



January/February 2007

# Saudi Aramco **world**

The Art of Integration



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## 2 Effat's New Roses

Written by Kay Hardy Campbell  
Photographed by Nicole LeCorgne

HH Princess Effat al-Thunayyan, whose husband, King Faisal, ruled Saudi Arabia from 1964 to 1975, was an avid rose gardener by avocation. But she is best remembered as the kingdom's pioneer advocate of education for girls and women. In 1999, a few months before she died, she opened the kingdom's first private women's college, and last year, 53 graduates of Effat College each received a diploma—and a rose.

## The Barb

Written by Jane Grutz

"Small and not very beautiful, but extraordinarily fast and strong" was what a second-century Roman wrote of the North African horse that became known as the Berber or "Barb." Later, it was from Barbs that Muslims in al-Andalus bred some of Europe's most prized horses, and it was Barbs the Spanish brought to the New World. There, the Barbs became buffalo-hunting horses and the wild mustangs of the American plains.



## 18 The Next Generation of Superheroes

Written by Piney Kesting  
Photographs and Illustrations Courtesy of Teshkeel Media Group

"It was a time of dark and light," begins the story. It is set in the year 1258, with the Mongol army poised for plunder outside Baghdad. In desperation, keepers of the great libraries forge 99 magical stones, the Noor Stones, into which they pour the wisdom of the ages. The stones are then lost—until now, as young people around the world start finding them and discovering that each stone gives its bearer a superpower: one of the 99 attributes of God, as revealed in the Qur'an. *The 99* is the first international comic series based on Islamic archetypes.



Cover:



British artist Zarah Hussain holds a master's degree from the Visual Islamic and Traditional Arts program at The Prince's School of Traditional Arts in London. Finding Op Art patterns "clinical and cold," she turned toward her own cultural heritage. The geometric rhythms of Islamic patterns, she says, "captured my eyes, heart and mind. The contemplation of these 'spider webs of God' molds my soul." An exhibit of her work is on view in London through January 18. Photo by Peter Sanders.

Back Cover:



In the inaugural issue of *The 99*, Buran is an assistant to Dr. Ramzi Razem, who has dedicated his career to a search for the 99 lost Noor Stones. Buran ushers Dana, who has recently found a Noor Stone, into a meeting with Jabbar, who was the first to find one. Art courtesy of Teshkeel Media Group.

## 24 The Art of Integration

Photographed by Peter Sanders

How to be both British and Muslim is a question that goes back more than a century to the first mosques built in Britain, and different degrees of assimilation and separateness characterize not only different Muslims groups in the UK, but also different individuals. One of the UK's leading photographers has taken a studied look at a selection of places, people and trends that are helping Britain and Islam find common ground.



## 34 Seas Beneath the Sands

Written by Louis Werner  
Photographed by Kevin Bubriski

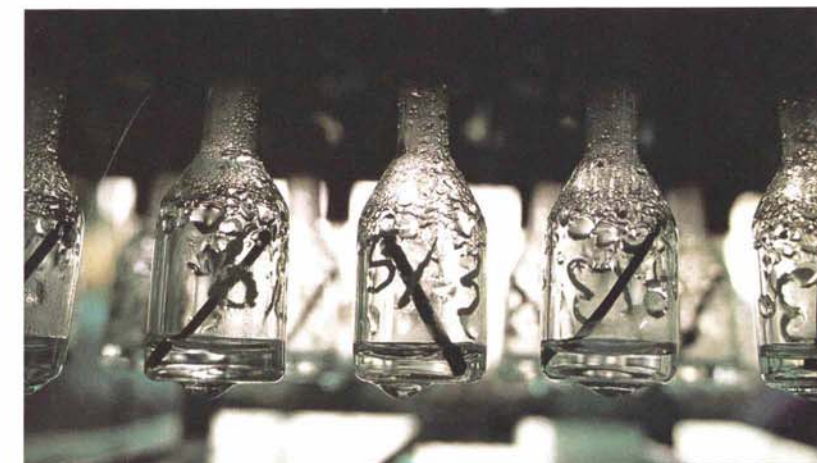
Quick—name Egypt's largest water resource. Hint: It's *not* the Nile. The International Atomic Energy Agency, co-winner of the 2005 Nobel Peace Prize, knows the answer, and with the Egyptian government it is using isotope marker technology to map the Nubian Sandstone Aquifer System. Never heard of it? That's not surprising: It's all beneath the desert.

## 40 Classroom Guide

Written by Julie Weiss

## 42 Annual Index 2006

## 46 Events & Exhibitions



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## Effat's New Roses

*It might have been any evening on a city college campus.*

The buildings glowed pink in the sunset, sparrows twittered in the trees, and evening traffic echoed in the distance. Normally, at that hour, few students or faculty might pass by, yet that night, as the time of the evening call to prayer drew near, there were more voices than usual, punctuated by the clicking of many high-heeled shoes. It was graduation night at Effat College, Saudi Arabia's first private college for women.

Fifty-three young women gathered, greeting friends in the traditional way of the Hijaz, western Saudi Arabia: one kiss on the right cheek, three on the left. They walked in groups along the shaded portico, past the swimming pool, to the air-conditioned basketball court. There, they put on silk baccalaureate gowns of turquoise and blue. A few had small children in tow. In the auditorium, mothers, sisters, aunts and cousins waited expectantly.

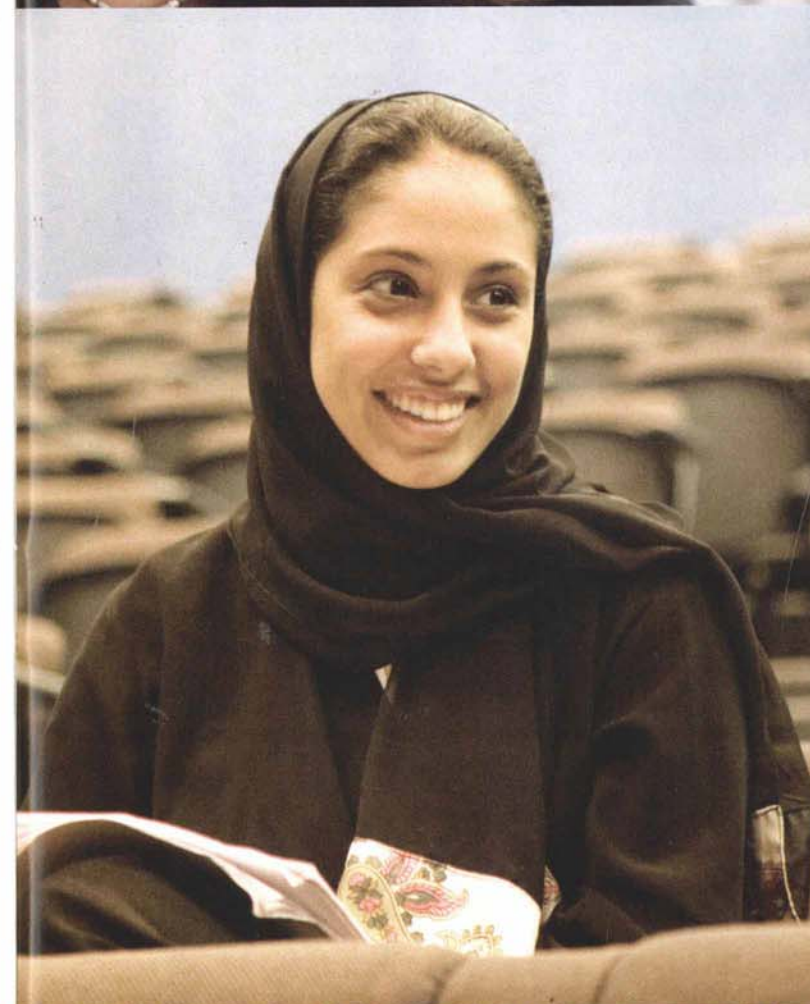
It was a moment that fulfilled a dream of the college's founder, HH Princess Effat al-Thunayyan, whose husband, the late King Faisal ibn 'Abd al-'Aziz, ruled the country from 1964

until 1975. With the support of her children and a team of Saudi and international experts, she opened the college for women in August of 1999, just months before she died, capping a lifetime of advocacy for women's and girls' education.

From that beginning with 30 students, Effat College grew rapidly, setting as its goal the preparation of Saudi women to take up leadership roles in the new century, from the academy and the business world to the home and society at large. Taught by faculty from Saudi Arabia and more than a dozen countries, the college's curriculum has grown in partnership with leading US institutions, including Duke and Georgetown universities and Mount Holyoke and Wilson colleges. By 2006, Effat College's 250 students were choosing among nine majors, including business administration, psychology, architecture and engineering. All classes are taught in English, and the curriculum is designed around US liberal-arts models.

Effat College's campus stands on Jiddah's south side, near a water tower and the grounds of the old Khuzam Palace. The campus occupies part of the former grounds of Dar al-Hanan, the first private school for girls in Saudi Arabia, also founded by Princess Effat—often known affectionately as

Above: This year, 53 graduates of Effat College donned caps and gowns before receiving their diplomas. Each graduate also received a red rose—a reminder, perhaps, that Princess Effat Al-Thunayyan was an avid rose gardener in her lifetime. Opposite, top left: Kerry Laufer, a Swarthmore graduate and now vice dean for institutional development and quality control, is one of the many Americans who have helped the college's development. Top right: Zakia Bahejri graduated this year with a major in information systems, as did Nojoud al-Sihli (bottom left), who also served as president of the Marketing Club. Bottom right: Dima Ikhwan is studying engineering.



WRITTEN BY KAY HARDY CAMPBELL  
PHOTOGRAPHED BY NICOLE LECORGNE  
ILLUSTRATIONS BY JUDY LAERTINI



“Queen Effat”—in 1955. The college’s modestly modernist architecture, with open courtyards, a jewel-like private mosque and simple shaded walkways, appears to beckon inward, reflecting the college’s focus on character and leadership development.

Within the curriculum, the business-administration major is being updated. Effat is one of two colleges in Jiddah taking part in a seven-country “Women in Technology” initiative organized by Microsoft Arabia and the Institute of

International Education of San Francisco and supported by a grant from the US Department of State’s Middle East Peace Initiative. Madrid’s Instituto de Empresa, one of Europe’s leading business schools, helped organize an entrepreneurship workshop, and London’s Prince’s School of Traditional Arts plans a series of extension courses on Islamic traditional arts. The college also hosts an annual symposium on learning

“They are dedicated, organized and efficient.... They are very keen to embrace the world, while at the same time being true to their identity and the identity of the land. I admire that combination,” says Dr. Ghazi Binzagr, who serves on the college’s advisory board.

## “A Very Determined Woman”

**H** Princess Effat al-Thunayyan was one of Saudi Arabia’s most influential 20th-century women. Throughout the country, she is admired as an example of courageous leadership and philanthropy and, most importantly, as a pioneering advocate of education for women and girls. Always dreaming of becoming a teacher herself, she was, until very late in her life, a frequent visitor to the campus of the first school for girls in Saudi Arabia, Dar al-Hanan, which she founded in 1955.

Effat College’s dean Haifa Jamal al-Lail recalls, “I have known her since I was a student myself at Dar al-Hanan. She was a very determined woman. She was focused. She used to come and attend school ceremonies. She was always humble, and always came to talk to the students. She’d pat them on the shoulder if they did well, and if not, she encouraged them to do better.”

“Queen Effat”—it was an informal title—also helped organize and expand the public-school system for girls, as well as the first government-run colleges to admit women. She was an enthusiastic supporter of the many women’s philanthropic societies that

often play significant national roles in social services.

Effat descended from a branch of the Al Sa’ud that emigrated to Turkey in the 1800’s; her father died while serving in the Turkish army. When her widowed mother fell on hard times, Effat was sent to live with her aunt in Istanbul and attended school there. Though funds were scarce, she was an excellent student, and she earned a teaching certificate.

She met her husband, then Prince Faisal ibn ‘Abd al-‘Aziz, viceroy of the Hijaz, in 1932 while she was visiting Saudi Arabia to perform the pilgrimage with her aunt. Prince Faisal made a courtesy call on the two ladies and, as the story is told by one of Effat’s five sons, Prince Turki Al-Faisal, former ambassador from Saudi Arabia to the US, “there was an immediate rapport between them, and he fell in love with her.” They were married soon afterward. Having been raised in Turkey, Effat spoke no Arabic at first, and Faisal spoke no Turkish, so they initially used an interpreter. Effat learned to speak, read and write Arabic fluently, though she always retained traces of a Turkish accent.

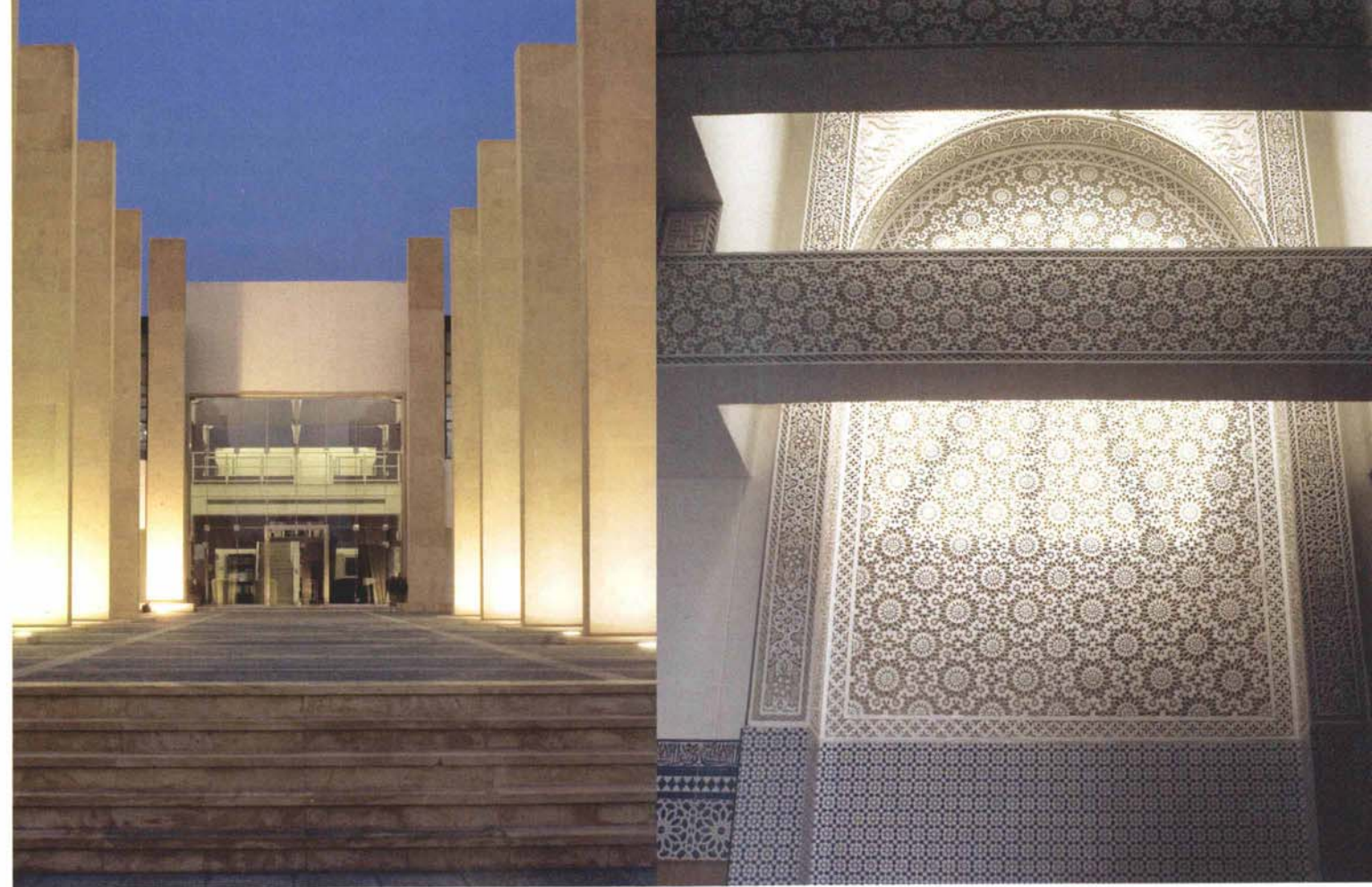
One of her four daughters, HRH Princess Loulwa Al-Faisal, who helped Effat found the college, reflects on her mother’s many challenges. “I think that is one of the reasons she was the way

she was: She had to deal with things that were completely foreign to her.”

Effat’s youngest daughter, HRH Princess Haifa Al-Faisal, also serves on the college’s board of trustees. She describes her mother: “Everybody called her beautiful, but I think her inner beauty came out more than her outer beauty. She was a dark blonde, with very bright, honey-colored eyes. She had great character and was very strong. She had to be strong to live the life she lived. She was just a giant of a woman, really. She was also wise, beyond anything you can think of. You had to run to keep up with her,” Haifa reminisces. “She had so much energy. When she was going somewhere, she *went* somewhere. And when she was doing something, she *did* it.”

“She used to laugh uproariously,” Loulwa recalls. “She was vivacious and alive, vibrant and quick in her laughter. When she laughed, she laughed from the heart. If she got angry, she really got angry and showed it, and then it was over. You knew you could not go beyond a certain point. One look was enough.”

What advice would Effat give Saudi women today? Princess Loulwa answers without hesitation, “It’s the same advice she’s always given. There is no difference between today and then. ‘Educate yourself. Be good mothers. Bring up perfect Saudis. Build your country.’”



and technology; the 2007 symposium will focus on digital literacy.

Dean Haifa Jamal al-Lail, who moved to Effat from her dean’s chair at Jiddah’s King ‘Abd al-‘Aziz University, earned her bachelor’s in business administration at King ‘Abd al-‘Aziz, followed by a master’s and a doctorate in public policy from the University of Southern California. To her, the biggest challenge at Effat is neither physical nor curricular: “It’s thinking,” she says.

“I want to help our society respond to different challenges while maintaining its identity,” she explains. “The challenges that are coming require enough flexibility to handle both, or to balance between both. So if I’m going to concentrate on one challenge, it’s to build this culture of critical thinking, of making people accept other views, to interact in a more meaningful way, with tolerance and harmony. Then, everything will come easier.”

Her English is flawless and fast, powered by a personal dynamism and the contagious enthusiasm that fuels the college’s own fast pace. Her eyes

Effat College’s campus in south Jiddah comprises part of the former campus of Dar al-Hanan, the first school for girls in Saudi Arabia, founded in 1955, also by Princess Effat. Left: Pillars line the path in one of the central courtyards. Right: A mosaic pattern decorates the campus mosque.

twinkle. She has just returned from an end-of-the-year meeting with students.

