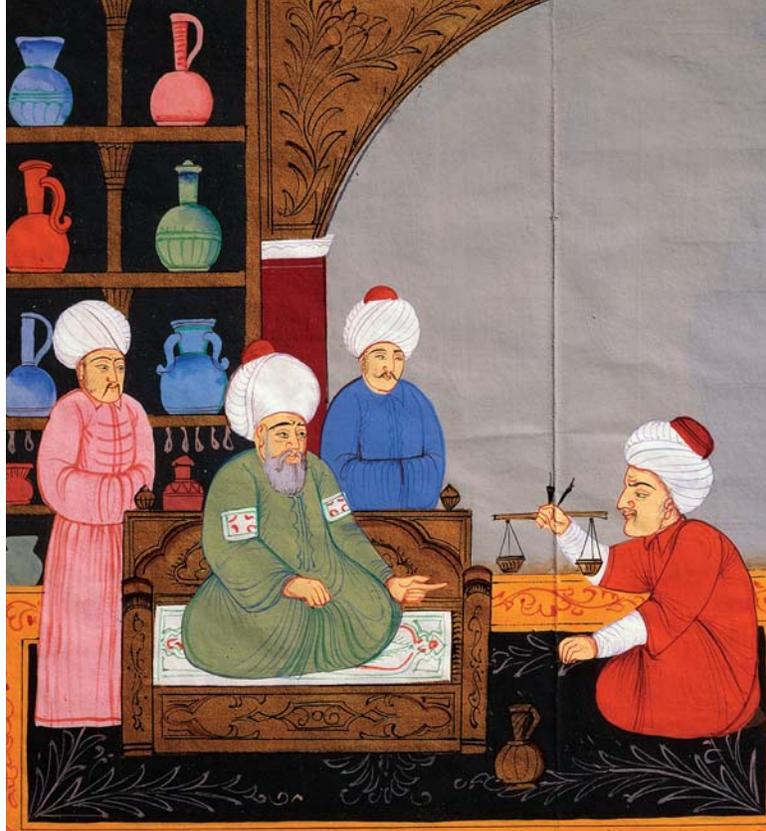
The word "alchemy" brings to mind a cauldron of images, mostly mythic and mystical. But alchemical practice played an important role in the evolution of modern science.

Alchemy was born in China in the fourth century BCE with its chief goal being the prolonging of life. Alchemy is next heard of in Egypt in the early Christian centuries. By then, the ideas and recipes of the alchemists were drawn both from Greek science, religion and philosophy (particularly Aristotle) as well as various strands of folklore, astrology and other branches of occultism. A breakthrough in the movement toward science was the introduction of experiments and the laboratory, on which Jabir ibn Hayyan (Geber) wrote in the late eighth century:

The first essential in chemistry is that you should perform practical work and conduct experiments, for he who performs not practical work nor makes experiments will never attain to the least degree of mastery. But you, O my son, do experiment so that you may acquire knowledge.... Scientists delight not in abundance of material; they rejoice only in the excellence of their experimental methods.

With this rudimentary scientific method, Muslim alchemists began to quantify and classify compounds and elements. They repeatedly denounced the mixing of occult belief with science. In the ninth century, Al-Kindi warned against alchemists attempting the transmutation of ordinary stones and metals into precious ones.

By the end of that century, alchemy was becoming a recognizable science, and the Muslim scholars of the time ensured that knowledge from Greece, Egypt, India and farther afield was preserved. It was on this foundation that later European scholars built Renaissance science.



Yazid's son, Khalid bin Yazid, took particular interest in alchemy, and he employed Greek philosophers who were living in Egypt. He rewarded them well, and they translated Greek and Egyptian books on chemistry, medicine and astronomy into Arabic. A contemporary of Khalid's was Jabir ibn Hayyan, called Geber in the West, who promoted alchemy as a profession, laying early foundations for chemical and biochemical research.



IBN SINA'S RULES OF CLINICAL TRIALS

Among his many contributions to medicine, Ibn Sina (Avicenna) developed rules for testing the effectiveness of a drug or medication that still underpin modern clinical trials:

1. The drug must be free from extraneous accidental quality.
2. It must be used on a simple, not a composite, disease.
3. The drug must be tested with two contrary types of diseases, because sometimes a drug cures one disease by its essential qualities and another by its accidental ones.
4. The quality of the drug must correspond to the strength of the disease. For example, there are some drugs whose heat is less than the coldness of certain diseases, so that they would have no effect on them.
5. The time of action must be observed, so that essence and action are not confused.
6. The effect of the drug must be seen to occur constantly or in many cases, for if this did not happen, it was an accidental effect.
7. The experimentation must be done with the human body, for testing a drug on a lion or a horse might not prove anything about its effect on man.

Left: A pharmacist prepares medicines to treat a patient suffering from smallpox in this illustration from a 17th-century Ottoman manuscript of Ibn Sina's *Canon of Medicine*. *Opposite, lower:* This depiction of an early European apothecary appeared in *Tacuinum Sanitatis*, a 14th-century Latin translation of Ibn Butlan's 11th-century *Taqwim al-Sihah (Maintenance of Health)*.

These early Islamic alchemists proved to be meticulous and persistent in their experimentation, and they made careful written observations of results. They designed their experiments to gather information and answer specific questions, and through them "scientific alchemy" arose. Avoiding unproven belief (superstition) in favor of the compilation and application of procedures, measurements and demonstrated trials that could be tested and reproduced, their work represented the true advent of the scientific method.

The role of scientific alchemy cannot be overemphasized. By the ninth century, the trend, approach and type of information that circulated in Arabic alchemical manuals represented some of the best work in this field. The careful methodology the alchemists developed served all fields, including pharmacy.

In the process of experimenting in making amalgamations and elixirs, important mineral and chemical substances were used, such as sal ammoniac, vitriols, sulphur, arsenic, common salt, quicklime, malachite, manganese, marcasite, natron, impure sodium borate and vinegar.

Among simples of botanical origin, they used fennel, saffron, pomegranate rinds, celery, leek, sesame, rocket, olives, mustard and lichen. Significant gums such as frankincense and acacia were used, as well as animal products including hair, blood, egg white, milk (both fresh and sour), honey and dung.

Laboratory equipment consisted of pots, pans, tubes, retorts, alembics, crucibles and various distilling apparatus; covering platters, ceramic jars, tumblers, mortars and pestles (often made of glass or metals); as well as tripods, scales and medicinal bottles. The range and scope of alchemical operations included processes often used today: distillation, sublimation, evaporation, pulverization, washing, straining, cooking, calcination and condensation (the thickening of liquid compounds).

While translation of Greek, Persian and Indian scientific books into Arabic had begun under the Umayyad caliphate, it blossomed in the ninth century under the Baghdad-based Abbasids. Hunayn ibn Ishaq, with his superlative knowledge of Syriac, Greek and Arabic, was probably the greatest of the translators, and his works included most of the corpus of Hippocrates and Galen. Intellectual ferment, reinforced by support from the highest levels of government, paved the way for some 400 years of achievements. Methods of extracting and preparing medicines were brought to a high art, and these techniques became the essential processes of pharmacy and chemistry.

A pharmacist was called *saydalani*, a name derived from the Sanskrit for a seller of sandalwood. The *saydalani*s introduced new drugs including—not unexpectedly—sandalwood, but also camphor, senna, rhu-barb, musk, myrrh, cassia, tamarind, nutmeg, alum, aloes, cloves, coconut,

THREE SCIENTIFIC ALCHEMISTS

Leading scientific alchemy during the early Abbasid period were Abu al-Fa'id Ohun-Nun of Egypt and Ibn Wahshiyyah. Both wrote on a variety of topics including alchemy, toxicology, magic and astrology. Scientific alchemy, however, reached its zenith in the works of Al-Razi, a contemporary of Ibn Wahshiyyah (and a far more original writer). Al-Razi's works are of higher caliber both in their relevance to alchemy, as well as to pharmacy and medicine.

ENGLISH	ARABIC	DEFINITION
alchemy	<i>al-kimiyah</i>	the art of alloying
alcohol	<i>al-kuhl</i>	produced by distillation
alembic	<i>al-ambiq</i>	distillation instrument
alkali	<i>al-kaḥli</i>	non-acidic
aniline	<i>al-neel</i>	organic solvent for dyes
antimony	<i>al-ithmid</i>	semi-metallic chemical
carat	<i>qirat</i>	“carob fruit,” i.e., a weight of four grains
elixir	<i>al-iksir</i>	aromatic mix of juices, water and medicine
jar	<i>jarrah</i>	storage container
julep	<i>juleb</i>	flavored <i>sharab</i> to which medicine is added
syrup	<i>sharab</i>	viscous juice

nuxvomica, cubeb, aconite, ambergris, mercury and more. They further introduced hemp and henbane as anesthetics, and they dispensed these in the forms of ointments, pills, elixirs, confections, tinctures, suppositories and inhalants.

As was the case in Europe and America up to modern times, many prominent physicians in Islamic lands prepared some medications for their patients themselves. While Al-Majusi, Al-Zahrawi and Ibn Sina are all good examples, they are actually exceptions, for the typical medical professional often welcomed the separate, specialized role of a *saydalani*, whose work proved as distinct from medicine as grammar is from composition.

By the beginning of the ninth century, Baghdad saw a rapid expansion of private pharmacy shops, a trend that quickly spread to other Muslim cities. Initially these were unregulated and managed by personnel of inconsistent quality, but all that changed as pharmacy students were trained in a combination of classroom exercises coupled with day-to-day practical experiences with drugs, and decrees by the caliphs al-Mamun and al-Mutasim required pharmacists to pass examinations and become licensed professionals pledged to follow the physician’s prescriptions. To avoid conflicts

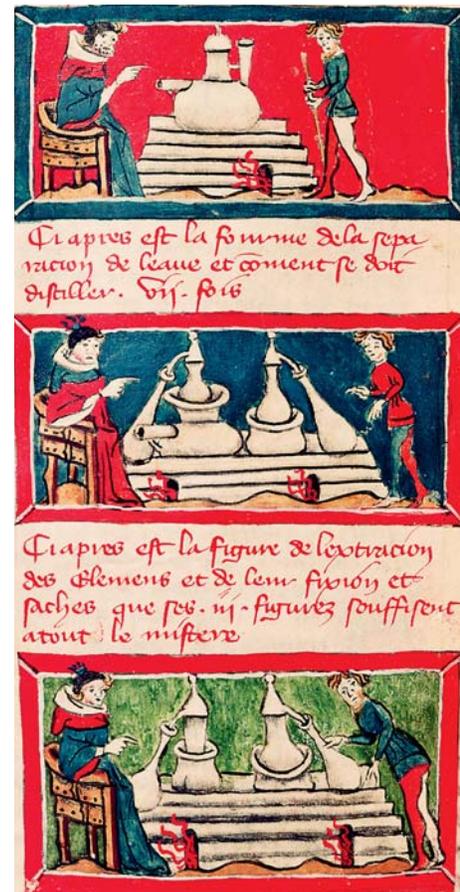
of interest, doctors were barred from owning or sharing ownership in a pharmacy. Pharmacists and their shops were periodically inspected by a *muhtasib*, a government-appointed inspector of weights and measures who checked to see that the medicines were mixed properly, not diluted and kept in clean jars. Viola-

tors were fined or beaten.