“It really takes a lot of time and effort,” she adds, “to change their attitudes toward learning. Instead of just receiving information, the student has to learn how to go and acquire knowledge.”

While Effat College was the first private college for men or women to open its doors in Saudi Arabia, it has since been joined by a dozen other private institutions of higher education, which now augment Saudi Arabia’s 14 major public universities and approximately 60 other government-run colleges and institutes. Like their counterparts worldwide, the private schools offer lower student-teacher ratios—Effat’s is five to one—and cutting-edge curricula in exchange for tuition fees. (The public university system not only waives tuition but offers students a stipend.) Dean Haifa, as she is known,

explains that Effat College takes pride in hiring only full-time faculty. “The students really need every single minute of a faculty member’s time. It’s not just in the classroom and not just 10 office hours a week. The faculty members work on their classes with them and have fun with them. We want to build a culture here.”

Zakia Bahejri, a senior majoring in information systems, remembers her decision to come to Effat College. “The best thing is the environment,” she says. “When I came to Effat College, I felt I was in a big home.”

Munira al-Saud, who is majoring in kindergarten studies (early childhood education) and serves as president of the Student Committee, agrees. “The faculty makes you feel like they’re your mothers,” she says. “And the students—everybody knows each other. You might not even be in the same major and have classes together,





This year, freshmen and sophomores put on the college's first play, an adaptation of *My Fair Lady*. Active student clubs include photography, community service and journalism; sports include swimming, basketball, volleyball, badminton, table tennis and tennis. Below: Engineering students demonstrate a robotics project they worked on with Duke University students who visited the college in 2006.

but you sit with different people and they are friendly."

Connecting students to the world is another challenge. "Our international perspective is real," explains Kerry Laufer, vice dean for institutional development and quality control. Laufer is a Swarthmore graduate who has been an integral part of Effat's development since its earliest days. Students have access to "a wide variety of visitors," she says, pointing out that recent guest speakers have included Nane Annan, the wife of the United Nations secretary-general, and Liz Cheney,

deputy assistant secretary of state for Near Eastern affairs and daughter of US vice president Dick Cheney. In addition, as Saudi Arabia's accession to the World Trade Organization was approved, speakers from the accession talks visited the campus. At the 2006 Jiddah Economic Forum, Effat College students helped run registration and were admitted to sessions, giving them personal access to leaders and exposure to debates and ideas.

Effat's new majors, in electrical and computer engineering, are the first in those fields to be offered to women in Saudi Arabia. The programs grew out of a venture with Duke University's Pratt School of Engineering.

Marianne Hassan, assistant dean for new initiatives at Duke, recalls that partnership grew from a visit to Duke by Dean Haifa and HRH Princess Noura bint Turki

Al Faisal, a granddaughter of Effat. "It was no coincidence," Hassan says, "since we have one of five sitting female deans in engineering. Our dean, Kristina M. Johnson, is a world-renowned electrical engineer who specializes in optics. Queen Effat herself was at Duke Hospital in the mid-1980's, and her family had fond memories of Duke. They felt they could develop a relationship with us."

This does not mean that Duke is "picking up our program and plopping it down there," she continues. "We are helping them and facilitating the development of their own program. We've asked the hard questions, like, 'How would we do things differently ourselves if we did them over again?' We are helping them create a program that meets *their* needs. Learn from our mistakes and our successes."

Last summer, Duke hosted a faculty institute for Effat College, and there are plans to set up the Queen Effat Teaching Laboratory, to which Effat College faculty can go each summer to meet with Duke colleagues and discuss their professions.

For the broader community, Effat College also offers non-enrolled women extension classes in creative writing, math, stock-market analysis, business negotiation and strategic planning—as well as a two-year diploma as a Cisco Certified Network Associate.

One afternoon during graduation week, students relaxed over a lunch of okra stew, lamb and chicken at the college cafeteria. At one table, faculty and staff from Saudi Arabia, Canada, Palestine and the US dined together while at another, Elizabeth Bosley, the lone US student at the college, chatted with Saudi friends while listening to music playing quietly from a laptop computer.

Bosley was finishing an academic year at Effat studying Arabic and English in translation. (She is now a senior in Near Eastern languages and civilizations at Yale.) As the only



A baccalaureate robe awaits another year's graduating class. The Arabic logo spells "Effat," a name that means "integrity" or "uprightness."

in their blue robes, the faculty donned robes from their own alma maters, representing many colleges around the world.

Dr. Amal Elyas, a Makkah-born assistant professor of psychology, proudly introduced Sarah al-Khureiji, one of several young mothers among the graduates. "I'll never forget how the course on the psychology of women really touched her, since she was just a new mother at that time," says Elyas.

"I'm planning to open a nursery school," explains al-Khureiji with her daughter at her side, "to offer things that you don't normally find here that I've learned about at college."

The ceremony started with a dramatic entrance. The wall at the front of the auditorium opened up onto the college's main courtyard, where the graduating students and faculty marched slowly in a group toward the audience and onto the stage. After a recitation from the Qur'an and a valedictory address, Dean Haifa, wearing the cardinal-red robes of USC, addressed the students in English. Following her, HRH Princess Loulwa Al-Faisal, a daughter of Queen Effat and vice chairman of the college's board of trustees, added remarks in Arabic.

Along with their diplomas, each of the students received a single red rose. Because Queen Effat had been an enthusiastic and accomplished rose gardener in her lifetime, each new graduate could count as a blossom from her painstakingly tended garden of Saudi women educated in the kingdom.

At the end of the ceremony, balloons descended onto the stage to the strains of Arab music and the students threw their mortarboards into the air and emptied the auditorium to join their guests at a dinner reception.

"It is important for us to see them the minute they come to the college, with their bad English and their poor communication skills, and then to see them before they leave," reflects Dean Haifa. "I usually sit with them as

non-Muslim student, she found her experience different from the years she lived in Riyadh with her family as an expatriate resident. "It's been a lot more representative, I think, of living as a woman in Saudi culture," she says.

To complement academics, the college is encouraging the arts and social activities. This year, freshmen and sophomores put on the college's first play, an adaptation of *My Fair Lady*. Student clubs include photography, community service and journalism; sports include basketball, volleyball, badminton, table tennis and tennis, and the students also make use of a workout room and an Olympic-sized swimming pool.

In 2006, the college won second place in an annual basketball tournament it sponsors. Munira al-Saud recalls that "up until last year, at basketball games, even ones during school hours, nobody would show up. This year we had a game on a Thursday, during our weekend, and the seats were packed. People brought their kids, their cousins—and they brought drums, too!"

"We were like soccer hooligans!" pre-engineering major Dima Ikhwan adds.

On graduation night, it was finally time to recognize the years of work.

"Girls! Please sign in with me so we can start the ceremony!" announced Asma Siddiki, vice dean for student affairs, speaking above the excited chatter. As the graduates assembled

graduates and so I get to see the big change. Each graduate is a grown-up lady, and she knows exactly what she wants, and she's communicating it. Before, she didn't even have a chance to answer the question, 'What's your dream in life?' or 'What's your goal in life?' If you'd asked her then, she would have said, 'I don't know.' When you start looking at that aspect and at the self-confidence she has when she leaves the college, *that* is true success."

Nojoud al-Sihli, president of the college's Marketing Club and a senior in information systems, recalls that "four or five years ago, I was totally different. I was really careless about studying. I was a very shy person at first. I couldn't say 'yes' or 'no.' I didn't speak at all. My mentality has changed and everything has changed. Now I care about my studying. I care about my future. I'm planning to do a master's. They build your character here. They change you." ☉

*"I want to help society respond to different challenges while maintaining its identity."*

— Dean Haifa Jamal al-Lail



**Kay Hardy Campbell** ([www.kay-hardycampbell.com](http://www.kay-hardycampbell.com)), a former resident of Saudi Arabia and writer for the *Arab News* and *Saudi Gazette*, now lives near Boston, where she writes about cultural affairs.



**Nicole LeCorgne** has been teaching and performing Arab percussion for more than 15 years. She has a master's degree in ethnomusicology from Wesleyan University and has traveled throughout the Middle East. Originally from New Orleans, she works as a free-lance photographer and percussionist in New York. She can be reached at [photography@nicoleleorgne.com](mailto:photography@nicoleleorgne.com).



# The Barb

WRITTEN BY JANE GRUTZ



OPPOSITE: ROBERT GRUTZ; TOP: AMERICAN NUMISMATIC SOCIETY; RIGHT: FROM ARTE DA CAVALLARIA DE GINETA E ESTRADIOTA, ANTONIO GALVANI D'ANDRADE (1677)

IN THE YEAR 715, THE FIRST MUSLIM GOVERNOR TOOK OFFICE IN SOUTHERN SPAIN, A LAND OF VERDANT VALLEYS, RICH PASTURES AND SEEMINGLY UNLIMITED POSSIBILITIES—THE LAND THE ARABS CALLED AL-ANDALUS.



AFTER THE DEATH OF THE PROPHET MUHAMMAD IN 632, THE MESSAGE OF ISLAM HAD SWEEPED OUT OF ARABIA, EASTWARD AS FAR AS THE PUNJAB AND WEST INTO NORTH AFRICA. THE OLD BYZANTINE PROVINCIAL CAPITAL AT CARTHAGE FELL TO THE MUSLIMS IN 698, AND A DOZEN YEARS LATER, A COMBINED MUSLIM ARMY OF ARABS AND BERBERS ENTERED THE IBERIAN PENINSULA.

THERE WERE MANY REASONS FOR THE MUSLIM SUCCESSES IN WHAT IS NOW SPAIN AND PORTUGAL. THE VISIGOTH RULERS WERE DIVIDED OVER THEIR OWN SUCCESSION, AS APT TO FIGHT ON ONE SIDE AS THE OTHER. THE DISENCHANTED SLAVES, SERFS AND FREEMEN OF IBERIA EASILY SUCCUMBED TO A FORCE MORE MOTIVATED THAN THEIR OWN. BUT THERE WAS A MILITARY REASON AS WELL: THE VISIGOTH KNIGHTS, WEIGHED DOWN BY HEAVY ARMOR, WERE NO MATCH FOR THE HIGHLY MOBILE ARAB AND BERBER CAVALRY, WHICH WAS MOUNTED ON EXCEPTIONALLY SWIFT, AGILE HORSES KNOWN AS "BERBERS" OR, MORE COMMONLY, "BARBS."

OPPOSITE: Juanita is a pure Spanish Barb living outside Tucson, Arizona. Her ancestors were the Barb horses that crossed into Spain from North Africa in the eighth century with the Arab-Berber invasion, and from there traveled with the Spanish conquistadors to the New World. TOP: A Carthaginian gold coin, struck in about 260 BC, depicts a Barb of the Numidian cavalry, which fought both for and against Carthage in its long struggle with Rome. RIGHT: When the Muslims rode into Spain in the year 711, they did so on Barbs fitted with short stirrups and neck bits, a riding style later called *jineta* that gave the rider great maneuverability. Spanish riders adopted the style and carried it to the New World.





THE BARB WAS AN IMPORTANT COMPONENT OF THE ARAB-BERBER ARMIES THAT ENTERED SPAIN. DURING THE EARLY YEARS OF ISLAMIC EXPANSION, ARAB FORCES HAD MOVED ON FOOT AND FOUGHT AS INFANTRY ACCOMPANIED BY SMALL CONTINGENTS OF CAMEL CAVALRY, FOR THE ARABIAN HORSE WAS TOO HIGHLY VALUED TO USE AS A CAVALRY MOUNT. THE BARB, THE NATIVE HORSE OF NORTH AFRICA, WAS A BREED ESPECIALLY WELL SUITED TO THE SO-CALLED "JINETA" STYLE OF RIDING, IN WHICH THE RIDER RELIED ON HIS HORSE TO PLACE HIM IN POSITION TO THROW, THRUST, PARRY OR DODGE AS REQUIRED. NAMED AFTER THE ZANATAH TRIBE OF WHAT IS TODAY ALGERIA, THIS STYLE REQUIRED A STEED TRAINED TO ANTICIPATE THE RIDER'S ACTIONS AND OBEY WITHOUT HESITATION. SELDOM TALLER THAN 14 HANDS, BARBS WERE NIMBLE AND RESPONSIVE TO THE SLIGHTEST TOUCH OF THE REINS. THEY WERE ACCUSTOMED TO HARSH ENVIRONMENTS, STRONG, SUREFOOTED, FLEET YET SMOOTH. THEIR STRONG LOINS AND QUICK INTELLIGENCE ENABLED THEM TO MASTER AND PERFORM THE QUICK TURNS AND ELEVATED POSITIONS REQUIRED IN CLOSE COMBAT. MOST OF ALL, THE BARB HAD EXTREME COURAGE, AND WAS UNFAZED BY BLOWS AND WOUNDS. TO THE CONTRARY, BARBS OFTEN SEEMED TO RELISH A FIGHT.

NO one can say exactly where or when the Barb originated. Like most horses of the ancient world, the Barb was the result of years of crossbreeding by peoples who migrated from one land to another. By Roman times, however, the Barb seems to have taken its basic form, already very similar to that of its Iberian cousin, separated as they were only by the Strait of Gibraltar.

"They are small and not very beautiful," commented the second-century writer Claudius Aelianus of the Barb, then known as the Numidian horse. But to their credit, he added, they were "extraordinarily fast and strong and withal so

tame that they can be ridden without a bit or reins and can be guided simply by a cane."

It appears the Romans first came in contact with Barbs as the mounts of the Numidian cavalry during the Second Punic War. (The Numidians were a Berber tribe occupying an area now in Algeria.) The Romans noticed their qualities and, after Rome destroyed Carthage at the end of the Third Punic War (149–146 BC), Numidian horses became an important part of the Roman cavalry.

Many of the Roman Numidians, however, came not directly from North Africa, but from the Iberian Peninsula, which the Carthaginians had invaded in 238 BC to establish a base from which to launch the Second Punic War. The Carthaginians brought large numbers of Barbs into Iberia,

Opposite: Mounted on Barb stallions, Algerian *spahi* cavalry fought for France in both World Wars, and later helped establish modern Barb studs in both France and Algeria. Right: Two water-color portraits of horses at the Spanish Riding School show "Alzan de Tunis" and an unnamed horse performing a *levade* in St. Mark's Square, Florence.

"Without doubt, the Spanish Horse is the best horse in the world for equitation," wrote Baron Reis d'Eisenberg, a prolific painter of horses and author in 1759 of *l'Art de monter à cheval* (*The Art of Horsemanship*). Lower: A 1371 Mamluk cavalry manual shows training exercises using Barb mounts.

and it seems likely that they were later cross-bred with native Spanish horses at the many Roman stud farms whose remains archeologists have found throughout southern Spain and Portugal.

Under Muslim rule in al-Andalus, an important new fusion of Barb and Spanish blood took place. The result was the Andalusian, which nearly 300 years of Umayyad patronage refined in the grasslands around Córdoba to become one of the most beautiful horses of all time.

As the years went by, the Andalusian was periodically refreshed with new Barb blood, especially after 930 when Ceuta and other North African cities entered the Umayyad orbit. "Horses of the highest quality" were transported to Cordoba, wrote scholar Maribel Fierro. By the end of the 10th century, al-Mansur, regent and de facto ruler of al-Andalus, had become famous throughout the Muslim world for his stud and his special strain of Barb warhorses. The later Almoravid and Almohad Dynasties (1090–1145 and 1145–1212 respectively) were both Berber in origin, and it must be assumed that the northbound traffic in Barb horses continued during the years of their rule.

As a result, there can be little doubt that the Muslim rulers of al-Andalus rode the finest horses of their time. Unfortunately, no prints or paintings of any of these rulers



TOP: EUGENE TITEUX, COURTESY UNIVERSITY OF TEXAS PRESS; OPPOSITE, TOP: COLLECTION OF THE EARL OF PEMBROKE, WILTON HOUSE / BRIDGEMAN ART LIBRARY (2); OPPOSITE, LOWER: FROM NIHAYAT AL-SUL (A MANUAL OF HORSEMANSHIP AND MILITARY PRACTICE) / BRITISH LIBRARY / BRIDGEMAN ART LIBRARY





Opposite: Interbreeding Barb and Spanish horses, the Umayyad court at Córdoba developed the Andalusian, which later became the preferred mount of much European royalty, including Isabella of Bourbon and Philip III of Spain, whose Andalusian stallion is posed executing the *levade*.

Right: In the 16th century, Gonzaga Barbs imported from Algeria won many *palio* races in Italy. Today, four portraits of top racers adorn the walls of the reception room in the Palazzo Té in Mantua.



are known to exist. Today, we can imagine the medieval Andalusian horses only by looking at their successors, as painted for the Spanish royal family by Diego Velázquez.

The stallion ridden by Philip III shows clear Barb characteristics: the luxuriant mane and tail, the proud arched neck, even the so-called “Roman” nose. But there are differences too: The horse pictured by Velázquez is broader in the chest and hips than the typical Barb and, as R. Cunninghame Graham points out in *Horses of the Conquest*, there is “not too much space between its belly and the ground.”

As was often the case in 16th-century equestrian portraits, the horse of Philip III is shown performing the *levade*, a dressage movement greatly admired at that time, which demands exquisite balance, strong loins and a willingness to perform. Although these qualities are present in the Barb, they may be present to an even greater degree in the Andalusian.

Baron d'Eisenberg, author in 1759 of *l'Art de monter à cheval*, wrote that “without doubt, the Spanish Horse is the best horse in the world for equitation, not only because of his shape, which is very beautiful, but also because of his disposition, vigorous and docile, such that everything he is taught with intelligence and patience he understands and executes perfectly.”

“I freely confess they are my favourites....

The best stallion is a well chosen Barb,  
or a beautiful Spanish horse.”

—William Cavendish, Duke of Newcastle

In the late 15th century, there was a strong influx of Andalusian blood back into North Africa as Muslims, forced to leave Spain by the Christian reconquest, took their beloved horses with them. Around the same time, Italy fell into the grip of “*palio* fever.” Often conducted around or through the city piazza, *palios* were races held on feast days. So often did imported Barbs win these races that in time the word *barberi* came to mean simply “race-horse.” Many of the Italian nobility began to acquire Barbs: Cosimo de’ Medici of Florence, Federico da Montefeltro of Urbino, the Duke of Ferrara and, not least, the Gonzaga family of Mantua.