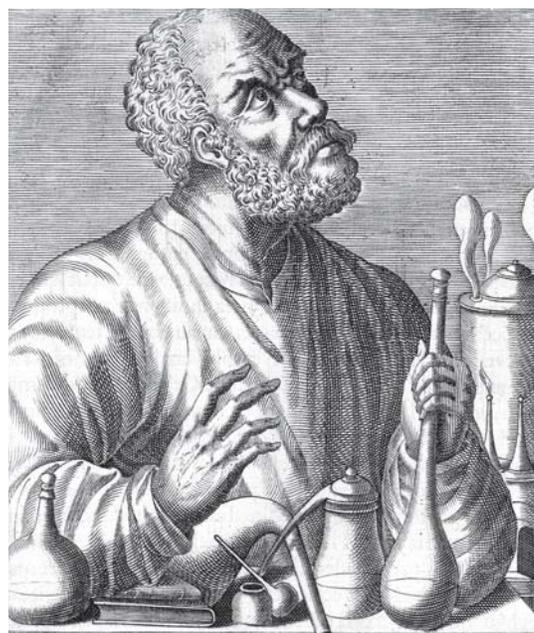
Hospitals developed their own dispensaries attached to manufacturing laboratories. The hospital was run by a three-man board comprising a non-medical administrator, a physician who served as *mut-walli* (dean) and the *shaykh saydalani*, the chief pharmacist, who oversaw the dispensary.

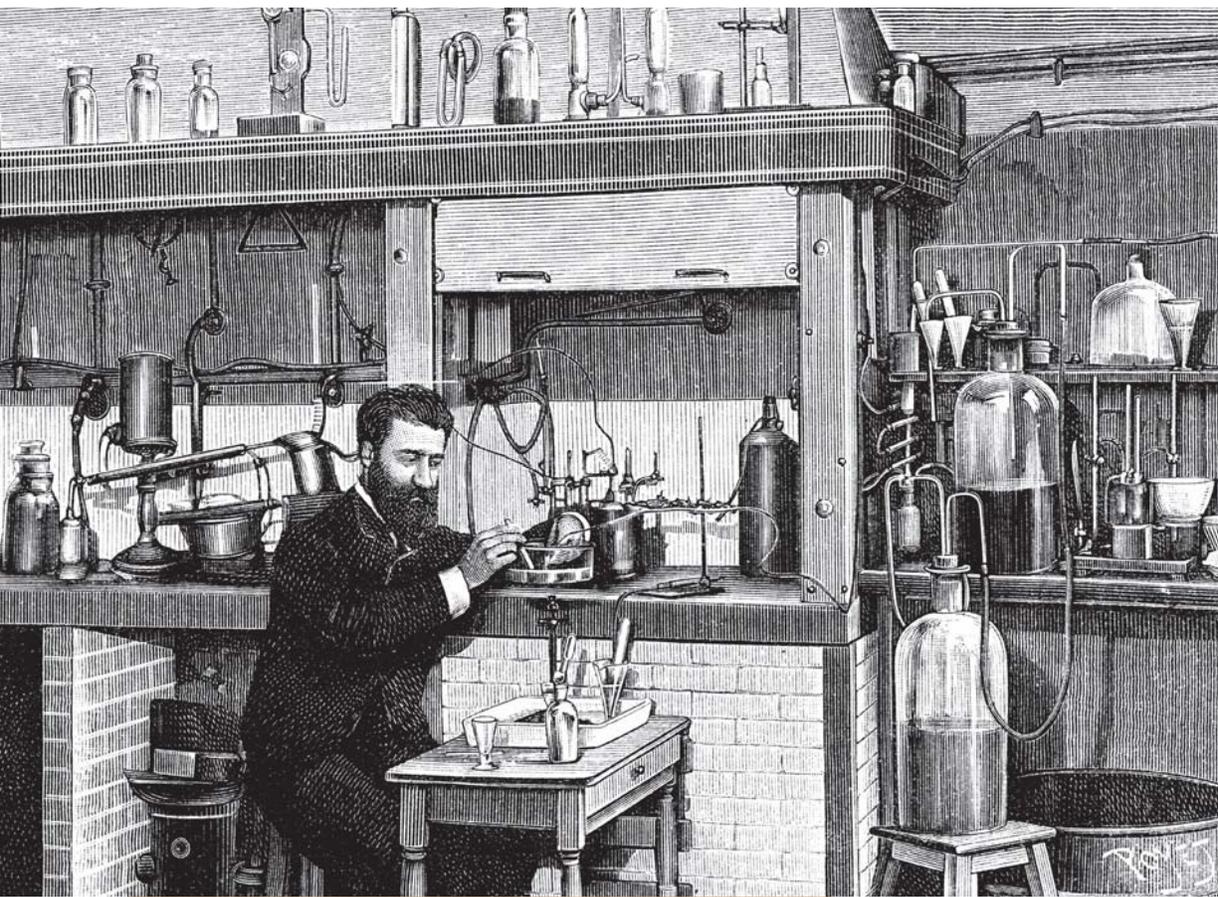
Around this time pharmacy developed its own specialized literature. It built first on Dioscorides’ *materia medica*

According to science historian E. J. Holmyard, Jabir ibn Hayyan, born in the early eighth century and known in the West as Geber, worked with classical Greek texts and the alchemy of his own time and “opened a gate which no one had ever opened,” paving the way to scientific alchemy and, from there, to the foundations of modern rational chemistry based on controlled, replicable experiments.



By the ninth century, pharmacies were regulated and managed by the Abbasid caliphate, and pharmacists were required to pass licensing exams.





Opposite: A French manuscript from the 14th century depicts alchemists at work. Some 500 years later, French chemist Henri Moissan was shown at work in his lab at Paris's l'Ecole de pharmacie, *left*, with equipment that often utilized processes first explored by scientific alchemists: distillation, sublimation, evaporation, pulverization, washing, straining, cooking, calcification and condensation—processes still widely in use today.

The first known medical formulary was prepared in the mid-ninth century by Al-Aqrabadhin Sabur ibn Sahl for pharmacists in both private and hospital pharmacies. The book included medical recipes, techniques of compounding, phar-

macological actions, dosages and the means of administration. The formulas were organized by tablets, powders, ointments, electuaries or syrups, and later, larger formularies followed his model.

More generally, pharmacological drugs were classified into simples and compounds—*mufraddat* and *murakkabat*. The largest and most popular of the *materia medica* manuals, written by Ibn al-Baytar, born in Malaga in the kingdom of Granada toward the end of the 12th century, offered an alphabetical guide to more than 1,400 simples taken from Ibn al-Baytar's own observations as well as 150 from named written sources.

Today, every prescription filled, every pharmacy license granted, every elixir, syrup and medicament created, used or tested reflects this Islamic legacy. If what the alchemists and early medical practitioners did then seems all too obvious to us now, it is only because today's obvious is yesterday's discovery. 🌐



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THE MEDIEVAL ISLAMIC MEDICINE CABINET

Medieval Islamic pharmacology was not only extensive but also the strongest empirically based biological science. Like most medieval medicine, the Islamic viewpoint was an outgrowth of Galen's Humoral Theory and focused on the need to balance the humors, or bodily fluids.

🌐 *Read more at www.aramcoworld.com.*

of some 500 substances, and then also on Nestorian physician Yuhanna bin Masawayh, a second-generation pharmacist, who penned an early treatise on therapeutic plants and aromatics.

It was a younger colleague, Abu al-Hasan 'Ali ibn Sahl Rabban al-Tabari, who said that the therapeutic value of each drug needed to be reconciled with the particular disease, and he urged physicians not to simply provide a routine remedy. He identified the best sources for components, stating, for example, that the finest black myrobalan comes from Kabul; aloes, from Socotra; and aromatic spices, from India.

He recommended glass or ceramic storage vessels for liquid drugs, special small jars for eye liquid salves and lead containers for fatty substances. To treat ulcerated wounds, he prescribed an ointment made of juniper gum, fat, butter and pitch. In addition, he warned that one *mithqal* (about four grams) of opium or henbane causes sleep and also death.



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The POETICS of SUSPENSE

INTERVIEW BY *Piney Kesting*

PHOTOGRAPHED BY *Bear Gutierrez*

Ausma Zehanat Khan's home office in Denver, Colorado, looks out toward the Rocky Mountains. It's a tranquil setting compared to the Community Policing Section of metropolitan Toronto law enforcement, scene of her two acclaimed debut mysteries: The Unquiet Dead, published in 2015 by Minotaur Books, and The Language of Secrets, published in February by St. Martin's Griffin.

Although Khan is newly published as a novelist, a black filing cabinet in her office overflows with poems, short stories, plays, musicals, journals, first drafts and even some abandoned novels she began writing from the time she was growing up in Toronto, Canada. “My family has always loved art and literature and especially poetry,” explains Khan, whose parents were raised in Pakistan. “I think I love writing because my parents taught me to venerate the written word.

“Writing is my first love,” emphasizes Khan, whose other passion is not far behind: justice. A former immigration attorney in Toronto, Khan holds multiple degrees in law, including a doctorate in international human rights law that focused on the 1992-1995 war in Bosnia that began while she was a student at the University of Ottawa, Ontario. Whether as a lawyer or a writer, she says, “I’ve really been doing the same thing all my life through different paths, and that is telling the stories that matter and representing voices that are often silenced or marginalized. It is important to me to do work that I think is humanizing.”

If that's your goal, then why crime novels?

I’m a lifelong fan of the mystery genre, and the crime novel is the form most suited to the stories I want to tell. It gives me the ability to let my characters grow over the course of several books. I use that form to explore stories about history, culture, art, politics, religion and the places where all these things intersect. I’m very comfortable with mystery storytelling as a narrative structure, and I find it engages the reader

quickly. In *The Unquiet Dead*, I’m able to tell a story about the genocide in Bosnia even though it’s framed as a murder mystery in Canada. And in *The Language of Secrets*, I’m writing about a terror plot in Toronto but also about the beauty of Arabic, Urdu and English poetry.

In both of your novels, you use a conventional “whodunit” plot structure—a mysterious death investigated by a detective and his partner. But neither book is simple or generic. What’s really going on?

I use that conventional form to explore two central themes in my books: the notion of identity—what it’s constructed of, what it means to us, how we are defined by or constrained by it—and the notion of justice. I believe justice is a complex notion. It takes many different forms, which you see as you work your way to the end of both of my books.

Tell us about your lead detective, Esa Khattak. Like you, he’s a Canadian of second-generation Pakistani heritage.

Esa is a man who is very connected to his Muslim heritage and who believes in the strength of multiculturalism. He is comfortable in his own skin even though he usually exists

in a place of tension as a police officer who sometimes has to investigate his own community. I've written him as a character who is reserved and thoughtful. There is some of me in Esa. He has my family roots and Canadian roots in common, and he is comfortable in that multicultural environment and in moving among different communities, as am I. What I wanted to suggest in Esa is that he is open to the world and that's something he cherishes in other people. This reflects my sense that we need to educate ourselves about a wide variety of cultures, languages, histories and traditions and understand that our own experience is not definitive; it's simply one of many.

How about his partner, Rachel Getty?

In telling a great story, you need to be able to connect to the characters and humanize them. The books are definitely about Esa and Rachel. I knew that I needed a foil for Esa, someone completely different but who still has core values in common with him. They stand for themselves, but they also stand for themes that I want to explore, such as identity, alienation and belonging. With Rachel and Esa helping, it shows that we all hold certain things in common, and that we can actually bridge existing divides.

The Unquiet Dead has excellent reviews from both the media and readers. What do you think generated this response?

I've heard that readers love Esa and Rachel as a set of characters. They love each of them for what they stand for, but they also love the dynamics between the two, and they like many of the secondary characters. I also hear from survivors [of the Bosnian war] that they feel their experience has been accurately represented. That means a great deal to me.

Before you wrote your novels, you were the editor of *Muslim Girl*, a Toronto-based magazine for young women. Tell us about that experience.

I was hired by the publishing company in 2006 to shape a vision for the magazine that was about reclaiming a voice for Muslim women and girls and allowing them to tell their own stories. This was really important to me because as a Muslim woman I have experienced feeling marginalized and spoken for or spoken to and really resenting that. I wanted to correct that portrayal and add dimension to the conversation. I spent three years there, and it was



wonderful how much I learned about the diversity of these [Muslim] communities. Those girls inspired me.

What's in store for your readers next?

I am working on two more books in the Esa Khattak-Rachel Getty series. We mystery writers try to keep our characters going for as long as humanly possible! I'd also like my readers to understand the things we hold in common and to appreciate that there is a heritage and history of beauty that is inspiring and life-affirming to my central characters in particular. A better world requires all of us to be kinder and better informed. That's what I struggle with myself, and that's what I try to put into these books.

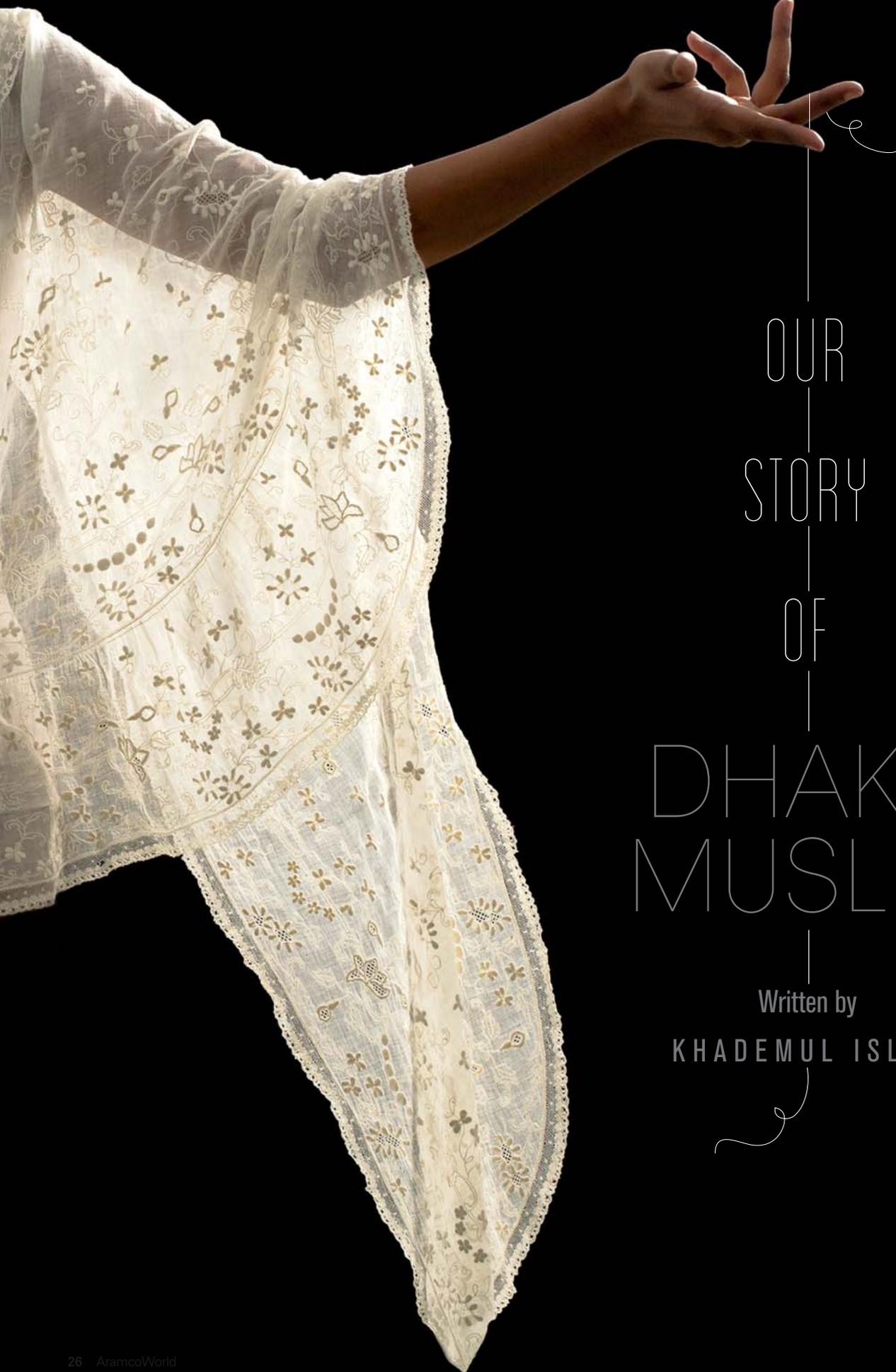
One review described your books using the phrase "the intersection of human suffering and human decency." Can you elaborate on that?

I've spent much of my professional life reading, teaching and writing about human rights and the ongoing crimes that take place in the world. That means I am keenly attuned to underrepresented stories of suffering and also to the lifelong impact of violence. That's a grim place to spend your time and your intellectual life, and it can often seem hopeless. But what I've found is that it's never hopeless. In the face of horror and senselessness, I am always able to find that impulse for decency. And that's the most beautiful thing in the world to write about. 🌍



Piney Kesting is a Boston-based freelance writer and consultant who specializes in the Middle East. **Bear Gutierrez** is a Pulitzer Prize-winning photo-journalist and commercial photographer based in Denver. After 10 years on staff at the *Rocky Mountain News*, he is now also a frequent volunteer mentor for aspiring journalists.





OUR
STORY
OF
DHAKA
MUSLIN

Written by
KHADEMUL ISLAM

THE
CLOTH
IS
LIKE
THE
LIGHT
VAPOURS
OF
DAWN.

—YUAN
CHWANG,

Chinese traveler
to India, 629-45 CE



I FIRST HEARD OF MUSLIN on a hot summer night in Karachi, Pakistan. It was sometime in the late 1960s. I was at the verandah table arm-wrestling with my school homework. My father was at the other end drinking tea. I can't recall now how the subject came up, but I probably asked him something about the British colonial times. It was a topic on which he held forth occasionally. He must have answered me, for he always did. Then—and from here on my recollection is clear—he said, “Muslin.” Not knowing what muslin was, I looked at him questioningly. “Our muslin. The British destroyed it.”

“What’s muslin?”

Muslin, he said, was the name of a legendary cloth made of cotton, fit for emperors, which used to be made way back in the past. Muslin from Dacca had been the finest, he said, from where it used to be shipped to the far corners of the world.

“Dacca?” I asked, surprised.

Pakistan from 1947 to 1971 consisted of two parts geographically separated by 1,500 kilometers. At one side of the Indian subcontinent, bordering Burma, was East Pakistan, which became Bangladesh. On the other side, bordering Afghanistan and Iran, was West Pakistan, which became present-day Pakistan. We were Bengalis from East Pakistan, whose capital was Dacca, which is now spelled Dhaka. It was then a provincial town in which rickshaws plied quiet streets beneath a modest skyline. Its old quarter by the river Buriganga was a maze of lanes, redolent with Nawabi-style cooking. Life was slow. A major outing for the family was going either to one of the two Chinese restaurants or to a movie at one of the four cinema halls. To be told now that it had been world-famous for a kind of cotton cloth was a bit of a shock.

But muslin, my father said, was no more.

“What happened?”

“The British,” he said, “wanted to sell their own cotton goods, and they destroyed the local industry. In Dhaka, the weavers disappeared. So did their muslin.”

A pause. Then he added, “They say the British cut off the thumbs of the weavers so that they couldn’t make muslin anymore.” And with that, he got up from his chair and walked away.

Generations of Bengali girls and boys have grown up with this legend, largely apocryphal, but in its arc and symbolism, an indelible metaphor. The story of muslin is one of contrasts and opposites: of artistry and murder, of splendor and penury, of loss and memory.

MUSLIN FESTIVAL 2016 was held in Dhaka from February 6 to 8, with seminars, workshops, the launch of the comprehensive book, *Muslim: Our Story*, and a preview of a documentary video, “Legend of the Loom.” An evening program on the grounds of the old mansion of the Dhaka *nawabs* featured a sound and light show, a dance drama and a runway of models in saris of contemporary muslin. The centerpiece of the festival was the exhibition “Muslin Revival,” held throughout the month of February at the National Museum.