The Gonzagas’ stables had long been among the best in Europe. Records from 1488 indicate that Francesco Gonzaga (1466–1519) owned some 650 horses, and the privileged position of his Barbs is evidenced by the *Codice dei Palii Gonzagheschi*, an illuminated manuscript that showed off his beloved *barberi* to peers and clients. His son Federigo (1500–1540) went further: He had portraits of his four top *barberi* painted nearly life-size on the walls of the grand reception room of his beautiful new Palazzo Té in Mantua, where they remain to this day.

The Gonzagas entertained there some of the most influential figures of the day, including, twice, the Hapsburg Emperor Charles V. Although Henry VIII of England never journeyed to Italy, he knew about the *barberi*: When Henry explained he wished to begin a stud in his own country, Federigo dispatched a gift of seven Barb mares and a magnificent Mantuan Barb stallion, said to be literally worth his weight in silver. In response, Henry graciously replied that the horses were “not only beautiful but of surpassing excellence,”

adding that he had never ridden a horse that pleased him more. Indeed, so taken was Henry with the Gonzaga Barbs that he went on to obtain as many fine additional Barbs as he could, along with a few Andalusians.

The English Royal Stables continued to grow under Elizabeth I, who appointed the Earl of Leicester to the coveted position of Master of the Horse.

Leicester soon obtained even more Barbs, though Elizabeth I discouraged the purchase of Andalusians, as she was not then on friendly terms with Spain.

The Gonzaga mystique affected Charles I as well. Less interested in horses than art, he acquired the fabled Gonzaga collection of paintings for a vast sum that he might better have used to support his ill-equipped armies—an example of the profligacy that in 1649 would cost the king his head.

It was not long until England also lost its royal stud. The cost of maintaining it was prohibitive, and in 1651 Oliver Cromwell ordered the king’s horses sold to the highest bidders. Unfortunate as this may have seemed to royalists, it contributed to the quality of England’s northern horses generally. As Sylvia Loch points out in *The Royal Horse of Europe*, the descendants of Henry VIII’s “imported coursers were to constitute the foundation lines for the Royal Mares, destined to be served by oriental stallions a century and a half later, making England the home of the finest racing horse in history.” She refers, of course, to the English Thoroughbred, descended from three 18th-century foundation stallions: the Darley Arabian, the Byerley Turk and the Godolphin

*The Falconer*, which Eugène Fromentin painted in Algeria in 1863, is one of his numerous works from that period that include Barb horses.

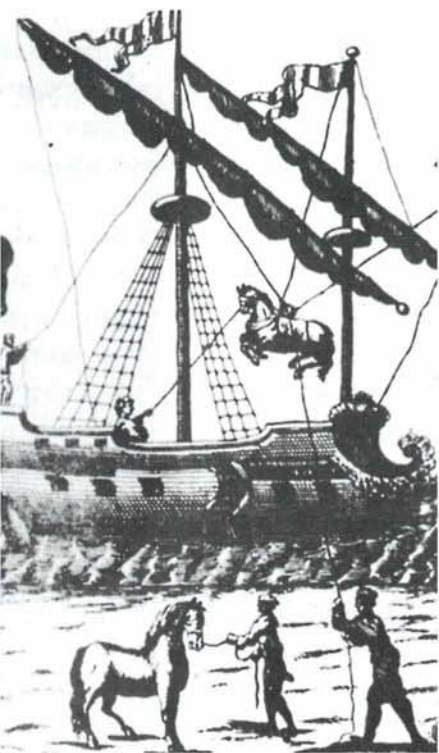
Barb, sometimes called the Godolphin Arabian. Although the Godolphin never raced, many great champions were numbered among his offspring.

But speed and stamina, critical as they are for a race-horse, are not the Barb’s only qualities. It is also known for



DIEGO RODRIGUEZ DE SILVA VELÁZQUEZ / MUSEO DEL PRADO / ERICH LESSING / SCALA / ART RESOURCE (2)  
TOP: GIULIO ROMANO / ERICH LESSING / ART RESOURCE; LOWER: EUGÈNE FROMENTIN / MUSÉE D'ORSAY / ERICH LESSING / ART RESOURCE





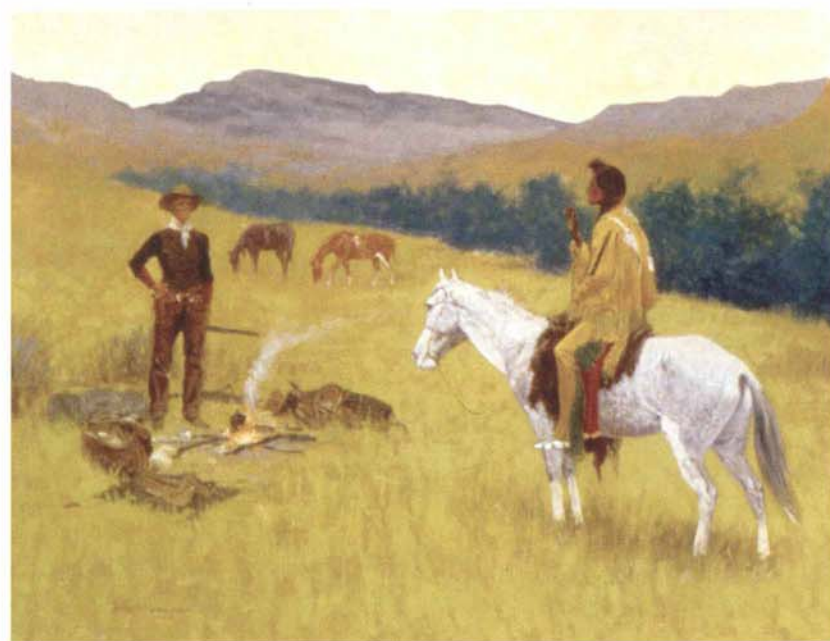
its strong, short-coupled body, perfect for “collection”—the posture that makes weight-bearing easiest for the horse—its eagerness to learn and its gentle nature. These qualities came into play in dressage, the art of horse-and-rider performance.

In the 1530's Federico Grisone established the first great school of dressage in Italy. This was followed in 1594 by that of Antoine de Pluvinet in Paris, whose most famous pupil was Louis XIII, performing with his Barb stallion Bonnitte.

The English royalist William Cavendish, Duke of Newcastle, established his own school while in exile in Holland, and his best-known royal pupil was Charles II. Cavendish wrote of Barbs: “I freely confess they are my favourites.... The best stallion is a well chosen Barb, or a beautiful Spanish horse.”

For the most part, however, Andalusians and Barbs continued to serve widely as popular riding and warhorses. And so it was that these were the horses that Isabella of Castille directed Columbus and his followers to take aboard when they set out to seek gold in the New World.

Top: The first horses in the Americas arrived having survived the three-month voyage suspended in canvas slings. Near shore, they were hoisted outboard by gun tackle. Right: Barb and Spanish horses were prized by North Americans of the Plains and Southwest, and their horses could often outrun those of the European settlers—including us cavalry mounts. Opposite: A portrait of Sauk and Fox chief Keokuk from 1835 shows him mounted on a Spanish horse in a pose that recalls European royal mounted portraiture.



Beginning with the second voyage of Columbus in 1493, horses in their hundreds were shipped out in the flimsy cockleshell boats of the time, a journey of two to three months. The losses were severe. If the ship were becalmed too long in the appropriately named Horse Latitudes, the horses were thrown overboard for lack of water.

But for all the horses that were lost, many survived. Of these, most thrived in the rich grazing lands of the West Indies. In 1609, Inca Garcilaso de la Vega wrote in his *General History of Peru* that “the first horses were taken to the islands of Cuba and Santa Domingo and then to the other Windward Islands, as these were discovered and conquered. Here they bred in great abundance and were taken thence for the conquest of Mexico and Peru.”

Horrible as the deeds of the conquistadors seem to modern sensibilities, it should be remembered that, outnumbered by thousands, they most certainly would have faced defeat if it were not for their horses, which presented a terrifying and novel sight to the Native Americans. This fact was not lost on the conquistador Pedro de Castaneda de Nagera, who stated that “horses are the most necessary things in the new country because they frighten the enemy most.” Indeed, in report after

“In the language of the range, to say that somebody is ‘as smart as a cutting horse’ is to say that he is smarter than a Philadelphia lawyer, smarter than a steel trap, smarter than a coyote, smarter than a Harvard graduate—all combined.”

—J. Frank Dobie, *Mustangs and Cow Horses* (1940)

Although the Spanish tried to keep horses out of the hands of Americans, it was not long before great herds spread in the New World.

report back to Charles V appears the phrase, no doubt deeply felt at the time, “After God, the victory belongs to the horses.”

By the end of the 16th century, the Spanish had fanned out north and south in the Americas, establishing not only missions, but also stud farms. Native Americans often served as grooms at these farms. Although at first the Spanish forbade natives to ride, in time horses came into native hands—a few as gifts, some by theft, and others after escaping into the wild. Great herds soon spread, and by the 18th century some Native American tribes owned these horses by the thousands.

The very best were reserved as buffalo-hunting horses and warhorses. In the early days, most of these “wars” were in fact raids on rivals, and the Native Americans—particularly in what became the central US—liked their horses to be in paint and feathers. The horse that to many looked best in this regalia proved to be a bright pinto or a colorful Appaloosa or “Medicine Hat” horse. (See “The Medicine Hat Barb,” page 16.)

In the 19th century, these horses were immortalized and romanticized in paintings by Charles Russell and Frederick Remington. Their work closely mirrored that of such earlier French artists as Eugène Delacroix and Eugène Fromentin, who traveled to North Africa following the arrival of French rule in Algeria in 1830. In both the American West and North Africa, the painters often showed these Barbs and their western descendants in action or even in combat.

In Algeria, the French military established the *spahi*, or local cavalry, mounted exclusively on Barb stallions. The most famous unit, the Seventh Spahi, fought bravely for France in both World Wars. After Algeria won her independence in 1962, many departing spahi officers brought their Barbs back to France. One was a veterinary surgeon named Jean Deveaux, who in 1978 established l'Association Française du Cheval Barbe, which has grown to more than 2000 members, so popular has the breed and its variations



become in France. More recently, similar associations have been organized in Belgium, Germany and Switzerland, and all are allied with the Algiers-based Organization Mondiale du Cheval Barbe. (See “The French Barb,” page 17.)

Likewise, there are Barb associations in the United States—but it took tragedy to bring them about.

As European settlers moved westward and clashed with Native Americans, the Europeans noticed that the native horses were often superior in combat. In reprisal, the US cavalry not only destroyed many Native American horses, but also deliberately crossbred them—particularly the Appaloosas—with larger, less nimble, horses.

The situation was worse for the wild horses, the mustangs whose herds were the gene pool from which the Native Americans drew their steeds. It is widely believed that at one time more than two million mustangs roamed North America. Settlers, however, often regarded them as grazing competition for cattle.

And so began a great slaughter, second in bloodiness only to that which befell the buffalo. Beginning early in the 20th century, hundreds of thousands of mustangs were systematically killed, and many were sold for pet food. Today, an estimated 50,000 mustangs survive; roughly half roam government lands, protected, since 1971, by the Bureau of Land Management.

Since the 1950's, private associations such as the Spanish Mustang Registry, the Spanish Barb Breeders Association

TOP: FROM MAINEJO REAL EN QUE SE PROPONE LO QUE DEBEREN SAVER LOS CAVALEROS, MANUEL ALVAREZ OSSORIO Y VEGA, 1769; LOWER: FREDERICK REMINGTON / FUNDACIÓN COLECCIÓN THYSSSEN-BORNEMISZA / ART RESOURCE  
GEORGE CATLIN / SMITHSONIAN AMERICAN ART MUSEUM / ART RESOURCE



## THE RANCHER BARB

In North America today, descendants of the Spanish horses are known variously as Spanish Barbs, Spanish Mustangs or Colonial Spanish Horses. The differences, explains Silke Schneider, who works to preserve rare breeds on her Desert Heritage ranch outside Tucson, lie less in the horses themselves and more in the goals of the horse registries that employ the terms.

"By selecting the horses that best typify the Spanish Barb type, the Spanish Barb Breeders Association is trying to bring the horse back to the way it was when it arrived in the 16th century," Schneider says. "The Spanish Mustang Registry is trying to preserve and perpetuate the last remnants of the true Spanish Mustang. The Horse of the Americas is trying to bring all these horses under one umbrella." Hence the term "Colonial Spanish Horse," which she says was coined as a generic term for all American horses of Spanish descent. Perhaps more significant are the strains within these types: Any horse may come from a feral strain, a rancher strain or a tribal strain. (Ranchers and tribal horses must be shown to be descended from confined, unadulterated herds.)

Schneider's two Spanish Barbs, Juanita and Pilar Wilbur, are ranchers whose forebears lived for more than 120 years on the Wilber-Cruce ranch

in Arivaca, Arizona.

When they came to her in 1989, they had never been ridden.

"They had never even seen anyone riding a horse," she says. Yet just nine weeks later, Schneider—who does not consider herself a trainer—

was able to ride Juanita in the Tucson Rodeo parade.

Schneider believes that Barbs often learn simply by watching and imitating.

"Normally, you have to teach a horse to align himself with a gate so you can open it," she says. But after a few minutes watching other horses perform the task, Pilar Wilbur took her cue and sidled up close to the gate so Schneider could easily unlatch it.

She is also quick to note that successful owners of Barbs do not "break" wild horses; rather, because it is the spirit and companionable nature of the animal that so enchants them, they treat those qualities with respect.

The horses respond in kind. When Schneider visits Spanish Barbs running free on a nearby ranch, they rush over, anxious to greet her, to be petted and perhaps to enjoy a treat.

"They love people," she says, pointing out what may be the most engaging quality of any Spanish Barb. "They just love people."

Contact: [www.horseweb.com/desertheritagebreeds](http://www.horseweb.com/desertheritagebreeds)

## THE MEDICINE HAT BARB

To Native American warriors, the markings of a "Medicine Hat" pony were auspicious: a warbonnet on its head, a shield across its chest, a shield of brown to protect its rump and shields on its sides to protect its flanks.

Alan Bell's 11-year-old mare Mariah is such a horse. Taller than most Barbs, she looks as if she has just stepped out of a painting by Remington or Russell.



"She's a granddaughter of San Domingo," says Bell, referring to the famous Medicine Hat stallion that belonged to Robert Brislawn, who in 1957 founded the Spanish Mustang Registry, the first of its kind in the U.S. San Domingo was named after the Navajo pueblo in New Mexico whose residents brought the stallion in from the wild.

Though San Domingo had many offspring, authentic Medicine Hat markings are rare, and he never sired a Medicine Hat colt, though he did sire several fillies. One of these fillies, Pepita, came to live in Iowa, where Bell, who raises horses near Dallas, found her and brought her home to his El Rancho Wakan. Some time later Pepita gave birth to her Medicine Hat look-alike, Mariah.

Bell soon discovered his little Pepita had the courage of a lion. When another horse entered Bell's compound, he was amazed to see Pepita herd the other mares into a corner and sally out. The fray was brief, and it was the intruder who ran off with a bite in his backside.

Courage is one Barb attribute. Intuition is another. "You can take a Spanish Barb down a trail, and a couple of miles before the end, he'll start to fidget and want to turn around. It will turn out that the trail ahead is washed out. I don't know how he knows it," says Bell, "but he knows it."

"The Barb is not a push-button horse," he adds.

Some people find such independence in a horse annoying, but for breeders like Bell, it's all part of the charm of their beloved Spanish Barbs.

Contact: [www.bellsspanishbarbs.com](http://www.bellsspanishbarbs.com)

## THE FRENCH BARB

The hilly green country north of Valence is a land of horses. At one farm, racers train on a makeshift track; further along, Percherons graze in tall grass. At Les Balmes there are Barbs—more than 80 of them, all belonging to Philippe Jacquelin, organizer of trail rides, trainer of Barb circus horses and since 2000 president of l'Association Française du Cheval Barbe.

Originally planning a teaching career, Jacquelin made the national rugby team and later played for the team in Romans, a town near Les Balmes. He fell in love with the area and decided to establish an equestrian academy to offer long rides through the countryside. Though at first he used many breeds of horses, he soon discovered that the one his customers preferred was the easily controlled, smooth-gaited Barb.

He tells one story of a 72-year-old woman who came to him to buy a horse. Sensing she wanted an animal of quality, he brought out a beautiful, spirited three-year-old Barb stallion. After one look, she stated flatly, "I cannot ride this horse."

Jacquelin replied, "You must try."

She did, and some time later she returned and declared, "I will buy this horse."

"Seventy-two years old," Jacqueline repeats. "She did not ask the price."

She did not ask his pedigree. She simply said, "I will buy this horse."



Jacquelin shrugs, pleased but hardly surprised that the woman would take such a fancy to his well-mannered Barb.

Most of Jacqueline's Barbs were raised at Les Balmes, but he has a special place in his heart for the Algerian national stud at Tiaret, birthplace of Lahdjar des Balmes, his champion Barb stallion, five-time champion of France and 2005 European champion, listed in both the French and Algerian studbooks. One look at Lahdjar's refined head, luxuriant mane and tail and fluid movements, and you are left with no doubt as to why he has won the judges' favor.

By any standards, Lahdjar is a horse of impeccable manners and great beauty. And, as usual, Jacquelin knows exactly why this is so. "Lahdjar is Barb," he explains. "Pure Barb."

Contact: <http://elevagedesbalmes.com>

and the Horse of the Americas Registry have drawn attention to the heritage and endangered status of the Spanish mustang. The US organizations share the goals of their North African and European counterparts: the preservation of a breed that, for more than 2000 years, has served in war and competition and—perhaps most important—has proved a comrade and companion to generations across continents.

In his 18th-century writing on dressage, Baron d'Eisenberg lauded the Barb as "one of the most beautiful amongst all horses in the world." He went on to note that because the Barb is docile and has a good memory, he is "easy to train, as long as it is done with kindness and discretion, and with delicate aids; but never with harshness, or long lessons, which wear out his good will, or stifle his disposition, which is in fact the best among all horses in the world."

Courageous, intelligent, companionable: It is easy to see why the Barb would elicit the effusive sentiment posted by one French breeder on his Web site: "The Barb is more than a horse," he wrote, "It is a friend for life." 🌐



**Jane Waldron Grutz**, a former staff writer for Saudi Aramco, is now based in Houston and London, but spends much of her time working on archeological digs in the Middle East. Recently her interest in history has broadened to include North Africa, Spain and the Americas, and the Barb horses that link those regions.