At the entrance to the exhibition, I walked into a long, narrow space with hundreds of cotton threads—thin at the top and swelling to thicker dimensions at the bottom—suspended from the high ceiling, blown by fans. Twirling and spinning in the dark air, their motion replicated the action of cotton yarn being soaked in the flowing waters of Bengal’s rivers.

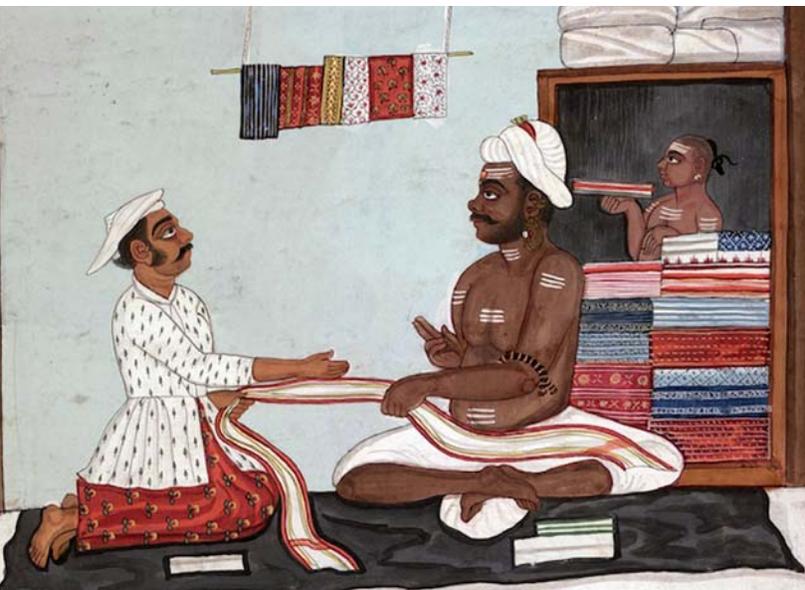
THE WORD “MUSLIN” is popularly believed to derive from Marco Polo’s description of the cotton trade in Mosul, Iraq. (The Bengali term is *mul mul*.) A more modern view is that of fashion historian Susan Greene, who wrote that the name arose in the 18th century from *mousse*, the French word for “foam.”

Muslin today has come to mean almost any lightweight, gauzy, mostly inexpensive, machine-milled cotton cloth. The word has lost all connection to the handwoven fabric that once came exclusively from Bengal. Cotton, stated the historian Fernand Braudel, was first used by the ancient civilizations on the Indus, while the art of weaving itself has been traced back to much earlier times. This head start perhaps was why ancient India became proficient in making cotton textiles. They became a staple export commodity to the Roman Empire, and they expanded in volume in the Middle Ages with the growth of the “maritime Silk Road” in the Indian Ocean.

From the very first, Bengal was in the lead. As textile



By the 17th century, Bengali muslin was associated with the power and elegance of the Mughal court in India, as shown in this 1665 depiction of princes Dara Shikoh and Sulaiman Shikoh Nimbate. *Left:* A cloth shop in 18th-century India. As early as the 10th century, one Arab traveler observed that “these garments ... [are] woven to that degree of fineness that they may be drawn through a ring of a middling size.”



Previous spread: In 1828, this casual-wear stole was woven of finest Bengal cotton and exported to Dresden, Germany, where it was embroidered in motifs to suit the European market. *Top right:* Also woven of nearly transparent Bengal muslin, this *angarkha*, or long, open-fronted men’s tunic, belongs to the Weavers Studio Resource Centre in Kolkata, India.

historians John and Felicity Wild noted, while a great many varieties of “largely plain cotton” were produced in the three areas of Gujarat, the Coromandel Coast and Bengal, “it was the east coast and especially the Ganges Valley [that] offered the finest qualities.”

Arab merchants came to dominate the Indian Ocean trade from the eighth century onward, when considerable volumes of Bengal’s cotton textiles began to reach Basra and Baghdad, as well as Makkah via Hajj pilgrims. To the east, it went to Java and China, where in the early 14th century the traveler Ibn Battuta wrote that it was highly prized. He noted that among the presents sent by the Delhi Sultan Muhammad ibn Tughluq to the Yuan emperor in China were 100 pieces each of five varieties of cloth: Four were from Bengal, named by Ibn Battuta as *bayrami*, *salabiyya*, *shirinbaf* and *shanbaf*.



Thriving only along riverbanks near Dhaka and to its south, *Gossypium arboreum* var. *neglecta*, known locally as *phuti karpas*, was spun to create threads that maintained tensile strength at counts higher than any other cotton species. But *phuti karpas* defied transplanting to other locations, and British colonial policy eliminated it: Although cultivars may remain, they are unconfirmed. This sample is preserved in Kolkata, India.

boat, a full-sized handloom and a series of muslin dresses scrupulously recreated from famous collections.

THE PRODUCTION PROCESS FOR DHAKA MUSLIN was spectacularly demanding from beginning to end. The cotton plant itself, *phuti karpas* (*Gossypium arboreum* var. *neglecta*), not only was unique to the area, but also only grew, as the British Commercial Resident in Dhaka James Taylor wrote in 1800, in “a tract of land ... twelve miles south-east of Dacca, along the banks of the Meghna.”

All attempts—and there were many—to grow it outside that one natural habitat failed. Its fibers were the silkiest of all. Contrary to all cotton logic, when soaked in the Meghna’s waters they shrank instead of swelling and dissolving. Alternate sections of its ribbon-like structure flattened and actually became stronger so that even the ultra-thin thread spun from it could withstand the stress when wound in the frame of the loom.

This thread was spun in intensely humid conditions, usually in the morning and evening, and then only by young women, whose supple fingers worked with water bowls around them to moisten the air, or else beside riverbanks or on moored boats. They often sang as they spun, and if the river was shrouded in fog, passing travelers brought back tales of muslin being made by mermaids singing in the mist.

Even the seeds for the next planting season were specially treated to keep them ready to germinate. After being carefully selected and dried in the sun, they were put in an earthen pot

While all travelers to the region waxed lyrical about Bengal’s fine cotton cloth, it was the first-century CE Roman author Petronius who, in *Satyricon*, formulated the dominant trope about muslin as *ventus textilis* (woven wind): “Thy bride might as well clothe herself with a garment of the wind as stand forth publicly naked under her clouds of muslin.”

SO WHAT MADE IT SO SPECIAL, so translucent, so softly gossamer? How did Dhaka—and only Dhaka—produce this finest of muslin?

This question lay at the heart of the exhibition. Wall-mounted videos showed each step of this lost art, from the sloping riverbanks where cotton plants flourished to the final bales of muslin ready for shipping. The waters of the great Meghna river sloshed on speakers and heaved on a huge screen as a background refrain to a display of manuscripts, documents, photos and illustrations, books and coins, tools of the trade—including a startlingly fine-toothed *boalee* (catfish) jawbone that even now seemingly strained to catch debris from raw cotton—Gandhian spinning wheels, a rough-hewn country



in which *ghee* (clarified butter) had been kept. Its mouth was sealed airtight, then it was hung from the ceiling of the hut at the height of an average individual over the kitchen fire to keep it moderately warm.

The most delicate, the very lightest of fibers were spun into muslin thread, and this was obtained by using a *dhunkar*, a bamboo bow tautly strung with catgut. The special bow for muslin cotton was small, and only women did the work—presumably because a light touch was needed. When it was strummed (*dhun* also means a light raga in classical Indian music) in a distinctive way, the lightest fleece from the cotton pile separated from the heavier fibers and rose into the air. One theory is that the strumming, by vibrating the air over the cotton pile, reduced its pressure enough to allow the very lightest fibers

WHEN THE *DHUNKAR* WAS
STRUMMED, THE LIGHTEST
FIBERS ROSE INTO THE AIR.
THESE MADE MUSLIN.

to be pulled upward. It was these finest of fibers—a mere eight percent of the total cotton harvest—that went into the making of the finest muslin.

Indeed, Dhaka muslin was woven out of air.

IT WAS LATE IN THE AFTERNOON when I left the museum and hopped on a rick-

shaw to head home. All around me cars, buses, vans, auto-rickshaws and motorbikes screeched, squealed and caterwauled. Crowds jammed the pavements, spilling on to the streets. Beggars implored; urchins scurried. Dhaka by any measure is the most crowded city in the world, a metropolis lightyears removed from the small town I had known when I first heard of muslin as a boy. It seemed unreal that this was the place that had once produced that fabled fabric. It seemed even more improbable still that it would do so ever again.

And yet, hanging airily from the ceiling at the exhibition, there was a freshly woven length of transparent cotton labeled, “New Age Muslin.”

MUGHAL EMPERORS wore dresses made of Dhaka muslin, and this became another crucial signifier of its quality. In the Mughal scheme of things, all authority and power was vested in the emperor, who manifested a God-given “radiance.” The display of pomp and the magnificence of the imperial lifestyle, therefore, was not merely personal gratification as much as it was political expression, an essential display of the empire’s grandeur.

Left: Fourth-generation cotton farmer Mohammad Nasim, of Gazipur, Bangladesh. Although Bangladesh is today a major exporter of ready-made cotton clothing, since the colonial era it has imported all but a fraction of the industry’s cotton.

Lower: A few of the more than 50 tools used by specialists to make the muslin weaver’s *shana* (ultrafine-toothed reed comb) from a dense bamboo called *mahal* that allows for the setting of more than 1,000 teeth per meter. On a loom, shanas keep separation among spiderweb-thin warp threads.



Lined with countless fine, razor-sharp teeth, the upper jaw of a *boalee* (catfish) was used for combing *kar-pas* (raw cotton) to clean it before ginning and spinning.



Muslin, by being worn by the emperor, became a part of the Mughal apparatus of power.

Few dynasties in the world have had the artistic sensibilities of the Mughal emperors, which they displayed in remarkably integrated forms of architecture, literature, gardens, painting, calligraphy, vast imperial libraries, public ceremonies and carpets. The Mughals often embellished their muslin-wear with Persian-derived motifs called *buti* and embroidery known as *chikankari*. More crucially, they incorporated it within their aesthetic framework, giving names that drew on the idioms and images of classical Persian poetry for the different varieties of muslin: *abrawan* (flowing water); *shabnam* (evening dew); *tanzeb* (ornament of the body); *nayansukh* (pleasing to the eye); and more. Although Bengal was ruled by Muslims from the 13th century onwards, it was Emperor Akbar's general Islam Khan who re-cast Dhaka as Bengal's capital, giving it distinct Mughal contours. It was during Akbar's half century of reign in the late 16th century that *mulmul khas* ("special clothing," or muslin diaphanously fine) began to be made exclusively for the emperor and the imperial household. It was Akbar again who deemed muslin suitable for India's summers and who designed the Mughal *jama*, men's outerwear with fitted top and a pleated skirt falling to below the knees.