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Arabian horses: M/A 86

Polish Arabian horses: M/A 98; N/D 01

Thoroughbred racing: J/A 96

🌐 **American Indian Horse Registry:** [www.indianhorse.com](http://www.indianhorse.com)  
**American Mustang and Burro Association:** [www.bardalisa.com](http://www.bardalisa.com)  
**Association Belge du Cheval Barbe:** [www.abcb.be](http://www.abcb.be)  
**Association Française du Cheval Barbe:** [afcb.9online.fr](http://afcb.9online.fr)  
**Horse of the Americas Registry:** [www.horseoftheamericas.com](http://www.horseoftheamericas.com)  
**Spanish Barb Breeders Association:** [www.spanishbarb.com](http://www.spanishbarb.com)  
**The Spanish Mustang Registry:** [www.spanishmustang.org](http://www.spanishmustang.org)





# THE NEXT GENERATION OF SUPERHEROES!

**M**OST PEOPLE YOU MEET KNOW MORE ABOUT COMICS THAN I DO," LAUGHS NAIF AL-MUTAWA, CREATOR OF THE 99, THE WORLD'S FIRST COMIC-BOOK SERIES WHOSE SUPERHEROES ARE BASED ON ISLAMIC CULTURE. THAT MIGHT HAVE BEEN TRUE SEVERAL YEARS AGO, BUT, SINCE THE SUMMER OF 2003, AL-MUTAWA, A 35-YEAR-OLD KUWAITI PSYCHOLOGIST, HAS TAKEN A PATH AS CHALLENGING AND AS INTRIGUING AS THAT OF HIS FICTIONAL SUPERHEROES. AND, JUST LIKE IN THE COMICS, IT ALL BEGAN WITH AN UNEXPECTED TWIST OF FATE.



The setting: London, a gray and chilly day. Al-Mutawa and his sister Samar were sharing a cab across town. During their conversation, Samar reminded Naif of his desire to return to his first love—writing. "I was one of those people who had wanted to be a writer ever since I was a little kid. My parents were very supportive, as long as it was only a hobby," recalls Al-Mutawa. One thought led to another, and by the time he stepped out of the cab, the first seeds of *The 99* had been planted.

Later that summer in New York, he sketched out a business plan on the back of a napkin in the Howard Johnson's restaurant in Times Square. The goal was to create a band of superheroes based on Islamic archetypes, each imbued with one of the 99 qualities that the Qur'an attributes to God.

Al-Mutawa explains that, during his clinical training in the 1990's at New

York's Bellevue Hospital, he worked with many Arab survivors of torture. Later, in Kuwait after the Gulf War, he treated former prisoners of war and other patients with post-traumatic stress disorder. "Those experiences made me very aware of the lack of heroes, and of the need for them," he says. It also led to the 1996 publication of his first children's book, *To Bounce or Not to Bounce*, which later won a UNESCO award for literature in the service of tolerance.

Thanks to a former business-school classmate, Al-Mutawa landed a meeting with Tom DiFalco, a former editor-in-chief of Marvel Comics, and Neil Adams, a renowned DC Comics illustrator. DiFalco and Adams "told me my concept was a comic-book project," Al-Mutawa explains. Others found his idea exciting enough to back it with cash: By June 2004, he had raised more

than \$6.8 million from 54 investors in eight countries, and he established the Teshkeel Media Group (TMG) in Kuwait. Its mission: positive, inspirational comics and media products for children in the Arab and Islamic worlds, with *The 99* series as its cornerstone. At that point, Al-Mutawa recalls thinking, "I have the money. I have the idea. Now what?"

"From the first moment Naif called and told me about *The 99*, I thought it was a terrific idea, both from the social and business points of view," comments Larry Durocher, former publisher of *Rolling Stone* magazine and a consultant to the project whom Al-Mutawa regards as a mentor. "It seemed it could be a profound door-opener for people to better understand each other, and to

WRITTEN BY PINEY KESTING

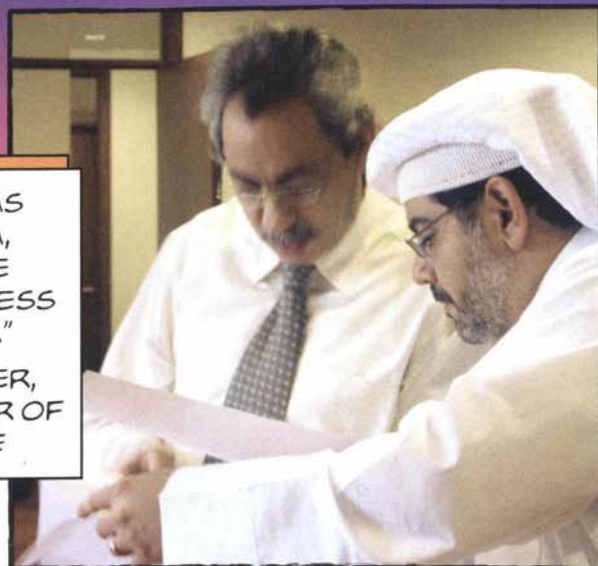
PHOTOS AND ILLUSTRATIONS COURTESY OF TESHKEEL MEDIA GROUP

Above: Kuwaiti psychologist Naif Al-Mutawa, author and publisher of *The 99*, sketched his business plan for Teshkeel Media Group in the classic style: on the back of a napkin in Times Square. Opposite: Released in November, the cover of the first English edition of *The 99* featured heroes Jabbar and Dana and their trainer, Zoran.

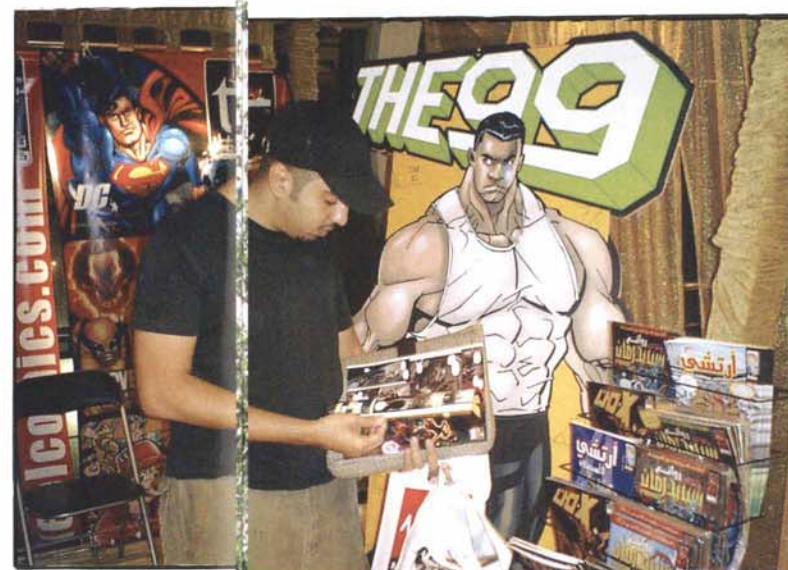
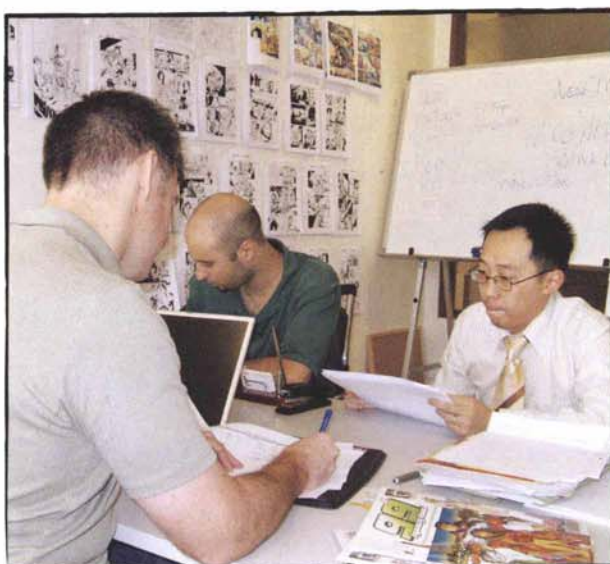


"I THOUGHT IT WAS A TERRIFIC IDEA, BOTH FROM THE SOCIAL AND BUSINESS POINTS OF VIEW."

—LARRY DUROCHER, FORMER PUBLISHER OF ROLLING STONE



Top row, from left: Tarek Hosni, editor-in-chief at Teshkeel, consults with Al-Mutawa. Mirna Dakik edits copy. Designers Hasaan Kanaan and Mohamed Azab confer on a layout. Second row, from left: Sven Larsen, chief operations officer, Saad Al-Bitar, production supervisor, and Frankie Shum, vice president of finance, guide the two-year-old business, which attracted an initial 54 investors from eight countries. Vivian Salameh translates the English script to produce the Arabic edition. Days before the launch of *The 99*, a visitor in Kuwait's Marina Mall looks over Arabic editions of Marvel comics. Below: Al-Mutawa explains that in *The 99*, Dr. Ramzi Razem's search for the bearers of the Noor Stones "is fueled by his dreams of bringing peace and a new age of tolerance to mankind."



understand what Islam is all about." Encouraged by Durocher and other professionals, Al-Mutawa assembled a top-notch international management and artistic team, many of whom had worked in New York for Marvel Comics.

Sven Larsen, former director of marketing and creative services at Marvel, joined Teshkeel in 2005. "I was attracted to the challenge of bringing comic books and pop culture to a part of the world that was significantly underrepresented in that regard," he explains. "There is an unmet demand for popular culture based on Islamic and Arabic history that's crying out to be filled. It is compelling for kids to have heroes who speak, act and look like them." Larsen adds that he was also intrigued by the story of

*The 99*. "It was exciting to come across a new story, one that was not based on the cultures or mythologies I was familiar with. Given the problems in the world today, I wanted to be involved in a project looking to bridge the gap between cultures and promote peace and tolerance."

Fabian Nicieza, an acclaimed writer in the American comic-book industry, best known for top-selling Marvel

titles such as *X-Men* and *X-Force*, joined Teshkeel's team as co-writer of *The 99*.

"I understand how it is when people have not had heroic characters to call their own," comments Nicieza, who emigrated from Argentina to the United States when he was a child. "I was enthused to work with someone who has a chance to bring his dreams and ideas to life. I respect Naif's beliefs. We have a real chance to do something here that can affect people positively."

Working together over more than a year, Nicieza and Al-Mutawa

Illustrator Dan Panosian and writer Fabian Nicieza both worked on numerous Marvel Comics best-sellers.



fine-tuned the character guide and story line. The plot is built on a historic event familiar to every schoolchild in the Middle East—Hülegü Khan's invasion of Baghdad in 1258. It was, as the story begins, "a time of dark and light...."

As the Mongols invade Baghdad, they are intent on destroying the city's great libraries, foremost among them the renowned Bayt al-Hikmah ("The House of Wisdom"). During the battle, its books are thrown into the Tigris River by the thousands, turning the waters black with ink. But unbeknownst to the Mongols, the librarians, the *huras al-hikma* ("The Guardians of Wisdom"), have hidden the library's ancient knowledge in 99 mystical gemstones, called the Noor ("The Light") Stones, which the huras move to safety in faraway Granada, in Muslim Spain. There, for

centuries, the Noor Stones lie concealed inside the dome of the Great Fortress of Knowledge, built by the huras. One fateful day in 1488, as King Ferdinand's Spanish army approaches, the fortress explodes. The huras disperse across the globe, carrying with them the precious Noor Stones; no one hears of them again.

The tale fast-forwards to the present. Dr. Ramzi Razem, a psychiatrist, has spent his life searching for those gems. He believes they have been recently found, and that each Noor Stone is possessed by a young person somewhere across the globe. He has made it his mission to find these heroes-to-be and teach them how to use their new powers to battle against darkness, both within their own souls and in the outer world.

When asked if Ramzi is Al-Mutawa's fictional alter ego, Nicieza laughs and admits that "the passion and desire to do something right and good is all true to Naif, but he will never be as tall as Ramzi!"

"Strength, honor, truth, mercy, invention, generosity, wisdom, tolerance—these are some of the superpowers possessed by my heroes," emphasizes Al-Mutawa. "No one hero has more than a single power, and no power is expressed to the degree that God possesses it," he adds. There are 99 young heroes from 99 countries, from all walks of life. All of them are Muslim, but not all are Arabs, and the number is almost evenly split between boys and girls. As Al-Mutawa explains, whenever these characters collaborate to solve problems, there is an implicit message of tolerance and acceptance, a theme central to the series.

Unlike many comic book heroes, the 99 do not use weapons. "They use the gifts they have within themselves," Al-Mutawa notes, adding that "*The 99* is not about what kids shouldn't be doing. It's about learning how to use the power within them to make a difference."

Nicieza agrees. "I want the readers to understand that when you are young,





you don't always do the right thing. You will make mistakes and you will learn from them." He adds that because these characters are just discovering their powers, they are less than perfect, and that allows readers to identify with them. But, in the long run, the characters band together to do something constructive. "That's a very important and

to colorist Monica Kubina, and then to Comicraft, a lettering team in Los Angeles. While the visuals are being finalized, the editorial team in Kuwait translates the English text into Arabic.

Last summer, prior to the publication of the first issues of *The 99*, Al-Mutawa, accompanied by two of his four young sons, took a long-overdue vacation and returned to the New Hampshire summer camp where he had read his first comic book in 1979. In a public letter he wrote afterward, he

"STRENGTH, HONOR, TRUTH, MERCY, INVENTION, GENEROSITY, WISDOM, TOLERANCE—THESE ARE SOME OF THE SUPERPOWERS POSSESSED BY MY HEROES," SAYS AL-MUTAWA. "NO ONE HERO HAS MORE THAN A SINGLE POWER, AND NO POWER IS EXPRESSED TO THE DEGREE THAT GOD POSSESSES IT."

positive message to send out these days," Nicieza emphasizes.

The original character designs were drawn by artist Dan Panosian, who is well-known for his work on *X-Men*, *Spider-Man* and *The Hulk*. Bringing his ideas to print is an international team: John McCrea in Birmingham, England pencils in Al-Mutawa's and Nicieza's preliminary script ("A crackling good read!" he calls it), and then the book is sent to inker Sean Parsons in Ohio. Once the artwork and final script have been approved, it goes on

explains that "*The 99* is all about making a conscious choice not to let others define who you are. It is about being proactive in choosing the backdrop against which you are to be judged. Islamic culture and Islamic heritage have a lot to be proud and joyful about. *The 99* is about bringing those positive elements into global awareness. I spent the better part of last year telling the world that next Ramadan, the world would have new heroes. Now it does."

Three years after Al-Mutawa stepped out of that cab in London,



A young fan finds coloring material at Teshkeel's promotional booth in Kuwait City. "*The 99* is all about making a conscious choice not to let others define who you are," says Al-Mutawa.

Teshkeel Media Group has become one of the leading developers of comics and children's entertainment in the region, as well as the exclusive Arabic translation partner for Marvel, Archie and DC Comics. Earlier this year, Teshkeel introduced the legend and characters in an "Original Special," which whetted readers'

appetites for the further adventures of Dr. Ramzi and his superheroes. Then, when the first monthly English and Arabic issues of *The 99* hit bookstore stands on November 5, sales exceeded Al-Mutawa's expectations.

Like his fictional characters, Al-Mutawa seems to have discovered his own Noor Stone—one which enables him to offer children in the Arab and

Islamic world a new beacon of light. And for many children inspired by *The 99*, that makes him a real hero. 🌐



Piney Kesting is a Boston-based free-lance writer who found her own Noor Stone the first time she traveled to Lebanon. She has been writing about the Middle East ever since.

📖 **Related articles** from past issues can be found on our Web site, [www.saudiaramco-world.com](http://www.saudiaramco-world.com). Click on "indexes," then on the cover of the issue indicated below:

Superman in Arabic: M/A 70

🌐 [www.teshkeel.com](http://www.teshkeel.com)

#### FROM CAIRO, MEET AK COMICS

Teshkeel Media Group shares the Middle Eastern comic-book market with Cairo-based AK Comics. Founded in 2003 by American University of Cairo economics professor Ayman Kandeel, AK Comics follow the adventures of four futuristic superheroes—Aya, Zein, Jalila and Rakan—as they strive to bring peace to the Middle East.

Drawn in studios in the US and Brazil and published in Egypt, the first 300 copies of *Zein: The Last Pharaoh* appeared in 2004. Today, the monthly series, published in both Arabic and English, has a distribution of approximately 50,000. To ensure that the comic is available to everyone, it is printed both in color and in a less expensive black-and-white edition, and several thousand free copies are donated to orphanages and underprivileged children throughout Egypt. Like its fictional heroes, AK too has a positive mission to encourage reading and to provide inspiring role models for children in the Middle East.

"The history of comic books in the Middle East is really a case of a culture interrupted," explains Sven Larsen, chief operating officer of the Teshkeel Media Group, noting that Egypt had a long history of creating and reading comic books. Prior to the Lebanese civil war, Lebanon was also a major publisher of translated Western comics. In the late 1960's, Illustrated Publications in Beirut produced Arabic translations of *Superman*, *Batman and Robin*, *The Lone Ranger*, *Tarzan*, *The Flash* and numerous other well-known western comics. Over 2.5 million copies of these comics were distributed in 17 countries through the early 1970's.

According to Larsen, the success of both Teshkeel Media Group and AK Comics illustrates that media produced in and for the Arab and Islamic worlds are as valid as any coming from traditional markets in America, Japan and Europe. "It also sends a good message," he notes: "That there are no limits on what young people in Islamic and Arab societies can accomplish."







^ Film director Ovidio Salazar's *Al-Ghazali: The Alchemist of Happiness* won the 2004 Religions for Peace award at the Trento Film Festival in Italy. Part biography and part "road movie," the film weaves Salazar's personal spiritual quest with that of one of Islam's most notable thinkers, the 11th- and 12th-century philosopher, theologian and jurist Abu Hamid al-Ghazali, whose personal crisis of faith led to a rejection of fanaticism. Salazar, who lives in England and grew up in California, embraced Islam in North Africa and studied Arabic in Cairo. This is his fourth film on Islamic culture, following the award-winning "Hajj: Journey of a Lifetime," which documented three British Muslims on their pilgrimages to Makkah. Above, Salazar communes with an actor playing al-Ghazali.



# The Art of Integration

Photographed by Peter Sanders

When Muslim Arabs first traveled to China nearly 1300 years ago, they were not in fact introducing an alien religion to an already long-established civilization. Rather, they called their Islam "the Way of the Pure"—a name and an ideal that did not conflict with the Confucian beliefs prevalent in China at that time—and their early mosques looked like Chinese temples and pagodas.