There are many stories about the translucent quality of the mulmul khas. One of the most enduring is that of Emperor Aurangzeb chiding his daughter princess Zeb-un-Nisa, a poet well-versed in astronomy, mathematics and Islamic theology, for appearing in transparent dress in court. She replied, to the astonishment of her father, that her dress, in fact, consisted of seven separate layers of muslin.

A HANDLOOM RESTED ON THE FLOOR at the exhibition, the kind that once wove muslin. It was the Indian pit treadle loom, one that has remained relatively unchanged over roughly 4,000 years. It was a thing of bamboo and rope, at which the weaver sat with his feet in a pit dug below to operate the treadles. I walked around it, looking at it from all sides, baffled that this rudimentary construction had snared whole empires in its almost invisible threads.

Weaving is as old as Bengal, conspicuously present in its



Although muslin weaving is nearly non-existent today, pit-loom workshops such as this one in Sonargaon, near Dhaka, continue to produce *jamdani* saris, which most likely take their name from Persian words meaning a vase of flowers. Delicate yet far less fine than true muslin, jamdani is made by weavers who have kept alive the tradition of fine weaving in Bangladesh. Yet as one weaver pointed out wryly, he could earn twice as much in a factory, so "being a weaver makes little sense. It's more a habit than a profession."

oldest literature. In the *Charyapadas* of the 10th century, written on palm leaves in the oldest form of the Bengali language yet known, the loom, yarn and weaving represent mystical concepts. Weavers populate the *mangalkavyas* written by medieval Bengali poets; they are also present in older ballads, chants and songs as well as depicted in terra-cotta.

On the museum walls were photos of weavers and spinners, the women and men behind the magic fabric. Faces of rural Bengal—sunburnt, lean, teeth stained with *paan*, stoic. It was impossibly backbreaking, mind-numbing labor, supported fore and aft by large groups of farmers, washers, cleaners, dyers, sewers, embroiderers and balers, all



On view in February at the Bangladesh National Museum in Dhaka, the exhibition “Muslin Revival” drew more than 10,000 visitors a day, setting a record for the most-visited exhibit to date.

organized, in typically Indian fashion, by religion and caste.

How did they do it? How did they make a storied cloth that, when wet with evening dew, became invisible against the grass below? German scholar Annemarie Schimmel put it well when she wrote of their “unsurpassed ability to create amazing works of art with tools which appear extremely primitive today.... Who today could weave the fabric described as ‘woven air’?”

DHAKA’S MUSLIN was felled by colonialism’s potent mix of the Industrial Revolution and the Maxim gun.

Before that fall, though, there was another rise. Europeans came to India at the beginning of the 16th century and were astonished not only at the quality and volume of its cotton textiles, but also by its extensive, far-flung trade. Soon Indian cotton textiles were exported more than ever to Europe, in exponentially increasing volumes, with Bengal taking the lion’s share. Fortunes were made. As the economist K. N. Chaudhuri noted, from the earliest times “exports from eastern India ... were a perennial source of prosperity to merchants of every nation.”

At its peak, muslin was on display

In the Bangla language, a place where muslin was made and sold was called *arong*, and the largest arong was at Panam Nagar, in Sonargaon, where the East India Company factory was located. It now stands as a reminder of how what was once the cloth of emperors was felled by an industrializing, colonial economy.

at the French court where, at the close of the 18th century, Empress Josephine’s muslin dresses set the course for the Empire Line style in France and later in Regency-era Britain. That style centered around muslin, since only “filmy muslin,” wrote Christine Kortsch, author of *Dress Culture in Late Victorian Women’s Fiction*, “clung Greek-like to the body ... and no color would do but white.”

But muslin’s days were numbered. The British colonial apparatus, whether in the form of the East India Company or as direct rule by the Crown, was a vast extractive



machine. So too had been the Mughal state, which had herded the weavers into designated workshops called *kothis* to labor in harsh, even punitive, conditions. But compared to the pitiless operations of the British, the Mughals were models of mercy. On one side, both Company and Crown squeezed the farmers and the weavers until nothing was left, then squeezed some more. On the other, a factory-produced, mass-product “muslin” rolled off the newly invented power looms in Lancashire cotton mills. Aided by a raft of tariffs, duties and taxes, British cotton textiles flooded not only the European markets, but the Indian ones as well, bringing Bengal’s handloom cotton industry, and muslin, to its knees.

Along the riverbanks, phuti karpas became extinct. Famines swept through the previously fertile land of Bengal, and spinners and weavers changed occupations, fled from their villages or starved. Only *jamdani*, known as “figured muslin” due to the flower and abstract motifs woven on it, survived to the present times.

THE MUSLIN FESTIVAL culminated an arduous two-year effort by a small research team affiliated with Drik Picture

Weaving age-old motifs into a sari of “New Age Muslin,” master weaver Al-Amin received support last year from Drik, the National Museum and the crafts NGO Aarong to begin a revival initiative.

Library, a Dhaka nonprofit that began in the 1990s and has since evolved into a cultural institution aiming to change representations of Bangladesh. At Drik’s offices, where youthful energy and defiant political posters underline a

buoyant commitment to social issues, I talked with Saiful Islam, its CEO and author of the exhibition’s book *Muslin: Our Story* (and, I should add, my younger brother). He and his team pursued cotton species and fabrics; sought out vanishing communities of handloom weavers and spinners; and interviewed historians and

fashion designers on three continents as well across the length and breadth of Bangladesh.

“I have many wonderful memories,” he said. “Once, when I was staying overnight with one weaver family, they laid out a hearty supper. Afterwards, when I wanted to sleep, they brought in a bed that had been made specially for my stay. I was a city guy, and they wouldn’t let me sleep in the rough. Our village folks might be poor, but they are amazingly hospitable.”

Drik, partnering with the National Museum and Aarong (the crafts division of BRAC, the globally known NGO based in Bangladesh), capped its efforts by recreating a fabric close to the muslin of old: “New Age Muslin.” It has located a plant that could be the phuti karpas. “We will know for sure,” he said, “once the complex lab tests are done.” It was also gratifying, he said, “to see the general rise in the public awareness of the extent to which muslin is part of Bangladesh’s heritage and history.” But “it is now up to Bangladesh, its government and people, to take it forward.”

Dhaka’s muslin awaits the next chapter of its history. So does, I am sure, my father, who died in 1984, but who is no doubt looking down from somewhere up there with considerable interest. 🌐

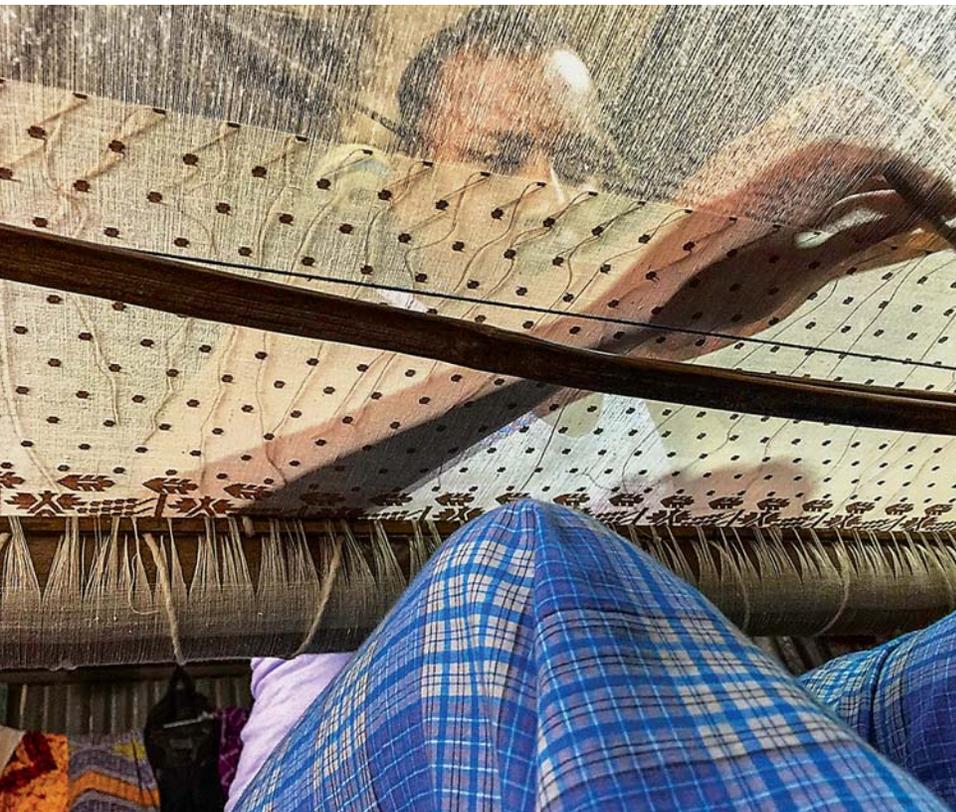


Khademul Islam (bengalkid@gmail.com) is a writer and translator. He is currently working on a nonfiction book forthcoming from Bloomsbury UK.

 <http://bengalmuslin.com>

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 **For Further Reading**
Muslin: Our Story. Saiful Islam. 2016, Drik Picture Library Ltd., 978-984-34-0013-0. BDT 3500/\$50/£35 hb. Inquiries: prince@drik.net





MALIKA

مَلِكَة

Written by TOM VERDE
Art by LEONOR SOLANS

RADIYYA BINT ILTUTMISH

From Bangladesh to Pakistan, Kyrgyzstan to Nigeria, Senegal to Turkey, it is not particularly rare in our own times for women in Muslim-majority countries to be appointed and elected to high offices—including heads of state. Nor has it ever been.

Stretching back more than 14 centuries to the advent of Islam, women have held positions among many ruling elites, from *malikas*, or queens, to powerful advisors. Some ascended to rule in their own right; others rose as regents for incapacitated husbands or male successors yet too young for a throne. Some proved insightful administrators, courageous military commanders or both; others differed little from equally flawed, power-seeking male potentates, and they sowed the seeds of their own downfalls.

This series presents some of the most notable historical female leaders of Muslim dynasties, empires and caliphates.

Our second story takes us to the court of the Sultanate of Delhi. Its founder, Qutbu-ud-din Aibek, a Mamluk slave general from southern Kazakhstan, died from injuries sustained playing polo after only four years of rule. His son Aram Shah held the throne only for months before his own death at the hands of forces loyal to his brother-in-law, Shams-ud-din Iltutmish. The year was 1211.