And Shaykh Ba, a West African scholar, said this about Islam:

The river is crystal clear.  
Its water remains pure,  
Sweet and unpolluted.  
It reflects the color of the riverbed.

Thus it is that Islam in China is Chinese, just as in Africa it is African and in here in Britain, it is British.

When I began this project in earnest in early 2005, William Blake's poem "Jerusalem" came to my mind time and time again, along with memories of singing it, as most British schoolchildren did, at school assemblies in my early years.

And did the Countenance Divine  
Shine forth upon our clouded hills?  
And was Jerusalem builded here  
Among these dark Satanic mills?

Upon looking carefully at the lyrics, I was sure that Blake was speaking about a spiritual Jerusalem: a place where people of all faiths could live in harmony. This is a vision I believe in.

Like most great visions, it is not something easily achieved, as events in London in July 2005 made all too

clear. Yet such is the enthusiasm and sincerity of the Muslims I met during this project that I truly believe it is a possibility. Most were second- and third-generation British Muslims, many of them young, professional and artistic—people who did not have the fears and concerns of previous generations of Muslims in Britain, but were integrated into their country. Within them was a confidence that to be both British and Muslim was not a problem, and that, on the contrary, their lives could contribute to realizing the vision I shared with Blake:

Till we have built Jerusalem  
In England's green and pleasant land. 🌍

—Peter Sanders

> Although the rapid growth of Islam in Britain is relatively recent, Islam's British connections are of long standing: For example, Adelard of Bath, tutor to Henry II, translated Arabic texts into Latin; Oliver Cromwell and his contemporaries knew basic tenets of the Qur'an, and Arabic texts were commonplace at the universities of Oxford and Cambridge in the 17th century. Later, colonialism forged ties between the UK and the Islamic-majority lands that are the foundation of the UK's modern economy and patterns of immigration. According to Britain's 2001 census, some 1.6 million British citizens identify themselves as Muslims; they comprise three percent of the total population. Among UK Muslims, 60 percent identify with national heritages in either Pakistan or Bangladesh, and 30 percent claim Indian, Asian, North African and other heritages; six percent identify racially as "black," and four percent similarly identify as "white British." In this photo, Muslim tourists from France relax along the Thames Embankment in London.



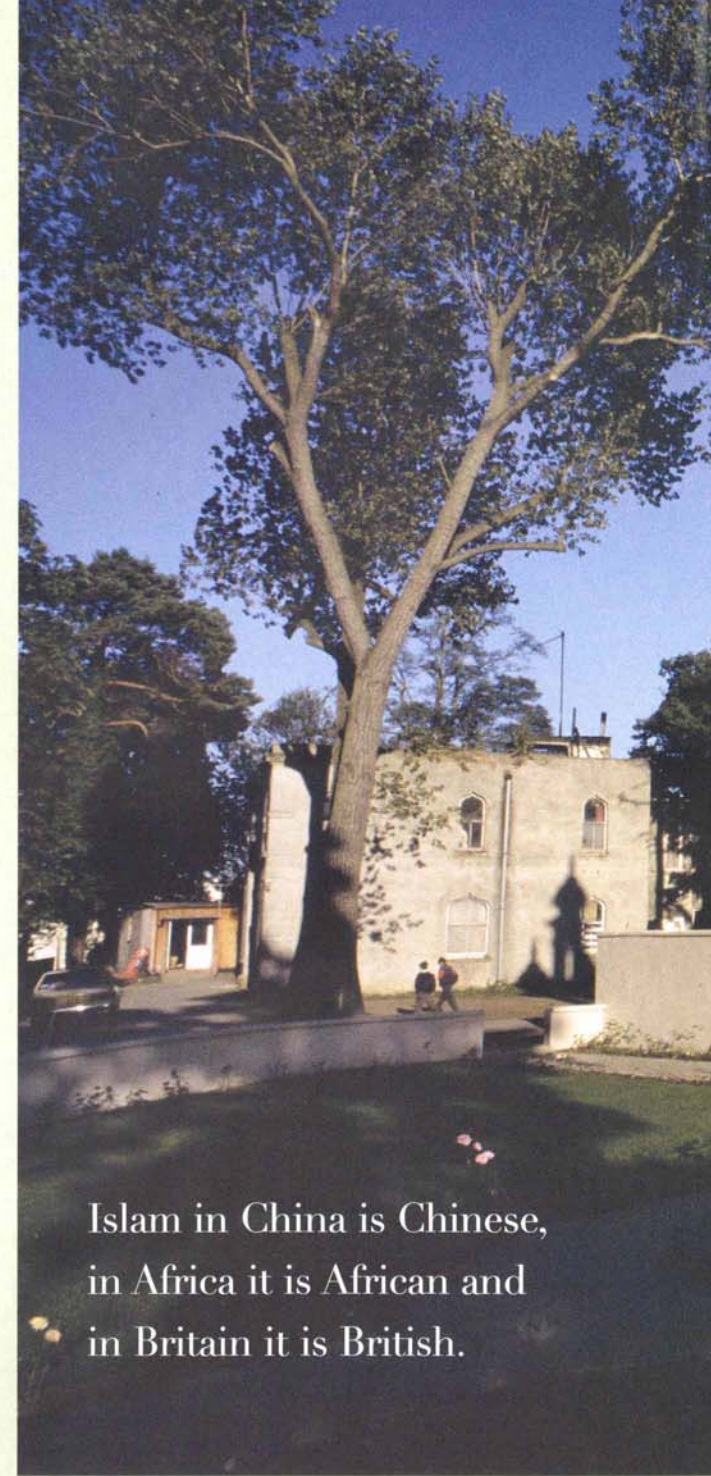
< In Chesham, northwest of London, police community support officer (PCSO) Hassan Malik consults with a colleague. In an effort to improve relations in and among UK's urban communities, the position of PCSO was created in 2002. Since then, more than 6700 PCSOs from diverse backgrounds have taken up street beats. Unarmed and without arrest powers, they are succeeding in preventing crime through better relations between communities and government.



v  
The Moslem Cemetery at Horsell Common in Woking was established in 1915 as a burial ground for roughly 60 Indian Muslim soldiers who died fighting for Britain in World War I. It is not far from the much larger Brookwood Memorial and War Graves site, which also contains a Muslim section for other veterans.



^  
Unlike many modern mosques whose designs are imported from Asia and the Middle East, the newly constructed center of the Jamiyat Tabligh al-Islam (Society for the Propagation of Islam) in Bradford, Yorkshire, uses the same local stone of which the city's houses, factories and churches are built. It is topped with a dome whose shape refers to neoclassical 19th-century British architecture as much as to Islamic design.



Islam in China is Chinese,  
in Africa it is African and  
in Britain it is British.

^  
The first purpose-built mosque in England was the Sultan Jahan Mosque, which opened in 1890 in Woking, on the outskirts of London. With a design that recalls the Taj Mahal, it was a bequest from the Begum Shah Jahan, ruler of Bhopal State in India. It remains an active mosque today.



<  
On December 25, 1889, the first mosque in England opened in this house at 8-12 Brougham Terrace in Liverpool. Founded by William Abdullah Quilliam, who embraced Islam in 1887 following a sojourn he took in Morocco to restore his health, it also housed an orphanage and a school. By 1896 some 150 members made up the Liverpool Muslim Institute.



Islam “makes room for the particularities of the peoples who come into it. The traditional Muslim world is a rainbow, an extraordinary patchwork of different cultures, all united by a common adherence

to the doctrinal and moral patterns set down in Revelation.”

—Timothy Winter,  
*British and Muslim*

V

Abdal-Hakim Murad, born Timothy Winter, is a lecturer on the faculty of divinity at Cambridge University and one of the UK's leading scholars of Muslim-Christian relations and Islamic ethics and orthodoxy. Murad (second from right) also leads a Muslim choir at Cambridge that specializes in “The Muslim Songs of the British Isles,” a collection of ballads, melodies and songs in English, some dating from the Middle Ages, that either derive from Muslim sources or refer to Islamic themes.



A

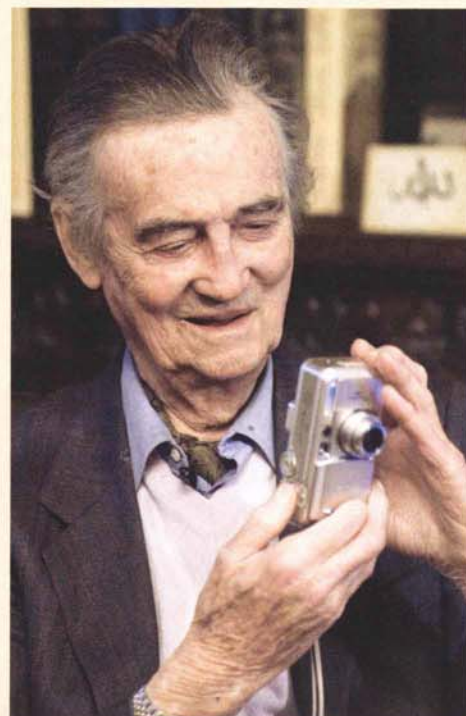
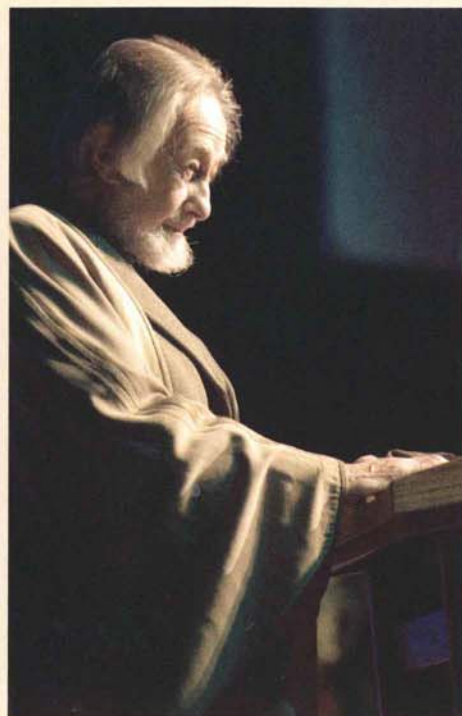
Filmmaker Tudor Payne works on a street scene for his independent film *Learning to Die*, which he describes as “the story of the human condition and the benefits of struggle and tribulation.” Payne was a designer with the popular British television series *The Big Breakfast*. “Rather than a Muslim making Muslim films,” he says, “I am simply a Muslim making films. That, to me, is integration.”



A

Birmingham artist Mohammed Ali describes himself as influenced by both urban graffiti and classical Islamic calligraphy. His most recent work, “Aero-solarabic,” is “an urban sound and visual installation” that takes “graffiti into the spiritual world.” His art, performances and workshops have been widely appreciated in England as well as in Europe and the Gulf. “I want my work to serve some kind of purpose, rather than just hanging up in the gallery, serve an educational purpose and benefit the whole community,” he said in a film interview last year. It appears on his web site, [www.aerosolarabic.com](http://www.aerosolarabic.com).





Yusuf Islam, formerly Cat Stevens, is the most widely known figure in British Muslim society. Now 60 and the father of five children, he withdrew from the music business in 1978 to pursue his spiritual quest. He established three schools, and in 1999 founded a charity in response to the Balkan crisis that continues to offer aid and relief worldwide. This year he returned to music with *An Other Cup*, his first musical release in 28 years. He wrote this about his faith journey: "Perhaps it was because I was unable to explain my incredible discovery or my reasons clearly that my chosen path looked oddly out of step with my previous track record. But I wasn't too worried about that, people would get to understand, gradually, I thought. After all, everybody knew I was 'on the road to find out'—why should they deny me ever finding out? ...Maybe if I'd written a song and sung about it, reactions might have been different.... Now I have decided to sing out for a peaceful world again." For this portrait, he posed with Sergeant Pepper.

Days before his death in 2005 at age 96, Martin Lings, Abu Bakr Siraj al-Din, addressed an audience at London's Wembley Stadium. One of Britain's greatest modern scholars, Lings worked as Keeper of Oriental Books and Manuscripts at the British Museum and British Library. Best known among his 18 books are his 1983 biography of the Prophet Muhammad and his 1998 spiritual interpretations of Shakespeare. A student of French Muslim philosopher René Guénon and the German metaphysician Frithjof Schuon, he embraced Islam while serving as a lecturer at Cairo University in the 1940's. In 1976, he was instrumental in the organization of the landmark "World of Islam" cultural festival in London.

Charles Le Gai Eaton, Hassan Abdul Hakeem, 82, is a consultant to London's Islamic Cultural Center. Born in Switzerland, educated at Cambridge and with long service in the British diplomatic corps, he became a Muslim while a lecturer at Cairo University. Long regarded as a distinguished thinker, he writes and broadcasts on topics related to Islam and the modern world, and is the author of four books.

Within them was a confidence that to be both British and Muslim was not a problem.

"Now I have decided to sing out for a peaceful world again."  
—Yusuf Islam

As community-relations manager for the London 2012 Olympic Games, lawyer Ayesha Qureshi worked with East London neighborhoods for two years in advance of London's successful bid for the Games last year. "I have never worked harder than I did in those two years," she says. "It was a truly amazing personal experience, but the most gratifying part of my job on the bid team was working with community groups and young people from across London who really grasped the ideals that London's bid signified. My passion for the bid was not limited to wanting to host the greatest sports event in the world; I also wanted to ensure a lasting and positive legacy for the communities who live in and around the Olympic Park." In recognition of her work, Qureshi was awarded an MBE (Member [of the Order of the] British Empire) in the 2006 new year's honors list, which she received from the Queen "in front of my very proud family." She has now returned to her job with an international law firm, and is at present posted to the firm's Dubai office.





“The things we have in common  
are much more significant than  
our differences.”

—Julie Siddiqi



> Right: “The Armed Man: A Mass for Peace,” by modern classical composer Karl Jenkins, draws its title from a 15th-century French folk song widely used in Latin masses. Throughout its hour-plus length, Jenkins employs words and music from diverse sacred and secular sources, including Islamic ones, to convey a musical vision of modern history and give voice to the universal human desire for peace. Premiered in 2000, “The Armed Man” topped UK classical charts in 2003, and a 2005 performance in Salisbury Cathedral used a 75-piece orchestra and 150 singers. Part of the piece is a Muslim *adhaan*, or call to prayer, which was performed in Salisbury by Imran Golding, director of the Islamic Awareness and Education Project, based in Wiltshire.



v

Khalil Ridwan enjoys the last moments of the day on Willowbrook Farm, owned by his parents, Lutfi and Ruby. The farm specializes in free-range chickens and eggs as well as lamb, duck and organic sheepskins. The Ridwans have committed themselves not only to “environmental farming,” but also to the development of “a vibrant ecosystem sustaining a wide variety of plant and animal life.” Together with community volunteers, they have planted more than 1000 trees of 14 species on the farm.



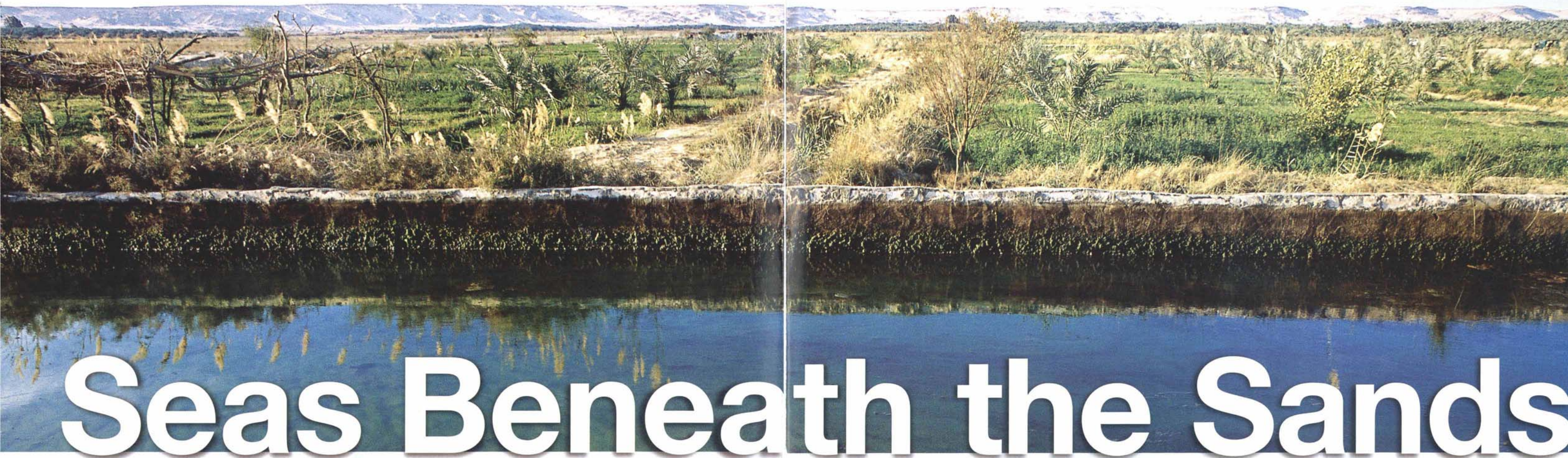
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The theme of the 10th annual nationwide Islam Awareness Week (IAW) in 2004 was “Your Muslim Neighbor,” and many events centered on London’s reconstructed Globe Theatre, whose curving façade opens onto the Thames Embankment. Each evening during the week, images of Muslim life and Islam illuminated the façade. Founded as a means to “raise awareness and remove misconceptions,” IAW’s 2005 theme was “1000 Years of Britain in Islam”; this year’s was “One World.” “Our message is that the things we have in common are much more significant than our differences,” said IAW national coordinator Julie Siddiqi.



After spending 35 years traveling and photographing the worlds of Islam, **Peter Sanders** ([www.petersanders.co.uk](http://www.petersanders.co.uk)) has spent the last two years producing *The Art of Integration*, which has been exhibited at British embassies and cultural missions in Egypt, Bahrain, Qatar and Kuwait. More exhibits are planned in London and in 20 other countries.





# Seas Beneath the Sands

Written by Louis Werner  
Photographed by Kevin Bubriski

*For among rocks there are some from which rivers gush forth; others there are which when split asunder send forth water.*

—The Qur'an, Surah 2, Verse 74



Look at a map of North Africa from Egypt to Algeria. Almost everything outside the Nile Valley and south of the coastal plain appears to be lifeless sand and gravel deserts, spotted here and there with oases and rain-catching massifs of uplifted bedrock. But peer deeper, under the sand, and you will find water.

Under the Sahara lie three major aquifers, strata of saturated sandstones and limestones that hold water in their pores like a wet sponge. The easternmost of these, extending over two million square kilometers, underlies all of Egypt west of the Nile, all of eastern Libya, and much of northern Chad and Sudan, and contains 375,000 cubic kilometers of water—the equivalent of 3750 years of Nile River flow. It is called the Nubian Sandstone Aquifer System, and lately it has come to the attention of practitioners of a subspecialty of nuclear science known as isotope hydrology.

Isotope hydrology, which studies the atoms of the two elements making up groundwater—oxygen and hydrogen—and the trace elements in it, like carbon and nitrogen, is able to determine when, give or take a couple of thousand years, today's groundwater fell to earth as rain. In the case of the Nubian Aquifer, some water in the system is thought to be one million years old, but most of it fell between 50,000 and 20,000 years ago at the time of the paleomonsoon. Since then, as the region has slowly turned to desert, especially during an acutely arid period from 20,000 to 12,000 years ago, there has been little addition of water to the

aquifer. What lies beneath the ground is called fossil water, and it will likely never be replaced—or, in the parlance of hydrologists, the aquifer will never be recharged.

Because the Nubian Aquifer is shared among four nations, and because Libya and Egypt are now going forward with big water-pumping projects that tap the Nubian Aquifer, the International Atomic Energy Agency (IAEA), co-recipient of the 2005 Nobel Peace Prize, is trying to bring the countries together in a joint effort to plan for a rational shared use of the water.

Nuclear scientists are leading the way now, but sometime in the future diplomats may be signing aquifer-sharing treaties similar to those that now commonly control the sharing of surface waters. Such a treaty allots the Nile River's flow among Ethiopia, Sudan and Egypt. Esmat Abdel Meguid, former secretary-general of the Arab League and Egyptian foreign minister, likes the sound of the words *diplomacy* and *hydrology* in the same sentence. "International agreements are the only way to go, especially among thirsty neighbors who live in the desert," he says.

Dr. Aly Islam, chairman of the Egyptian Atomic Energy Authority (EAEA), whose isotope-hydrology laboratory in Cairo is a key asset in the project, has an even sharper perspective on the subject of "atoms for peace." "Mankind's use of nuclear science to date has been rather sad," he says. "But if we who specialize in the atom can dedicate ourselves to peaceful ends, like water analysis, or seed research, or even irradiating semiprecious gems to make them more beautiful, then we will have done our part." Dr. Islam is himself a world expert in the nitrogen-15 isotope, used for water-pollution studies.

The stakes are certainly high. Although the population density of the area overlying the aquifer is less than one

Right: In Cairo, Sawzan Gamal Abd El-Samie searches for the extra neutrons in atoms of oxygen and hydrogen that tell hydrologists how old a water deposit is. Most of the water in the Nubian Sandstone Aquifer System is 20,000 to 50,000 years old. Above: A reservoir near the Bahariyya Oasis draws on the aquifer that underlies most of western Egypt as well as eastern Libya and northern Sudan and Chad.





person per square kilometer (2.6 people per square mile)— $\frac{1}{2000}$  that of the populous Nile Valley—desert agriculture and resettlement plans dating from the 1960's are being dusted off. Egypt eventually hopes to use almost half a billion cubic meters of groundwater annually—more than the volume of Lake Erie. Libya is already pumping water from the Kufra Oasis, in its southeast corner, through a four-meter-diameter pipeline to its thirsty coastal cities. When fully operational, that project will pump some 3.6 million cubic meters per day. Still, at current extraction rates, the aquifer is not likely to be depleted for a thousand years.

Kufra lies not far across the border from Egypt's East Uweinat agriculture project, which itself is just north of Sudan's Salima Oasis, whose soils have proved high fertility. Farther north, Libya's Al-Jaghoub Oasis and Egypt's Siwa Oasis are pumping from the aquifer's same limited sub-basin. Even northern Chad's 3415-meter-high Tibesti

Massif, where any development plans are far in the future, is critical to what little rainfall does recharge the aquifer in southern Libya and Egypt. In the region where the four countries touch, everything underground seems connected.



Aly Islam directs the Egyptian Atomic Energy Authority, which runs the isotope hydrology lab. "If we who specialize in the atom can dedicate ourselves to peaceful ends, like water analysis, or seed research ... then we will have done our part."

Abd El-Samie, is a long way from the blazing desert. But water from that desert is tested here and compared to previously quantified international samples, supplied through the IAEA by the United States Geological Survey in tiny vials labeled with such far-off names as "Antarctic Water 1" and "Puerto Rico Water 1." The machine that does the comparisons, an isotopic ratio mass spectrometer, is periodically recalibrated against the IAEA standard, known as VSMOW, or "Vienna Standard Mean Ocean Water."

Abd El-Samie and her team go about the task of purifying and maximizing the component gases that she squeezes out of her water samples, using extreme heating and cooling and vacuum pressurizing to a tiny fraction of normal atmospheric pressure. "Sample purity is essential when we work at the atomic level," she says, "and we must check and recheck for anomalies. Sometimes our irrigation-engineer colleagues do not understand why they must protect a sample against contamination—they think water is always just water."

Abd El-Samie is looking for oxygen and hydrogen atoms with extra neutrons in their nuclei; such atoms act as markers, or fingerprints, for that particular sample and can give a relative timeline for the groundwater's deposition. Water sampled at different depths acts almost like a rain-gauge record that goes back tens of thousands of years.

Another machine, the liquid scintillator, looks for the sample's carbon-14 isotope, which attaches to water molecules in the sky when cosmic rays strike. Since carbon-14 is an unstable isotope with a known half-life, it can be measured and dated with some accuracy. But the scintillator is a thirsty machine: It usually takes a 60-liter water sample to yield just 300 milligrams of testable carbonate.

**T**he project's reach extends from the laboratory to the desert, with an intermediate stop at the Groundwater Research Institute, part of the National Water Research Center under Egypt's Ministry of Water Resources and Irrigation. This is the core of the nation's irrigation know-how, which stretches back some 5000 years. The center is located, appropriately, at the Nile Barrage just north of Cairo, where engineering works divide the two branches of the Nile and provide a testament to Egypt's long history of manipulating the flow of water.

Dr. Taher Muhammad Hassan is charged with pulling together all the project's many strands, from isotope laboratory results to piezometer (well-pressure) readings, from geological maps to the resettlement dreams of social policy-makers. "We know some things about the Nubian Aquifer but many other things we do not," he says. "The aquifer is what we call a closed system, but within it there are many internal dynamics—sub-basins and drainages, impermeable clay layers, vertical faults and horizontal fissures, and a limited potential for local recharge. And everything is deep underground, far out of sight."

He gives the example of the Great Sand Sea, the dune system between Egypt and Libya west of Farafra Oasis. Eighteen-meter dunes overlie a layer of clay, which may hold a large isolated reservoir, a perched water table. Ground-penetrating radar indicates something is there, not far from the surface—but how to access it and, given the rough topography and poor soil conditions, why bother? "Not now," says Hassan with a smile. "But maybe later."

"One thing that isotope studies have shown us," Hassan continues, "is that there is surprising little aquifer recharge from the Nile. Nile water has a younger isotopic profile, and samples from wells dug as close as five kilometers from the river show no sign of the Nile fingerprint. In fact, some of that well water is dated at 26,000 years old." Since scientists now know they cannot rely on passive recharge taking place naturally, they might engineer it artificially, channeling water from the Toshka emergency spillway, just north of Abu Simbel, toward Kharga Oasis and helping it to enter the aquifer there by digging infiltration basins, injection (pumped) wells and gravity (percolation) wells.

"We had a huge Nile flood in 1996," says Hassan, "and 33 billion cubic meters of river water filled the Toshka depression, just 50 kilometers from Kharga, where it has

been evaporating ever since at a rate of three billion cubic meters each year. Now we have salt marshes there, good for duck hunting but not much else."

Hassan is confident there is little likelihood of international conflict over aquifer sharing. "We know that the velocity of underground flow in most places is just two meters a day," he says. "It's like sucking a thick milkshake through a straw—it doesn't happen fast, and eventually it stops completely." Even Libya's big extraction plans for Kufra will



Left: In the Bahariyya Oasis, the hot spring of Beshmu, known since Roman times, is one place where the aquifer brings bath-temperature water to the surface. To manage the aquifer under the oasis, farmers are allocated water by the hour from some 75 government wells. Below left: Water engineer Ahmed Helmy and Maher El Shewy, left, discuss samples collected from Bahariyya's springs during a research trip to the oasis by the staff of the Cairo-based EAEA.

probably have only a minor effect on Egypt's East Uweinat farming area, given the distance between the two. If Kufra's water table drops 200 meters, the Egyptian side might see a drop of only 10 centimeters.

Such confidence does not travel very far, however. In the Bahariyya Oasis, a five-hour drive southwest of Cairo out past the Pyramids, the famous Roman spring called Bishmu has gone dry in recent memory due to over-pumping from nearby wells. The oasis has some 75 government-dug deep wells and hundreds of privately dug shallow wells. Because Bahariyya is a geological uplift, comprising limestone underlaid here by sandstone, some of the aquifer's 30-odd horizons, or distinct water-bearing rock strata, are near the surface; some wells are thus free-flowing and require no mechanical lifting.

Sixty-five-year-old Abdel Min'am Hasaballah, who farms 12 *feddans* (roughly 12 acres) of wheat, barley, alfalfa and date palms, relies on a nearby 1000-meter-deep government well to allocate him 11 hours of water in each 15-day irrigation cycle, called a *dawrah*. Before the construction of the



Aswan High Dam, his father dug a 100-meter free-flowing well which subsequently went dry in this long-farmed part of the oasis. Abdel Min'am blames the deep well's hot 50°C (122°F) water for killing his apricot trees—which may be true—and also blames the dam for knocking the hydrology of the oasis off-kilter, which is less accurate.

More likely his father's problem stemmed from the steady reclamation of thirsty new lands on the oasis's margins. Not far away, Talaat Abdel Bari works as a contract well-digger, using the free-spinning wheel of an old tractor set on blocks to power a pipe-driving hammer. He charges small farmers \$10 per meter of well depth (\$3.05 per foot); by 70 meters' depth he usually strikes water that will free-flow at a rate of 10 cubic meters per hour—just about right to irrigate this client's eight *feddans*. Each *feddan* requires about 25 cubic meters per day,

depending on the crop mix. Even if a well goes dry after five years of steadily decreasing flow, a farmer will have profited from the investment, and need only sink another well close enough to the first one to use the same irrigation channels.

Ministry of Irrigation engineer Ibrahim Salama oversees the drilling of deep government wells such as that currently being dug at al-Agouza West. A 10-story drilling rig, the same kind used to drill oil wells, has reached 800 meters and is now evacuating the drilling mud and widening the bore. It has taken 20 days to penetrate layers of shale and clay to reach the

saturated sandstone—the basement of the Nubian formation is some 1800 meters deep here—at a cost of about \$400,000.

Samples are taken every 10 meters for analysis. Because the northern half of the Nubian Aquifer is overlaid with limestone layers which carry brackish water containing up





It took the crew of this drilling rig—the same type used to drill for oil—20 days to bore some 800 meters (2560') to the saturated sandstone of the aquifer. The lower surface of the aquifer lies another 1000 meters (3200') deeper than that. Left: Mud samples from different depths will be tested, and the results combined with isotope readings and lithographic and hydrostatic data.

to 8000 parts per million (ppm) of dissolved salts, wells in this zone must drill through them in order to reach the sandstone's sweeter water, containing only 200 ppm.

Once the well is ready for testing, the ministry engineers check its static and dynamic levels with a sounder, a kind of fisherman's bob at the end of a tape measure that rises and falls with the water table. The static level is the water's depth under natural conditions; the dynamic level measures its drop when water is pumped out at varying rates, say 100 or 200 cubic meters an hour. Under the new project, information from the well drillers—geochemistry, lithography and hydrology—will be fed into a database married to the isotope readings from special test wells that will help to penetrate the aquifer's deeper secrets.

A first draft of such a database, lacking only the isotope readings, has been built by the Egyptian non-profit Center for Environment and Development of the Arab Region and Europe (CEDARE). Called NARIS, for "Nubian Aquifer Regional Information System," the database is a computer-based display of hydrological maps, water-use scenarios and long-term projections.

CEDARE water-resources manager Dr. Khaled Abu Zeid notes that much of the NARIS data was collected through the Joint Authority for the Nubian Aquifer, an international

office headquartered in Tripoli that was established by the Libyan and Egyptian governments in 1992 and joined a few years later by Sudan and Chad. "It was not a very systematic approach, but at least it was a beginning," says Abu Zeid.

He stresses the social context of water-resource development, and the need to keep in mind traditional water users as well as new users. Small farmers and Bedouin who rely on shallow wells should not be ignored in favor of the big development schemes. "They need water today," he says, "and will still need it tomorrow. We must not let it run dry because deeper wells are more cost-effective. But neither should we have an absolutist conservationist approach, in which we try to keep fossil water in some kind of 'museum' for their benefit."

Abu Zeid might have been thinking of Rifaat Sayyid Hamida and his brother Atef in Bahariyya. Although not traditional users in the full

sense—Rifaat is an accountant, Atef is an English teacher, and both are weekend farmers—their roots here go back many generations, and their grandfather was a full-time date grower in the old farms of the oasis. Eight years ago, feeling a need to "return to the land," they bought 11 feddans of reclaimed desert, paid \$2600 for a 130-meter free-flowing well, and now farm apricots, grapes and alfalfa. Their seven sons are learning to do as a hobby what their great-grandfather once did by necessity.

Dr. Ahmed Khater, director of the Groundwater Research Institute at the Nile Barrage, finds it ironic that in a desert region like the Middle East, petroleum geology is much better understood than subsurface hydrology. "But water is what makes our life possible here, and we must use it wisely," he says. He cites the experience of President Nasser's "New Valley" project in the 1960's, which proposed a massive resettlement of Nile Valley farmers to the western oases. It was a failure.

"These isotope studies hold the promise of learning more about what is really our most precious asset—water, not oil," he says. Nasser, he notes, got the New Valley project's motto wrong. "He said, 'When settlers come, then we will find water,'" says Khater. "He should have said, 'When we find water, then settlers can come.'" ☉



Atef Sayyid Hamida, a teacher, and his brother Rifaat, an accountant, are grandsons of a Bahariyya date farmer. They maintain a "weekend farm" in Bahariyya, where apricots, grapes and alfalfa depend not only on a hand-dug well and reservoir, but also on the full-time skills of Sayed Mahgoub, lower left, who keeps the fields irrigated and tilled. Lower right: It is not only the Hamida's plants that appreciate a dependable flow of water.



Louis Werner is a free-lance writer and filmmaker living in New York. He can be reached at [wernerworks@msn.com](mailto:wernerworks@msn.com). Kevin Bubriski ([www.kevinbubriski.com](http://www.kevinbubriski.com)) is a documentary photographer living in southern Vermont. His most recent exhibition, "Bridging People / Bridging Cultures," showed last fall at the Hallmark Museum of Contemporary Photography in Turners Falls, Massachusetts.



Related articles from past issues can be found on our Web site, [www.saudiaramcoworld.com](http://www.saudiaramcoworld.com). Click on "indexes," then on the cover of the issue indicated below:

Fossil water (Arabia): J/A 97, M/A 00

Great Sand Sea: N/D 02

Siwa Oasis: S/O 88, M/J 06

## EQUIVALENTS

### Length or height

10 centimeters = 3.9"

two meters = 6' 7"

four meters = 13' 1½", wider than an Interstate Highway lane in the us

18 meters = 58' 6"

70 meters = 230'

130 meters = 426'

200 meters = 656'

800 meters = 2625'

1000 meters = 3280'

1800 meters = 5905'

3415 meters = 11,204'

five kilometers = 3.1 miles

50 kilometers = 31 miles

### Area

1 square kilometer (km²) = 247 acres

two million (2,000,000) square kilometers (km²) = 772,204 square miles

### Volume

300 milligrams = 10 fluid ounces

60 liters = 16 gallons

10 cubic meters (m³) per hour = 2642 gallons per hour = 44 gallons per minute

25 cubic meters (m³) = 6600 gallons

100 cubic meters (m³) = 26,417 gallons

200 cubic meters (m³) = 52,834 gallons

3.6 million (3,600,000) cubic meters (m³) = 3000 acre-feet = 951 million gallons

half a billion (500,000,000) cubic meters (m³) = 405,356 acre-feet = 132 billion gallons

three billion (3,000,000,000) cubic meters (m³) = 2,432,140 acre-feet = 793 billion gallons

33 billion (33,000,000,000) cubic meters (m³) = 26,750,000 acre-feet = 8.7 trillion gallons

375,000 cubic kilometers (km³) = 304 billion acre-feet = 90,000 cubic miles





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

—THE EDITORS

## Class Activities

### Theme: Integration

The cover story, and other articles in this issue of *Saudi Aramco World*, relate to the idea of “integration.” The following activities can help you explore it.

#### What does “integration” mean?

Start by looking over “The Art of Integration.” Look at the photos and read the captions to get an idea of how photographer Peter Sanders is thinking about the concept. Then use a dictionary or the Internet to find a definition of *integration* that you think is suited to the article. Write it down.

One way to clarify a definition—to really understand the shades of meaning in a word—is to explore other words that are related to the word you are defining. Working with a partner if you'd like, write answers to these questions:

- What is the difference between integration and assimilation?
- What is the relationship between integration and harmony?
- What is the relationship between integration and tolerance?

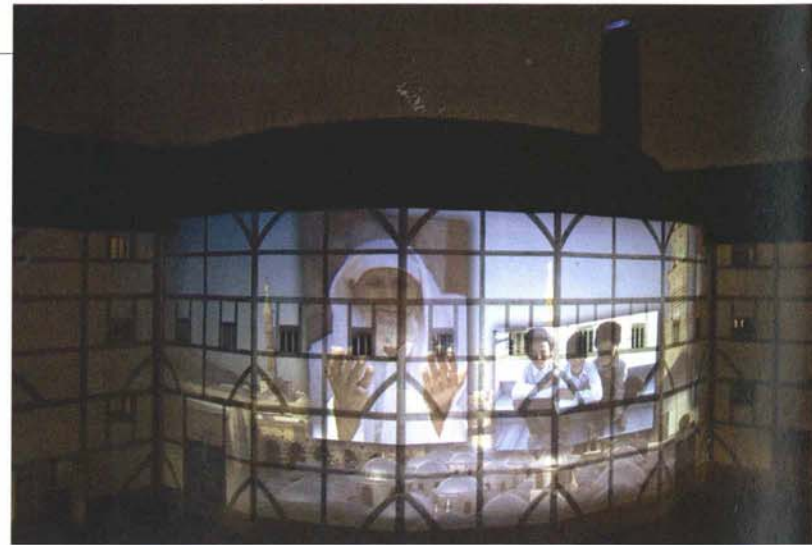
Look at the definition you started with, and at your answers to the two questions above. Use them to write a one-paragraph definition of *integration*. A paragraph gives you more space to explain the word than a dictionary entry would, but it still requires you to be concise. Share your paragraph with other students. Revise your definition in light of any new ideas you've got from your peers.