As Sultan of Delhi over the next quarter century, Shams-ud-din Iltutmish proved extraordinarily able. Backed by the *umara chihalgani* (forty amirs), the elite corps of Turkic nobles, he extended the Sultanate's realm from the Khyber Pass, along today's Afghanistan-Pakistan border, east to the Bay of Bengal, on the opposite side of the subcontinent. He won a reputation for courage, wisdom and generosity while staving off not only usurpers but also the armies of no less a threat than Genghis Khan. The strength of his sultanate allowed for endowments to religious and scholarly institutions, the standardization of a currency and support for poets and philosophers. Near what was to be the end of his reign, in 1229, he received a title and robes of honor from the Abbasid caliph in Baghdad.

A century later, the Moroccan traveler Ibn Battuta noted Iltutmish was remembered for being “just, pious and of excellent character.” As an example, Ibn Battuta recorded Iltutmish's decree that the seeking of justice be open to anyone who sought it, signaled by wearing a red-colored robe: “When [Iltutmish] held a public audience or rode out [from the royal court] and saw someone wearing a coloured robe he looked into his petition and rendered him his due from his oppressor.”

In short, upon his death in 1236, he had paved the way for his son Rukn-ud-din Firuz to inherit a stable, prosperous and highly cultured monarchy, if it hadn't been for one thing: Firuz's “inclinations were wholly towards buffoonery,” according to contemporary chronicler Minhaj al-Siraj Juzjani's *Tabaqat-i Nasiri*. Firuz's younger brother Bahram proved equally disappointing.

Aware of both his sons' shortcomings, Iltutmish had a controversial backup plan in place: He designated the office of sultan to his eldest and most self-disciplined child: Radiyya, his daughter. The 16th-century Persian historian Firishta described her as imbued “of every good quality which usually adorns the ablest princes.” During her father's reign, Firishta continued, “[she] employed herself frequently in the affairs of government; a disposition which he rather encouraged in her than otherwise, so that during the campaign in which he was engaged in the siege of Gualiar [modern Gwalior, a rival city south of Delhi], he appointed her regent during his absence.”

When the *umara chihalgani* questioned his appointment, Firishta recorded Iltutmish's attempt to reason with them: “[My] sons give themselves up to wine and every other excess and none of them possesses the capability of managing the affairs of the country.” He added that Radiyya “was better than twenty such sons.”



*Iltutmish designated
the office of sultan
to his eldest and
most self-disciplined
child: Radiyya.*

None of this stopped Firuz from shoving his step-sister aside and seizing the throne for himself upon his father's death in 1236. Or, more precisely, he had his mother, Shah Terken, do it for him. The harem's chief concubine, Shah Terken was, according to Firishta, “a monster of cruelty.” Even before Iltutmish's death, she had taken advantage of the *umara chihalgani*'s misgivings about Radiyya as a female ruler and bribed them to support Firuz.

After Iltutmish died, she set her sights quickly and directly on 31-year-old Radiyya. She arranged for a deep pit to be dug along the path where the princess frequently went horseback riding. However, the plot was discovered, and Radiyya was spared.

“The minds of the people revolted at these scenes,” wrote Firishta, and they began to rally around Radiyya. The amirs imprisoned Terken, and although they acted to advance Radiyya to the throne, Firuz retaliated militarily. This brought on the stirring gesture for which Radiyya is most remembered: Recalling her father Iltutmish's decree, on the eve of the battle, Radiyya appeared wearing not royal attire, but the red-colored

robe of one who seeks a redress of grievance. She appealed directly to the people and the army, and thus defeated Firuz, who was captured and put to death—in all likelihood together with his mother—in November 1236.

Under Radiyya, “all things returned to their usual rules and customs,” Juzjani reported. “Sultan Radiyya was a great monarch,” he observed, employing the masculine form of her title. “She was wise, just and

generous, a benefactor to her kingdom, a dispenser of justice, the protector of her subjects, and the leader of her armies ... endowed with all the qualities befitting a king," he recorded.

Still, the chronicler felt compelled to editorialize: "[B]ut she was not born of the right sex, and so in the estimation of men, all these virtues were worthless."

This, in fact, was what the power-hungry umara chihalgani was hoping for: a "worthless," subservient woman they could manipulate from behind the scenes. But Radiyya, it seems, was neither so easily fooled nor foiled. Appearing unveiled in public during the traditional royal procession, she used her first official act as sultan to set the tone for her reign as one of self-assertion and even defiance.

"She ruled as an absolute monarch [and] mounted a horse like a man, armed with bow and quiver, and without veiling her face," Ibn Battuta reported. Other historic accounts say she cut her hair short and, wearing men's robes, sat among the people in the marketplace to listen to their grievances and render judgments.

Not only did she rule astutely, but also, as historian Peter Jackson noted, she was the only sultan of her time whom Juzjani described as a military commander. Like her father, she took diplomatic steps to keep the Mongols in check, but she also put down insurgencies: She crushed a rebellion by one of the old guard who objected to her on the grounds of her sex, and she campaigned against other rival incursions. Surviving coins minted in her name were imprinted with "commander of the faithful" and "most mighty sultan."

While all this may have irked the umara chihalgani, its members didn't feel compelled to do much about it until Radiyya started threatening their job security by appointing an Ethiopian slave, Jamal ud-din Yaqut, to the post of Lord of the Stables (*Amir-i akhur*, or amir of horses, i.e., Sultan's equerry). The job commanded great prestige because it put him in daily, ear-whispering distance of the sultan. Peppering the court with spies, the nobles began digging for dirt. Lacking anything concrete, they fell back on one of the oldest political tricks in the smear-campaign handbook.

"A very great degree of familiarity was observed to exist between [Yaqut] and the Queen," wrote Firishta. Whether or not Radiyya shared more than just a master-subject relationship with Yaqut will never be truly known. What ultimately mattered, according to Jackson, "was that Radiyya sought to develop a power-base of her own and neglected the Turkish slave elite which she and Firuz had inherited from their father. Her dependence on Yaqut and his promotion to the rank of intendant of the imperial stables must be seen in this context."

To extinguish the threat, the amirs began openly to challenge the sultan. But Radiyya was beloved by the citizens, especially in Delhi, and the amirs knew that overthrowing her on her home turf would prove difficult. In the spring of 1240, they convinced one of their fellow amirs, the provincial governor of Bhatinda, Malik (King) Altunapa, to conjure up a rebellion in the Punjab as bait to lure Radiyya away from Delhi.

While she was away, the umara chihalgani had Yaqut murdered, and then they dusted off her hapless half-brother Bahram and set him on the throne.

Worse yet for Radiyya, the Bhatinda campaign proved a rout. She was captured, and Altunapa imprisoned her.

Then, in a truth-is-stranger-than-fiction twist of fate, she and Altunapa, whether from love or ambition or both, married, and he pledged to reinstate her as sultan.

The newlyweds marched upon Delhi, hoping for triumph, but their army was no match for the forces the amirs who rallied around Bahram. Deserted by their troops after a humiliating retreat, Radiyya and Altunapa, according to Juzjani, were captured and executed by Hindus near the Punjab city of Kaithal on December 25, 1240. She was 35 years old.

Ibn Battuta, however, recorded a more embellished account of her death:

Defeated, Radiyya stumbled into a farmer's field, hungry and exhausted, begging for food. The farmer gave her a crust of bread, and she fell asleep beneath a tree. Catching sight of jewels glinting in the embroidery of her garments, the farmer killed her and buried her, and "taking some of her garments, he went to the market to sell them." The plan backfired when local authorities suspected the farmer of theft, beat a confession out of him and recovered Radiyya's body. (To this day, the actual location of Radiyya's grave remains uncertain: Delhi, Kaithal and Tonk, in Rajasthan state, all claim the honor.)

Not unexpectedly, Radiyya's half-brother Bahram was deposed for incompetence after two years on the throne. The sultanate itself endured two more centuries until it fell to the Turco-Mongol conqueror Timur.

Of all the sultans of Delhi, Radiyya is perhaps the best remembered in popular culture, even eight centuries later. The subject of poems, plays, novels, Bollywood films of highly varying quality and, last year, an epic mini-series on Indian television, she continues to capture the social imagination of India and the world. ☉

To win the people's support on the eve of battle, Radiyya appeared wearing the red robe of one who seeks justice.

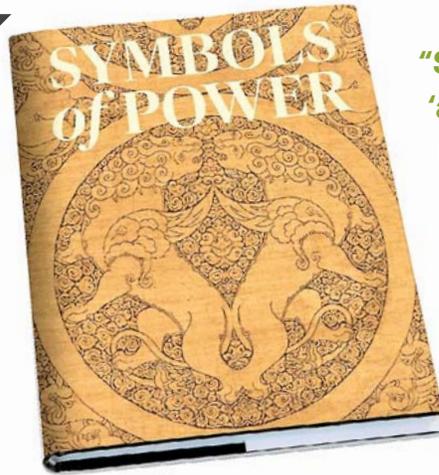
Tom Verde (tomverde.pressfolios.com) is a freelance writer from Connecticut and a regular contributor to *AramcoWorld*. **Leonor Solans** (www.leonorsolans.com) is an artist living in Granada, Spain. Art direction for the "Malika" series: Ana Carreño Leyva; calligraphy: Soraya Syed; logo graphics: Mukhtar Sanders (www.inspiraldesign.com).



REVIEWS & RECOMMENDATIONS

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

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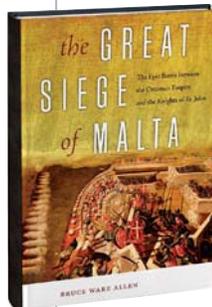
“Sultans presented gifts and letters ‘always enclosed in an embroidered cloth, kerchief or gauze,’ in an indispensable tradition... The quality of these ‘envelopes’ was revealed by the raw materials, ground fabric, gilt-metals and dyed silk thread, and the caliber of the stitches, all of which were instantly evaluated in a textile society permeated with embroiderers.”

—Chapter 8, “Ottoman Turkey 1453-1924”

Symbols of Power: Luxury Textiles from Islamic Lands, 7th-21st Century.

Louise W. Mackie. 2015, Yale UP, 978-0-30020-609-8, \$85 hb. Ubiquitous, portable, polyvalent and beautiful, textiles generally offer a window into the commercial ties, cultural and technological exchanges, and political and social dynamics of the societies that produce them. And when Louise Mackie writes that luxury textiles are “a missing link in understanding the visual arts, culture and history of Islamic lands,” it is no exaggeration, as comes clear in her ambitious survey. She begins by laying out the various functions of textiles, as well as the materials and techniques commonly used in their making, and then moves chronologically through Islamic cultures. Each chapter begins with the historical and social context of a particular culture, followed by a discussion of designs and technologies that evolved within it, and ends with studies of select examples. Mackie draws extensively but by no means exclusively on the prized collection of the Cleveland Museum of Art, where she is curator of Textiles and Islamic Art. Throughout, her explanations are clear, her use of photographs extensive and her prose engaging. Add to this a useful glossary and appendices illustrating different weaves, and you have a book that is itself a rare luxury: an invaluable reference book that is also a joy to read. And that is no exaggeration.

—LEE LAWRENCE



The Great Siege of Malta, The Epic Battle between the Ottoman Empire and the Knights of St. John.

Bruce Ware Allen. 2015, University Press of New England, 978-1-61168-765-1, \$29.95 hb. In 1521 Ottoman Sultan Suleiman the

Great ejected the Knights of St. John from their fortress on Rhode, generously allowing those who surrendered to go free. It was an act he would regret. By 1531 the knights had established themselves on the isle of Malta, where they resumed plundering Ottoman shipping. This time Suleiman would give no quarter. In 1565 an Ottoman fleet arrived to begin a siege that the Sultan fully expected would lead to an easy victory, but it was not to be. Thanks to the tenacity of

the knights and the last-minute arrival of a volunteer relief force, the Order of St. John finally prevailed. The consequences were profound, for the victory redirected “the Ottoman flow away from the Mediterranean’s northern shores and back toward Africa,” writes Bruce Ware Allen in his extensively researched account of the clash. He details the motivations of Christian and Ottoman commanders in this gripping study, giving equal weight to the bravery and ingenuity on both sides in one of the epic battles of the 16th century.

—JANE WALDRON GRUTZ

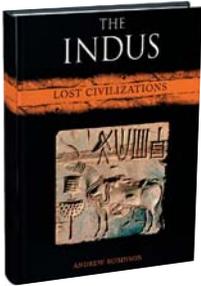
based on shipwrecks from ancient times until today. Some of the vessels are discovered wrecks; others are lost ships known to history but never found. Each had a significant impact on history, with good archeological or textual documentation backing up its role. The oldest is a nine-meter dugout carved from an African mahogany tree 8,000 years ago and excavated in Dufuna, Nigeria. The newest is the *Costa Concordia*, the cruise ship that ran aground off western Italy in 2012. Gordon links each vessel with the world in which it flourished and shows the spread of globalization via trade, exploration or conquest. He also excels at details. Describing the *Uluburun* shipwreck, a 3,000-year-old Eastern Mediterranean cargo ship found off western Turkey, he notes that the pomegranate seeds and skin fragments in jars amid the wreckage tell much about its trade mission. In those days, pomegranates were grown only in the Caspian region, and the tasty red fruits, with a rich mythical lore, were a high-value export destined for tables of the elites of the Levant.

—ROBERT W. LEBLING



A History of the World in Sixteen Shipwrecks.

Stewart Gordon. 2015, ForeEdge, 978-1-61168-540-4, \$29.95 hb. Stewart Gordon, a specialist in Asian history, has produced an intriguing chronicle



The Indus: Lost Civilizations.

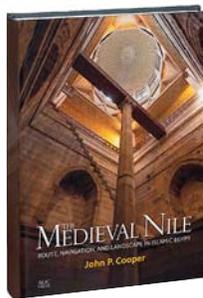
Andrew Robinson. 2015, Reaktion Books, 978-1-78023-502-8, \$25 pb. The Indus or Harappan civilization, the third oldest after those of Mesopotamia

and Egypt, astounds. This peaceful, egalitarian, technologically sophisticated trading empire of around one million thrived from about 2600 to 1900 BCE in more than 1,000 settlements spread over 800,000 square kilometers of what is now Pakistan, northeastern Afghanistan and the Indian states of Gujarat, Rajasthan, Haryana and Uttar Pradesh. Its two largest cities, Harappa and Mohenjo-Daro, each held 50,000 residents, rivaling Mesopotamia's Ur, the largest city of the time; and they outclassed it with advanced water and sewer systems. Regular trade networks stretched overland and along the Persian Gulf as far as Mesopotamia. Robinson presents no new theories here; he draws on the works of leading Indus scholars to compose a compact, highly readable and well-illustrated picture of the civilization from genesis to puzzling decline, and legacies including aspects of Hinduism and today's boats and carts. At a generalist level, he delves into all facets of the society including, importantly, a solid chapter on main attempts at deciphering the elusive Indus script which, if any succeed, will unlock many of the civilization's mysteries.

—GRAHAM CHANDLER

eclipses the fact that “the greatest tensions and the worst violence tended to take place among people of the same faith” and political leaders bent upon “personal and earthly agendas.” The Crusader sacking of Christian Constantinople in 1204 is a notorious example; sectarian struggles within the Fatimid state likewise fueled Islamic “jihads,” not against the invading “Franks” but fellow Muslims who posed a political threat, he writes. Populated by the famous (El Cid, Salah al-Din) and not-so-famous (Bahram Pahlavuni, aka “The Sword of Islam,” an Armenian Christian in the Fatimid court), Catlos’s account reemphasizes the enlightened view that “we cannot blame religion for the violence” of the Crusades.

—TOM VERDE

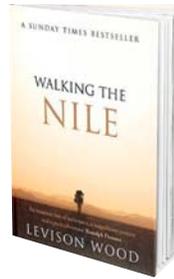


The Medieval Nile: Route, Navigation, and Landscape in Islamic Egypt.

John P. Cooper. 2014, AUC Press, 978-9-77416-614-3, \$75 hb. Viewed from above, the Nile can resemble a long-stemmed lotus or a

cobra poised for attack. The rich greens of the riverbanks contrast to the pale tans of the deserts around them, signifying life, activity and growth. From the perspective of boat pilots and sailors, the Nile is an altogether different beast. Today the river is rather docile, but before the Aswan High Dam tamed the Nile in 1964, Egypt experienced an annual flood as waters from heavy spring rains in African highlands swept down the valley en route to the Mediterranean. The author looks at Nile navigation from the boatman’s perspective, focusing on the medieval Islamic period with comparative glimpses of pre-Islamic and early modern periods. Combining ancient documents with tools of modern marine archeology, he shows that in contrast to Orientalist stereotyping the boatmen were marine problem solvers of the first order. He identifies former waterbeds that were part of the Delta network, with its many “mouths” and its inland “seaports” serving the Mediterranean trade.

—ROBERT W. LEBLING



Walking the Nile

Levison Wood. 2015, Simon & Schuster, 978-1-47113-565-1, £8.99 pb. Starting from a spring in Rwanda in late 2013, British sojourner Levison Wood sets off to

hike the Nile’s 4,000 miles from its source to its mouth. En route, he and a companion barely escape an attack by rebels in newly minted South Sudan, forcing him to accept a plane ride north to Khartoum. In his book about the journey—all but that sector on foot (or boat)—Wood interweaves stories of the people he meets with those of the river. He also covers ancient accounts of travel and travail along the waterway, writing of the Roman soldiers charged by Nero to find the Nile’s source in the first century CE, for example. (They discovered an advanced society at Meroe in Sudan but could not cross its swamps in the south.) And he introduces readers to Dr. David Livingston and his “rescuer,” Henry Stanley, among other 19th-century explorers seeking the river’s source. Nine months after embarking, Wood finally reaches his destination: the Mediterranean Sea. Although he fails to walk the whole route, that doesn’t make his journey any less triumphant. “... I was here exploring people. Constantly in flux, constantly evolving, there is always something new to discover about people” that “does not make it into our headlines,” he writes near the outset. He brilliantly succeeds in that task.

—ARTHUR CLARK

languages before embarking in 1892 on travel throughout the Middle East—much of it by horse and camel—that occupied the rest of her life. Bell’s political dispatches to the British government and military during World War I provided the detailed knowledge of desert wells and complex tribal alliances that helped defeat Ottoman forces in the region. Her acquaintance with rulers there gave her advice even more weight. At the war’s conclusion, she was instrumental in establishing the states of Transjordan and Iraq and the coronation of their first kings, then in establishing the Iraq Museum. Bell died in Baghdad in 1926, two days short of her 58th birthday.

—WILLIAM TRACY

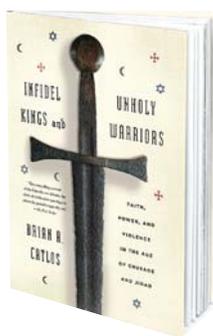


Salam Neighbor.

Mohab Khattab and Salam Darwaza, producers. 2016, www.livingonone.org and 1001 Media.

This is the best film to date for beginning to understand the daily lives of people fleeing war in Syria. American filmmakers Chris Temple and Zach Ingrasci, producers of the *Living on One Dollar* YouTube series, teamed up with 1001 Media and interpreter Ibraheem Shaheen to set up a tent for a month in Za’atari, the largest Syrian refugee camp established by the UN, in northern Jordan. Each day they visited and shared tea, food lines, meals and conversation with neighbors Ismail, Um Ali, Ghousseon, Ghassem, Raoul and others. Perhaps most surprising is the energetic entrepreneurship of so many they talk to—a resilience that, despite trauma and loss, dispels stereotypes of refugees as dependents lacking initiative. After the film’s 75-minute runtime, you can go to the website to learn and connect. Temple and Ingrasci stand among the best of a rising generation of activist-humanist visual journalists, driven by compassionate curiosity. Not released commercially, *Salam Neighbor* can be booked online for screening.

—RICHARD DOUGHTY



Infidel Kings and Unholy Warriors: Faith, Power, and Violence in the Age of Crusade and Jihad.

Brian A. Catlos. 2014, Farrar, Straus and Giroux, 978-0-80905-837-2, \$28 hb. Despite the growing body of revisionist histories of the

Crusades, these medieval “holy” wars still “invite preconceptions,” states Catlos at the outset of this engaging study. He warns that polarizing the Crusades in terms of East vs. West, Christian vs. Muslim (and Jew), and orthodoxy vs. heresy



A Woman in Arabia: The Writings of the Queen of the Desert.