Now, armed with your clear understanding of the term *integration*, turn your attention to the content of the magazine.

#### What is valuable about integration? What problems, if any, might it lead to?

Integration may be physical, like the integration of buses for black and white riders in the South in the 1950's. It can also be more abstract. “Effat's New Roses,” for example, describes a new college in Saudi Arabia. The college is only for women, so in that sense, it's not integrated. And yet, if you read carefully, you can see that the mission of Effat College includes moves toward a different kind of integration. Find those ideas in the article and highlight them. Here are two hints: What language are courses taught in? What unusual majors are some students pursuing?

Take your answers to these questions, and develop a graphic that shows the worlds into which Effat College is integrating, as well as the cultural traditions the college is holding onto. Study your graphic. How are Effat's students likely to benefit from integrating into the worlds that are opening to them? Now look at the other side: Do you think they might be losing something in the process? How are they likely to benefit from holding on to their society's traditions? Keep your answers ready while you look at another instance of integration.



Read “A New Generation of Superheroes,” and then read the preview of *The 99 Origins* at [www.teshkeel.com](http://www.teshkeel.com). How does the look of the comic compare to other comics you have seen? How does the story compare? Think about the comic book form. What does *The 99* creator Naif Al-Mutawa say about why he chose the comic format for his stories? How is *The 99* an example of integration? Who is likely to benefit from this integration? Who might oppose it? Why?

Now go back and look at your definition of *integration*, these two articles and the work you've done with them. Then role-play one of these dialogues: The first is between Naif Al-Mutawa and someone who doesn't like the idea of presenting religious concepts in a comic book; the second is between Dean Haifa Jamal al-Lail of Effat College and someone who doesn't like the fact that courses at the college include engineering and are taught in English.

#### How can visual images express integration?

The photo essay “The Art of Integration” includes beautiful photographs that show the integration of Muslims in the United Kingdom. In these activities, you'll be looking at some of them.

Start with the two photos on page 24. Both include two people. One of the people in the top photo is film director Ovidio Salazar. Who do you think the other person is? (Use the caption to help you figure it out.) Think about what the photograph might symbolize about integration and the theme of the article, even its tone. Why do you think the two men are facing each other? Why are their eyes closed? Why is one in light while the other is in shadow? Why is this photo important? Contrast this photo with the smaller photo beneath it on the page. Who are the two men in that photo? How do light and shadow affect those images? What does this photo suggest about integration? Write your own caption that explains the symbolism about integration in these two photos.

## Class Activities (cont.)

Turn to the next photo spread, on pages 26–27, which focuses on the theme of integration as it relates to architecture. What do the Sultan Jahan Mosque and the part of the Moslem Cemetery shown in the photo to its left have in common? How do they differ from the Jamiyat Tabligh al-Islam building? Look in your community for buildings in different architectural styles. In a group, photograph some of them, and bring your photos to class. Which buildings reflect a culture's traditions? (Which cultures?) These might be religious traditions, if it's a place of worship. Or they might be historical and/or ethnic, if, for example, some of your town's buildings come from an earlier century or from a colonial power or from a native people's culture. Relate your photos to the theme of integration in the place you live.

Then, look at the photo taken at Cambridge University (pages 28–29) and the photo of Ayesha Qureshi on page 31. The first situates people in a traditional English setting; the second shows a person in a modern office building. How do the two photos express the theme of integration? What similar scenes might you see in your community? Or in the news? Or in another magazine?

Finally, look at the photo of the Globe Theater in London, pages 32–33. How does this image show the integration of Muslims into the UK? How is it also symbolic? Explain how the image expresses some of the complexities of immigration that you explored earlier.

Now do your own photo essay showing integration in your community. Use your architecture photos as a beginning. The integration might be taking place now, in which case you can take your own photographs; or it might have happened in the past, in which case you can look for photos at your local library or historical society. Put together your own essay, similar to “The Art of Integration.” Make it at least four pages. Include introductory text about integration in general and about your community specifically. Write captions for your photos. The captions should tell the reader about the photo, and also connect the photo to the theme. Copy the format of “The Art of Integration” as closely as you need to, keeping to the theme of your own community.

### Theme: Education

For most students, getting an education is more or less a full-time job—at least until you're 18. But how much do you think and talk about your education? Do you think about how you learn? About how your classes suit your ways of learning? About what you want to get out of your education? With this issue, you will have a chance to think about questions like these as you read about a new college in Saudi Arabia.

#### Pre-Reading Questions

Before you read “Effat's New Roses,” think about your own education, and about your ideas about what makes for a good education. Start by writing answers to the following questions. Your answers are just to get you thinking. Don't worry about perfecting the presentation.

- What do you like about school? What don't you like about it?
  - How much is your school part of your “education”?
  - What do you want to get out of your education?
  - What do your parents and teachers want you to get out of your education?
  - If you could learn any way you wanted, how would you do it?
- Take the thoughts you've jotted down, and working with a small group or as a class, discuss the questions and your answers. Then read “Effat's New Roses.”

### What are the goals of education?

#### A School's Goals

Begin thinking about this question by looking at Effat College. According to the article, what are the school's goals? Make a list of them. You can add to your list, and expand what you know about the goals the article describes, by visiting Effat's Web site at <http://www.effatcollege.edu.sa>.

Now turn to your own school's goals. Your teachers and your school's administrators give a lot of thought to what they want your school to accomplish—and what they want you to accomplish there. Find out about your school's goals. As a class, come up with interview questions about your school's goals. Start by interviewing your teacher about his or her goals. For the interview, assign different class members to ask the questions, take notes of the answers, record the answers if possible, and transcribe the recordings. Remember that part of your job is to be sure you understand what your teacher is saying to you. In other words, don't let him or her hide behind jargon. For example, if your teacher talks about “critical thinking,” push for a definition of the term.

Then invite your school's principal or headmaster to your class, and interview him or her about the school's goals. How are the principal's thoughts about goals similar to your teacher's thoughts? How are they different?

#### Students' Goals

You, as students, are the real focus of all this attention to education, schools and goals. So what about you? What do you want from your education? To answer the question, work with a group, and break the question down into subtopics. Make lists of your goals in these areas: Information you want to learn; skills you want to learn; social experiences; reaching career goals. Add any other subtopics that apply. Summarize your group's goals. Make a Venn diagram to compare them to the goals your teacher and principal talked about. What does the diagram tell you?

### How can schools and students reach those goals?

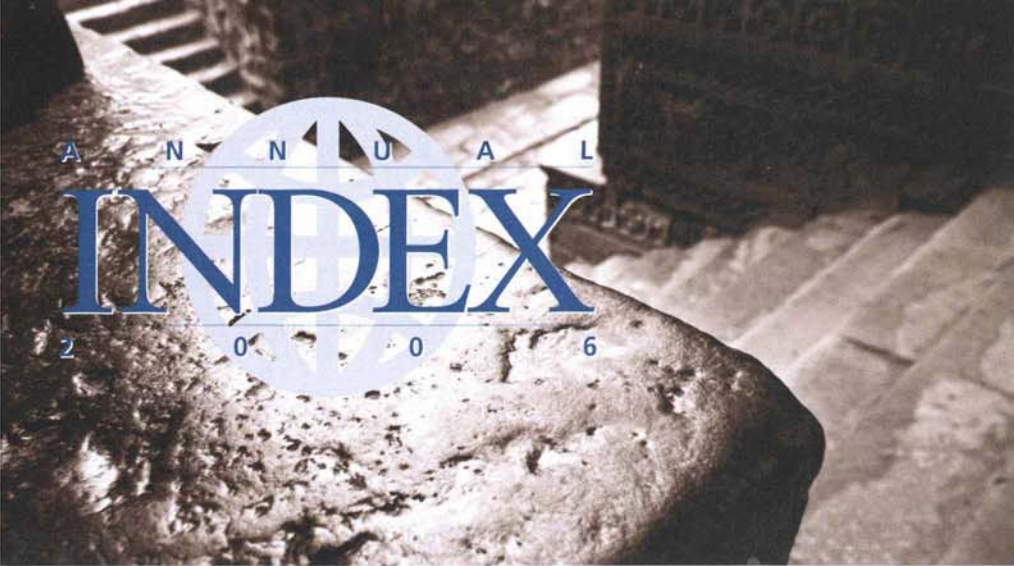
Look at Effat College's goals. What does the article say about how the college tries to meet those goals? See if you can match up each goal on the list you made to different aspects of the school's day-to-day operations. Think, for example, about class size, about what professors are expected to do and about what kind of environment the school strives for. Try the same exercise for your school's goals. How is your school organized so that students will meet those goals? How do you think your school could be organized to help you reach your goals?

With your group, imagine that you have the chance to start your own school. Using the Effat College Web site as your guide, write your school's vision and mission statements.



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# SUBJECTS

## A

- ABBASIDS**  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23
- ABRAHAM**, Kera  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39
- AGDAL GARDENS**, Marrakech  
*The Art and Science of Water*, Covington, R., M/J 06: 14–23
- AFRICA**  
*Muslim Roots*, U.S. Blues, Curiel, J., J/A 06: 8–13
- AGRICULTURE**  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33  
*An Oasis in the Balance*, Smith, S., M/J 06: 2–5  
*Soufi From the River, Soufi From the Sand*, Aziz, B., M/A 06: 24–33

**ALEXANDER THE GREAT**  
*Ptolemy's Alexandrian Postscript*, Holt, F., N/D 06: 4–9

**ALGERIA**  
*Soufi From the River, Soufi From the Sand*, Aziz, B., M/A 06: 24–33  
*Soufi Identity in El-Oued*, Aziz, B., M/A 06: 27

**ALHAMBRA**, Granada  
*A Virtual Walking Tour: The Alhambra*, Gross, B. and Gross, M., J/A 06: 24–29

**ALI**, Lorraine  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39

**ANDALUSIA**  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9  
*The Art and Science of Water*, Covington, R., M/J 06: 14–23  
*Lusterware*, Eigeland, T., J/F 06: 4

**ARAB-AMERICANS**  
*Birmingham 9 to 5*, Sieber, A., N/D 06: 33–43

**ARCHEOLOGY**  
*Before the Mummies: The Desert Origins of the Pharaohs*, Chandler, G., S/O 06: 2–11  
*World's Oldest Book?*, Chandler, G., S/O 06: 11

**ARCHITECTURE**  
*The Decorated Houses of Nubia*, Werner, L., J/A 06: 2–7  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33  
*A Virtual Walking Tour: The Alhambra*, Gross, B. and Gross, M., J/A 06: 24–29  
*A Virtual Walking Tour: The Süleymaniye Mosque*, Gross, B. and Gross, M., S/O 06: 22–27

**ASHGABAT**, Turkmenistan  
*Turkmenistan on a Plate*, Goldstein, D., J/F 06: 10–19

**ASTRONOMY**  
*The Scholar's Supernova*, Donsbach, M., J/A 06: 38–43

## B

**BAGHDAD**, Iraq  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23

**BAGHI**, Abdallah  
*An Oasis in the Balance*, Smith, S., M/J 06: 2–5

**BIRMINGHAM**, Alabama  
*Birmingham 9 to 5*, Sieber, A., N/D 06: 33–43

**BLUES**  
*Muslim Roots*, U.S. Blues, Curiel, J., J/A 06: 8–13

**BOOK EXCERPTS AND REVIEWS**  
*Suggestions for Reading*, M/A 06: 40–42  
*Suggestions for Reading*, S/O 06: 40–42

**BOOKS**  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39  
*In Memoriam: Naguib Mahfouz 1911–2006*, N/D 06: 2–3  
*World's Oldest Book?*, Chandler, G., S/O 06: 11

## C

**CALENDARS**  
*Home 2007: Gregorian and Hijri Calendars*, N/D 06: 17–32  
*Patterns of Moon, Patterns of Sun*, Lunde, P., N/D 06: 19

**CENTRAL ASIA**  
*Turkmenistan on a Plate*, Goldstein, D., J/F 06: 10–19

**CERAMICS**  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9  
*Lusterware*, Eigeland, T., J/F 06: 4

**CITIES AND CITY PLANNING**  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**CLAVIJO**, Ruy González de  
*The Diplomacy of the Sons*, Stone, C., M/A 06: 6–13

**CLIMATE**  
*Before the Mummies: The Desert Origins of the Pharaohs*, Chandler, G., S/O 06: 2–11

**COINS**  
*The Marvels of Mir Zakah*, Holt, F., N/D 06: 7  
*Ptolemy's Alexandrian Postscript*, Holt, F., N/D 06: 4–9

**CONSERVATION**  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9  
*An Oasis in the Balance*, Smith, S., M/J 06: 2–5  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33

**CRAFTS**  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9  
*Lusterware*, Eigeland, T., J/F 06: 4

## D

**DAKHLAH OASIS**, Egypt  
*Before the Mummies: The Desert Origins of the Pharaohs*, Chandler, G., S/O 06: 2–11

**DAKHLAH OASIS PROJECT**  
*Before the Mummies: The Desert Origins of the Pharaohs*, Chandler, G., S/O 06: 2–11  
*World's Oldest Book?*, Chandler, G., S/O 06: 11

**DAMS**  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33

**DELHI**, India  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**DELHI SULTANS**  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**DIPLOMACY**  
*The Diplomacy of the Sons*, Stone, C., M/A 06: 6–13  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**DOUGHTY**, Charles Montague  
*"A Titanic Desolation"*, Harrigan, P., M/A 06: 8

**DYES AND DYESTUFFS**  
*How Murex Works*, Scott, P., J/A 06: 35  
*It's a Purple World*, Scott, P., J/A 06: 33  
*Millennia of Murex*, Scott, P., J/A 06: 30–37

## E

**EARTHQUAKES**  
*Volcanic Arabia*, Harrigan, P., M/A 06: 2–13

**ECONOMIC DEVELOPMENT**  
*Soufi From the River, Soufi From the Sand*, Aziz, B., M/A 06: 24–33

**EDUCATION, HIGHER**  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39

**EGYPT**  
*Before the Mummies: The Desert Origins of the Pharaohs*, Chandler, G., S/O 06: 2–11  
*The Decorated Houses of Nubia*, Werner, L., J/A 06: 2–7  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33  
*An Oasis in the Balance*, Smith, S., M/J 06: 2–5

**EL-OUED**, Algeria  
*Soufi From the River, Soufi From the Sand*, Aziz, B., M/A 06: 24–33  
*Soufi Identity in El-Oued*, Aziz, B., M/A 06: 27

**ETHIOPIA**  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33

**EXHIBITIONS**  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

## F

**FADEL**, Leila  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39

**FILMS**  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33

**FLOWERS**  
*Orchid Arabia*, Hansen, E., N/D 06: 10–16

**FOOD**  
*Cooking in Hunza*, Flowerday, J., M/A 06: 34–37  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23  
*Turkmenistan on a Plate*, Goldstein, D., J/F 06: 10–19

**FOOD—RECIPES**  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23  
*The Recipes*, Paley, M., M/A 06: 38–43

**"FOUNTAINS OF THE SUN"**  
*The Last Nile Flood*, Feeney, J., M/A 06: 24–33

## G

**GARDENS AND GARDENING**  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**GEOLOGY**  
*Volcanic Arabia*, Harrigan, P., M/A 06: 2–13

**GRANADA**, Spain  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9  
*The Art and Science of Water*, Covington, R., M/J 06: 14–23

## H

**AL-HADDAD**, 'Abd al-Rahman Muhammad  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**AL-HAKIM**, Fatimid caliph  
*The Scholar's Supernova*, Donsbach, M., J/A 06: 38–43

**HANDY**, W. C.  
*Muslim Roots*, U.S. Blues, Curiel, J., J/A 06: 8–13

**HERBS**  
*Natural Remedies of Arabia*, Lebling, R. and Pepperdine, D., S/O 06: 12–21  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**HISTORIOGRAPHY**  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**HORTICULTURE**  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**HOUSES**  
*The Decorated Houses of Nubia*, Werner, L., J/A 06: 2–7

**HUNG WU**, Ming emperor  
*The Diplomacy of the Sons*, Stone, C., M/A 06: 6–13

**HUNZA**, Pakistan  
*Cooking in Hunza*, Flowerday, J., M/A 06: 34–37  
*The Recipes*, Paley, M., M/A 06: 38–43

## I

**IBN BATTUTA**, Abu 'Abd Allah Muhammad al-Tanji  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**IBN KHALDUN**, Abu Zayd 'Abd al-Rahman  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**IBN RIDWAN**, Ali  
*The Scholar's Supernova*, Donsbach, M., J/A 06: 38–43

**INDIA**  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**INTERNATIONAL MUSEUM OF MUSLIM CULTURES**, Jackson, Mississippi  
*Mississippi's Muslim Museum*, Sieber, A., J/F 06: 20–23

## J

**JACKSON**, Mississippi  
*Mississippi's Muslim Museum*, Sieber, A., J/F 06: 20–23

**AL-JAZARI**, Abu al-'izz ibn Isma'il ibn al-Razzaz  
*The Art and Science of Water*, Covington, R., M/J 06: 14–23

**JIMÉNEZ**, Miguel Ruiz  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9

**JOURNALISTS AND JOURNALISM**  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39

**JUN**, Spain  
*Andalusia's New Golden Pottery*, Eigeland, T., J/F 06: 2–9

## K

**KARAKORAM HIGHWAY**  
*Cooking in Hunza*, Flowerday, J., M/A 06: 34–37

**KITAB AL-'IBAR**  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**KITAB AL-TABIKH**  
*Cooking With the Caliphs*, Perry, C., M/J 06: 14–23

**KOTB**, Hoda  
*Calling Helen Thomas*, Chambers, D., M/A 06: 34–39

## M

**MADINAH**, Saudi Arabia  
*The Madinah Eruption*, Harrigan, P., M/A 06: 5  
*Volcanic Arabia*, Harrigan, P., M/A 06: 2–13