Gertrude Bell. Georgina Howell, ed. 2015, Penguin Classics, 978-0-14310-737-8, \$17 pb. These neatly assembled excerpts

from Gertrude Bell’s remarkable Middle Eastern diaries and almost daily letters to parents and friends highlight the career of an exceptional traveler-diplomat-intelligence officer who excelled in a male-dominated world. Born into a wealthy British family in 1858, Bell studied history at Oxford University. She mastered mountaineering, photography, mapmaking, archeology and six



EVENTS & EXHIBITIONS

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CURRENT

CURRENT MAY

Hajra Waheed: *The Cyphers*. The largest solo exhibition ever by the Montreal-based mixed-media artist expands upon a recent presentation at Kunst-Werke, Berlin, *Still Against the Sky*. This exhibition continues her research into what has been described as “our current aerial occupation,” highlighting the ever-increasing militarization of the sky through military drones and surveillance technology, often with lethal consequences. Against the backdrop of borderless spatial power games, Waheed’s drawings, collages, videos and photo-based works emerge in the form of archives, fragments and field notes. The materials the artist enlists construct new stories about unstable histories. BALTIC Centre for Contemporary Art, **Gateshead, UK**, through May 30.

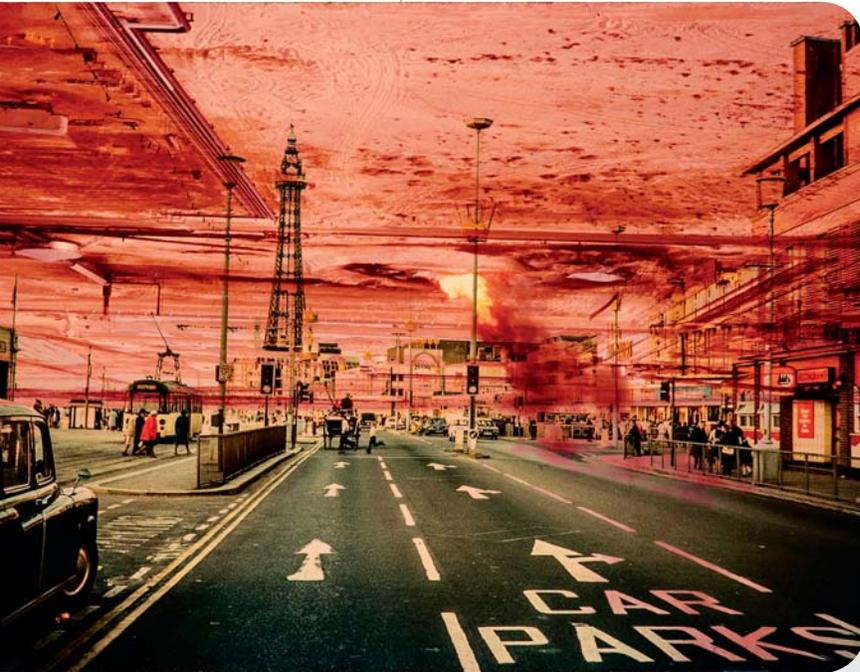
CURRENT JULY

Between Myth and Fright: *The Mediterranean as Conflict*. Devoted to a sociocultural analysis of the Mediterranean region, this show questions whether the region as an area exists more as a cultural, political or social entity. Arranged in two parts, the exhibit first reflects on the myth produced largely by intellectuals from the north of Europe who traveled south in search of a lost Arcadia. The second and more contemporary part of the exhibition reflects on the transition from that idealized view to one of “fright,” which sees the Mediterranean as an area of permanent conflict faced with immigration, inequality, racism and impassable frontiers. The Institut **Valencià d’Art Modern**, through July 3.

Ruined: *When Cities Fall*. Presented in conjunction with *Megacities Asia*, this exhibition of works on paper explores what happens when cities fade. Artists have long been fascinated with scenes of ruin and devastation, and about 40 works drawn from the museum’s collection provide a look at the mortality of great cities. “Ruined” begins in the Renaissance, when the withered bones of ancient Rome provided artists and scholars with both a source of inspiration and a cautionary tale. Later, the cities of ancient Greece, Egypt

and the Near East also loomed in European imagination. The exhibition includes early photographs of Athens, as well as Egyptian temples and 18th- and 19th-century views of Palmyra. The show also features works that capture destructive forces, including images of the great fire of Boston, the empty buildings of Richmond after the Civil War and the charred remains of Dresden after the firebombing of 1945. Museum of Fine Arts, **Boston**, through July 17.

Court and Cosmos: *The Great Age of the Seljuqs*. One of the most productive periods in the history of the region from Iran to Anatolia (Turkey) corresponds to the rule of the Seljuqs and their immediate successors, from 1038 to 1307. The Seljuqs were a Turkic dynasty of Central Asian nomadic origin that in a short time conquered a vast territory of West Asia stretching from present-day Turkmenistan through Iran, Iraq and Syria, and into Turkey. The lands controlled by the Seljuqs were not a unified empire, but controlled by various branches of the Seljuqs and their successor dynasties (Rum Seljuqs, Artuquids, Zangids and others). Under Seljuq rule, the exchange and synthesis of diverse traditions—including Turkmen, Perso-Arabo-Islamic, Byzantine, Armenian, Crusader and other Christian cultures—accompanied economic prosperity, advances in science and technology, and a great flowering of culture within the realm. This landmark international-loan exhibition features spectacular works of art created in the 11th through 13th



Ahmed Mater, “Crisis,” from the series *Ashab al-Lal/Fault Mirage: A Thousand Lost Years*, wood slide viewer with glass slide.

journeys observing economic and urban change. This is his first us solo show, and it debuts new works based on his extensive research on urban development in Riyadh. Sackler Gallery, **Washington, D.C.**, through September 18.

SYMBOLIC CITIES: *The Work of Ahmed Mater*

Born in 1979 in southern Saudi Arabia and trained as a medical doctor, Ahmed Mater has been a practicing artist since the early 1990s, creating works that offer an unparalleled perspective on contemporary Saudi Arabia. Now based in Jiddah, since 2010 Mater has focused primarily on photography and video. From abandoned desert cities to the extraordinary, sweeping transformation of urban Makkah, “Symbolic Cities” presents his visual and aural

COURTESY OF THE ARTIST AND ATHR GALLERY



century from Turkmenistan to the Mediterranean. Approximately 270 objects—including ceramics, glass, stucco, works on paper, woodwork, textiles and metalwork—from American, European and Middle Eastern public and private collections are shown. Among the highlights are a dozen important loans from Turkmenistan, marking the first time that Turkmenistan as an independent country has permitted an extended loan of a group of objects to a museum in the us. The Metropolitan Museum of Art, **New York**, through July 24.

She Who Tells a Story: Women Photographers from Iran and the Arab World is a landmark exhibition of more than 80 photographers that challenges stereotypes surrounding the people, landscapes and cultures of its subject regions. Refuting the conventional idea that Iranian and Arab women are oppressed and powerless, and illuminating the fact that women are in fact creating some of the most significant photographic work in the region today, the exhibit's title is inspired by the Arabic word *rawi'ya*, which means "she who tells a story." (It is also the name of a collective of women photographers founded in 2009 and based in the Middle East.) Developing an expansive series of images that create sophisticated, nuanced narratives about identities, events and social and political landscapes, each artist offers a vision of the world she has witnessed, inviting viewers to reconsider their own preconceptions about the nature of politics, family and personal identities in the greater Middle

East. National Museum of Women in the Arts, **Washington, D.C.**, through July 31.

CURRENT AUGUST

An Oasis in Glass showcases fourth-century mosaics, beads, flasks and other glass objects created during the Roman occupation of Syria and Egypt. Displayed in a space that replicates the desert's dunes and wide expanses, each object serves as a kind of tiny experiential oasis where light boxes amplify the works' sparkle and transparency. The show also incorporates themes from classical Arabic poetry. Cantor Arts Center at **Stanford University, California**, through August 8.

Des trésors à porter: Bijoux et parures du Maghreb (Treasures to Wear: Jewelry and Ornaments of the Maghrib) explores the world of women's ornamentation through the jewelry of the Maghrib, on display for the first time from the Bouvier collection. These precious metal-jewelry pieces—silver and gold-plated silver—produced and distributed in urban or rural areas, cover a period from the mid-19th century to the first half of the 20th century. The jewelry reveals the inventiveness and expertise of the artisans and individuals who shaped them. Ornaments from Morocco, Algeria and Tunisia are characterized by a rich corpus of head ornaments, earrings, necklaces, brooches, bracelets and anklets—all possessing functions that are utilitarian as well as decorative. The variety of forms, designs and craftsmanship

reflects the diversity of peoples and identities of the regions of North Africa today. Institut du Monde Arabe, **Paris**, through August 28.

CURRENT SEPTEMBER

Jardins d'Orient (Gardens of the East). Western appreciation for gardens is a product of the East: Well before becoming a national emblem of the Netherlands, for example, the tulip was highly prized by Ottoman sultans who lavished countless tulips on foreign dignitaries and allies. No less is the concept behind the modern park in Western cities an import from the East. The very word "paradise" was born from the Persian *pairi-daeza*—meaning enclosure. This exhibition serves as a modern interpretation of the Eastern garden, incorporating the many facets of its ancient art, including a promenade of pink and orange trees, palms and jasmine that lead to the discovery of variegated vegetation, as imagined by Francois Abelanet. Tracing the history of Eastern gardens from ancient times to the most contemporary innovations, from the Iberian Peninsula to the Indian subcontinent, the exhibition garden is accompanied by some 300 works of art on loan by major international and private collections that recall the ingenuity and talent behind the horticulturists of the past. The arts of gardens—culture, history, art, botany, environment and society—are addressed in all their aspects. Institut du Monde Arabe, **Paris**, through September 25.

CURRENT OCTOBER

Harun Farocki: Empathy. Two years after the death of Germany-based Harun Farocki, Fundació Antoni Tàpies, in collaboration with the Institut Valencià d'Art Modern, presents the second half of a project that brings together the more than 120 films and installations of an author whose career as a filmmaker, artist, critic and activist made him a seminal figure of the second half of the 20th century. While the selection at IVAM focuses on his research on surveillance cameras and the "technification" of vision, the exhibition presents a series of emblematic works analyzing new forms of labor arising from capitalist production demand, especially those that require the mobilization of more subjective and human aspects than those hitherto employed. The notion of empathy, taken from a text by Farocki, guided the selection of works. Farocki's work is founded on an idea of cinema as something that avoids the illusions of an innocent image in favor of ideological transmission. Fundació Antoni Tàpies, **Barcelona**, through October 16.

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AramcoWorld (ISSN 1530-5821) is published bimonthly by the Aramco Services Company, 9009 West Loop South, Houston, Texas 77096-1799, USA.

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POSTMASTER: Send address changes to AramcoWorld, Box 2106, Houston, Texas 77252-2106.

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