**MADINAT AL-ZAHRA**, Spain  
*The Art and Science of Water*, Covington, R., M/J 06: 14–23

**MAHFOUZ**, Naguib  
*In Memoriam: Naguib Mahfouz 1911–2006*, N/D 06: 2–3

**MEDICINE, TRADITIONAL**  
*Natural Remedies of Arabia*, Lebling, R. and Pepperdine, D., S/O 06: 12–21

**MINERALS**  
*The Green Gems of Volcanic Arabia*, Harrigan, P., M/A 06: 11  
*Natural Remedies of Arabia*, Lebling, R. and Pepperdine, D., S/O 06: 12–21

**MING DYNASTY**  
*The Diplomacy of the Sons*, Stone, C., M/A 06: 6–13

**MINOANS**  
*Millennia of Murex*, Scott, P., J/A 06: 30–37

**MIR ZAKAH**, Afghanistan  
*The Marvels of Mir Zakah*, Holt, F., N/D 06: 7

**MOSQUES**  
*A Virtual Walking Tour: The Süleymaniye Mosque*, Gross, B. and Gross, M., S/O 06: 22–27

**MUHAMMAD IBN TUGHLUQ**, Sultan of Delhi  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**MUQADDIMAH**  
*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**MUREX**  
*How Murex Works*, Scott, P., J/A 06: 35  
*It's a Purple World*, Scott, P., J/A 06: 33  
*Millennia of Murex*, Scott, P., J/A 06: 30–37

**MUSEUMS**  
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**MUSIC AND MUSICIANS**  
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**MUSIC REVIEWS**  
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**MUSLIMS—AFRICA**  
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**NASRIDS**  
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## O

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**OTTOMANS**  
*A Virtual Walking Tour: The Süleymaniye Mosque*, Gross, B. and Gross, M., S/O 06: 22–27

## P

**PAKISTAN**  
*Cooking in Hunza*, Flowerday, J., M/A 06: 34–37  
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**PERIDOT**  
*The Green Gems of Volcanic Arabia*, Harrigan, P., M/A 06: 11

**PERSONALITIES**  
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(Miguel Ruiz Jiménez)  
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(Hafiz Chandiwalla, Rola Pacha, Maher Qashou, Loay Ali, Lucas and Sawzan Gambino, Michael and Nillie Niknafs, Shirley Stanley, Mamoun Pacha, Hussein Abdullatif, Melanie Mahmoud, Donna Dooley, Gigi Douban, Ashtaq Taufique, Firas AL-Tarawneh, Karim Shamsi-Basha)  
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(Anthony Shadid, Lorraine Ali, Hoda Korb, Kera Abraham, Eyad Zahra, Leila Fadel, Jack Shaheen)  
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(Okolo Rashid, Emad Al-Turk)  
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(Abdallah Baghi)

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(Ibn Battuta)

**PHOENICIANS**  
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**POLITICAL SCIENCE**  
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**PTOLEMY AND THE PTOLEMIES**  
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## Q

**QUTUB MINAR**, New Delhi  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

## R

**RASHID**, Okolo  
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*Ibn Khaldun and the Rise and Fall of Empires*, Stone, C., S/O 06: 28–39

**RESTORATION**  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33

**RIHLA**  
*A Tangerine in Delhi*, Mackintosh-Smith, T., M/A 06: 14–23

**RIVERS**  
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## S

**SANA'A**, Yemen  
*Sana'a Rising*, Hansen, E., J/F 06: 25–33  
*The Secret Gardens of Sana'a*, Mackintosh-Smith, T., J/F 06: 34–37

**SAUDI ARABIA—CITIES**  
*The Madinah Eruption*, Harrigan, P., M/A 06: 5

**SAUDI ARABIA—DESCRIPTION AND TRAVEL**  
*"A Titanic Desolation"*, Harrigan, P., M/A 06: 8

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**SAUDI ARABIA—HISTORY**  
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**SAUDI GEOLOGICAL SURVEY**, Jiddah  
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**SUDAN**  
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**SUPERNOVAE**  
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## T

**TECHNOLOGY**  
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**TEXTILES**  
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**THOMAS, Helen**  
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**TIMUR AND TIMURID DYNASTY**  
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**TRADE**  
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V

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**WOMEN**  
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**WORK AND WORKERS**  
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Y

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Z

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*Suggestions for Listening*, Nickson, C., M/A 06: 43  
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**FLOWERDAY, JULIE**  
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**GEHMAN, RAYMOND**  
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**GOELL, HERMANN**  
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**GOLDSTEIN, DARRA**  
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*A Virtual Walking Tour: The Alhambra*, J/A 06: 24–29  
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**LEBLING, ROBERT W.**  
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**MEUNIER, PASCAL**  
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**NEWTON, ROBERT C.**  
*Muslim Roots, U.S. Blues*, J/A 06: 8–13

**NICKSON, CHRIS**  
*Suggestions for Listening*, M/A 06: 43  
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**PAKKA, KYLE**  
*Suggestions for Reading*, S/O 06: 40–42

**PALEY, MAREILE**  
*The Recipes*, M/A 06: 38–43

**PALEY, MATTHIEU**  
*Cooking in Hunza*, M/A 06: 34–37

**PEPPERDINE, DONNA**  
*Natural Remedies of Arabia*, S/O 06: 12–21

**PERRY, CHARLES**  
*Cooking With the Caliphs*, M/J 06: 14–23

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*Mississippi's Muslim Museum*, J/F 06: 20–23

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**ROGERS, HELENE**  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06: 28–39

**SAWAYA, LINDA DALAL**  
*Cooking With the Caliphs*, M/J 06: 14–23

**SCOTT, PHILIPPA**  
*It's a Purple World*, J/A 06: 33  
*How Murex Works*, J/A 06: 35  
*Millennia of Murex*, J/A 06: 30–37

**SHAMSI-BASHA, KARIM**  
*Birmingham 9 to 5*, N/D 06: 33–43

**SHEARS, SUSAN**  
*The Art and Science of Water*, M/J 06: 14–23

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*Mississippi's Muslim Museum*, J/F 06: 20–23

**SMITH, SYLVIA**  
*An Oasis in the Balance*, M/J 06: 2–5

**STONE, CAROLINE**  
*The Diplomacy of the Sons*, M/A 06: 6–13  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06: 28–39

**SWEENEY, CHARLES**  
*Suggestions for Reading*, S/O 06: 40–42

**EL-TANTAWY, LAURA**  
*An Oasis in the Balance*, M/J 06: 2–5

**TEZEL, TUNÇ**  
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**AGE PHOTOSTOCK**  
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**ALAMY**  
*The Diplomacy of the Sons*, M/A 06: 6–13  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06: 28–39

**ANTENNA AUDIO**, Madrid  
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**BDEEP MUSIC**  
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*Millennia of Murex*, J/A 06: 30–37

**ESTOCK PHOTO**  
*The Diplomacy of the Sons*, M/A 06: 6–13

**EUROPEAN PRESSPHOTO AGENCY**, Frankfurt  
*In Memoriam: Naguib Mahfouz 1911–2006*, N/D 06: 2–3

**FORT WORTH STAR-TELEGRAM**  
*Calling Helen Thomas*, M/A 06: 34–39

**FOTOSEARCH**  
*Home 2007: Gregorian and Hijri Calendars*, N/D 06: 17–32

**HOUSE**, Stewart F.  
*Calling Helen Thomas*, M/A 06: 34–39

**HOUSE OF MANUSCRIPTS**, Sana'a  
*The Secret Gardens of Sana'a*, J/F 06: 34–37

**HERITAGE IMAGE PARTNERSHIP**, London  
*The Scholar's Supernova*, J/A 06: 38–43

**INTERNATIONAL MUSEUM OF MUSLIM CULTURES**, Jackson, Mississippi  
*Mississippi's Muslim Museum*, J/F 06: 20–23

**JENNINGS, Steve**  
*Muslim Roots, U.S. Blues*, J/A 06: 8–13

**JIMÉNEZ**, Miguel Ruiz  
*Andalusia's New Golden Pottery*, J/F 06: 2–9

**KIT TROPENMUSEUM**, Amsterdam  
*Muslim Roots, U.S. Blues*, J/A 06: 8–13

**KRASSOVSKY, Klex**  
*Calling Helen Thomas*, M/A 06: 34–39

**EL LEGADO ANDALUSÍ**, Granada  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06: 28–39

**MAPPING SPECIALISTS**, Madison, Wisconsin  
*Volcanic Arabia*, M/A 06: 2–13

**MARINER'S MUSEUM**, Newport News  
*Muslim Roots, U.S. Blues*, J/A 06: 8–13

**MAX PLANCK INSTITUTE FOR EXTRATERRESTRIAL PHYSICS**, Garching  
*The Scholar's Supernova*, J/A 06: 38–43

**MUSÉE BONNAT**, Bayonne  
*Millennia of Murex*, J/A 06: 30–37

**MUSÉE DU LOUVRE**, Paris  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06: 28–39

**NATIONAL PALACE MUSEUM**, Taipei  
*The Diplomacy of the Sons*, M/A 06: 6–13

**NBC UNIVERSAL**  
*Calling Helen Thomas*, M/A 06: 34–39

**DEN OTTER, E.**  
*Muslim Roots, U.S. Blues*, J/A 06: 8–13

**PHOTOS12.COM**  
*The Art and Science of Water*, M/J 06: 14–23  
*Millennia of Murex*, J/A 06: 30–37

**PRIMATE CATHEDRAL OF TOLEDO**  
*Ibn Khaldun and the Rise and Fall of Empires*, S/O 06



# Events & Exhibitions



**Oriental Glass** focuses on the history of glass-making in the Middle East. This began around 2500 BC in Phoenicia. From the seventh century, when Damascus became the center of the first caliphate, glass began to be used in the decoration of buildings as well as in utilitarian wares. Many techniques of glass decoration were inherited from the glassblowers of ancient Rome, including engraving, cutting and adding patterns in relief. Around 1200, glassmakers in Egypt and Syria began to supplement these by the use of enamel: colored glass powder in an oily medium painted onto the glass. Some pieces, like oil lamps, reliquaries and goblets, were designed mainly for ceremonial use and were therefore magnificently decorated. Around 1500, the Middle East began to step up its imports of European glass, especially from Venice, where enameled glass of great quality was being produced. Even mosque lamp-holders were produced there, using a technique that the Venetians had actually filched from Islamic glassblowers. The exhibition also includes some western pieces inspired by Oriental examples, such as Dutch gin bottles enameled in India using a style derived from Persian miniatures. The 19th-century vogue for Oriental artifacts gave rise to a renaissance of Islamic-style glassmaking in Europe, illustrated in the exhibition by a pilgrim's flask and basin made in France. Gemeentemuseum, **The Hague**, through March 18.

This glass mosque lamp-holder, enameled and gilded and 32 centimeters (12 1/4") tall, was made in Egypt between 1322 and 1328. The text on its neck is part of the Qur'an chapter "The Light": "God is the Light of the heavens and the earth. The Parable of His Light is as if there were a Niche and within it a Lamp: the Lamp enclosed in Glass: the Glass as if it were a brilliant star."



**<<< Ongoing** a Bedouin tent to watch a short film about life on the dig. Special interactive areas allow visitors to explore what archeology can—and cannot—tell us. Brunei Gallery, SOAS, **London**, through March 24.

**Embroidering Identities:** A Century of Palestinian Clothing explores the expression of personal and regional identity through clothing, and shows the beauty, technical achievement and tremendous diversity of the 19th- and early 20th-century garments on display. In the days before globalization and the homogenization of culture, clothing was an important cultural marker that expressed not only geographic origin but also status. Until recent years, each region of Palestine had its own style of clothing for women characterized by distinctive patterns of embroidery, appliqué, sleeve design and accessories. Men's clothing too showed considerable diversity. The exhibit includes traditional wedding gowns, with their elaborate headdresses covered with coins and silver ornaments, as well as other clothing from Jerusalem, Bethlehem, Ramallah, Jericho, Hebron, Beir Saba' and Gaza. Oriental Institute Museum, **Chicago**, through March 25.

**The Vessels of the Alhambra** reunites more than 100 of the magnificent *malic* vessels—whole or fragmentary—that represent the height of the artistic achievement of the Nasrid Dynasty of Spain in the 14th and 15th centuries. These vessels, shaped like winged amphorae, were recognized beyond the Muslim world, and imitations and copies were produced long after the fall of the Nasrids. Palace of Charles V, Alhambra, **Granada, Spain**, through March.

**Istanbul:** City of the Ottoman Sultans includes some 300 masterpieces of Ottoman art, portraits of the sultans, miniatures and paintings depicting important moments in history, tapestries, gifts presented to the sultans, religious reliquaries, marble turbans, mystical objects, highlights of literature and science, beautiful calligraphy, ceramics, water pipes and musical instruments, assembled from the collections of various museums in Istanbul. All these striking objects are to be found in more than 10 structures, representing a bazaar, a mosque and so on, that have been placed inside the majestic medieval church. They are combined with old and new film footage and intriguing musical excerpts. Nieuwe Kerk, **Amsterdam**, through April 15.

**Discovering Tutankhamun:** The Photographs of Harry Burton celebrates one of the best-publicized episodes in the history of archeology: the discovery and exploration of the tomb of the Egyptian pharaoh Tutankhamun in 1922. Taken by the renowned archeological photographer Harry Burton, who had been "lent" by the Metropolitan Museum to Howard Carter, the photographs document every stage in the process of excavation. From the rock-cut steps leading down to the entrance passage to the first view of the contents of

objects illuminate the ancient Egyptians' concern with the afterlife, for which mortal existence was only a preparation, and of whose delights it was a mere shadow. A life lived morally and in accord with the commandments would allow a soul to pass through the final gate from the underworld into the paradise of the Field of Reeds. National Gallery of **Australia, Canberra**, through February 25.

**Treasures of Ancient Egypt** presents more than 200 artifacts, from statuary and relief to coffins, funerary art and everyday domestic objects, to shed light on the life of the ancient Egyptians. Art Gallery of **Nova Scotia, Halifax**, into 2007.

**A Future for the Past:** Petrie's Palestinian Collection highlights the extraordinary finds made by the archeologist Sir Flinders Petrie, who spent many years working in the area around modern Gaza in the 1920's and 1930's. The sites he dug include major towns and trading centers which flourished over 5000 years ago. Petrie found beautiful pottery and jewelry and a huge variety of tools. This is the first time that many of these unique artifacts have been on public display. The exhibition draws on the letters, notebooks and photographs kept by Petrie and his colleagues that help recreate what daily life was like for the European archeologists and for the Palestinian men, women and children who worked on these excavations in the 1930's. Visitors can see into a "dig house," explore a trench and sit inside

Islamic world, which brought about new technological, artistic and intellectual information. These Venetian objects will be studied vis-à-vis works of Islamic art, providing an immediate, comparative visual reference. A continuous thread throughout the exhibition deals with the works of Islamic art that entered Venetian collections in historical times and explores the nature of the artistic relationship between Venice and the Mamluks in Egypt, the Ottomans in Turkey and the Safavids in Iran. Institut du Monde Arabe, **Paris**, through February 18; Metropolitan Museum of Art, **New York** (as **Venice and the Islamic World, 828-1797**), from March 27.

**Art of Being Tuareg:** Sahara Nomads in a Modern World. The elegance and beauty of the Tuareg peoples—their dress and ornament, their large white riding camels, their refined song, speech and dance—have all been rhapsodically described by travelers in Niger, Mali and Nigeria. This exhibition explores the history and culture of the Tuareg through their silver jewelry, clothing, leather purses, bags and saddles, and other highly decorated items. UCLA Fowler Museum of Cultural History, **Los Angeles**, through February 25.

**Egyptian Antiquities From the Louvre:** Journey to the Afterlife includes stone and bronze sculpture, illustrated manuscripts, painted chests and mummy cases, *ushabti* figures, reliefs, jewelry, ceramics and fine wood carvings. All of the more than 200

compelling reflections on a homeland equally rich in culture, history and turmoil. Arab American National Museum, **Dearborn, Michigan**, through January 31.

**<<< Ongoing Living Under the Crescent Moon:** Domestic Culture in the Arab World explores the colorful and expressive domestic lifestyles of 10 Arab countries, journeying from the tents of the nomadic Tuareg and Bedouin, through Moroccan kasbahs and Damascene manor houses, to modern domestic architecture designed by Hassan Fathy, Pierry Khoury and Elie Mouyal. The exhibition's goal is to answer the question, "From where does Arab-Islamic civilization derive its rich artistic and decorative expressions?" Thailand Creative and Design Center, **Bangkok**, through February 4.

**Venice and the East** examines the relationship between Venice and the Islamic world over a thousand-year period, focusing on artistic and cultural ideas that originated in the Near East and were channeled, absorbed and elaborated in Venice, the European city-state that exercised economic and commercial hegemony over the Mediterranean. The underlying theme of the exhibition will focus on the reasons why a large number of Venetian paintings, drawings, printed books and especially decorative artworks were influenced by and drew inspiration from the Islamic world and from its art. "Orientalism" in Venice was based on direct contact with the

**<<< Last Call Across the Board:** Around the World in 18 Games features an assortment of board games from around the world and throughout the ages. In Egypt, as shown on the burial papyri, the dead played "senet" with the gods as a test to see if they were worthy to pass into the afterlife. "Snakes and Ladders" is an ancient game that originated in India and was used to teach morality: Good behavior led up the ladders and bad behavior meant moving down a frightening snake. The exhibition explores these games and many more. Wardown Park Museum, **Luton, UK**, through January 21.

**Luxury Arts of the Silk Route Empires** explores the rich and extensive artistic interaction that resulted from the commercial ties that linked the far corners of Asia via the Silk Roads. Sasanian artisans created silver-gilt vessels that enjoyed enormous prestige within and beyond the Persian empire, and their products influenced the forms, manufacturing techniques and ornament of luxury metalwork and ceramics made in other kingdoms along the trade routes. Silver and porcelain vessels, mirrors and other luxury items illustrate the influence of West Asian styles on works produced in Central Asia and China. Sackler Gallery, **Washington, D.C.**, through January 28.

**Out of Iraq:** Artists' Meditations on Their Homeland features the work of Leila Kubba, Nadwa Qaragholi and Mohammed Fradi, revealing three highly personal and visually

the tomb and the removal of the objects, Burton's images capture thousands of beautifully made and decorated objects found in the tomb. Metropolitan Museum of Art, **New York**, through April 29.

**Afghanistan, Rediscovered Treasures:** Collections from the National Museum of Kabul presents some 220 finds from four major archeological sites: Fulol, Ai Khanum, Tillia-Tepe and Begram. The exhibition brings together representative objects from the Kabul collections, such as Indian ivories, Hellenic bronzes, even glassware that appears to be the oldest known example of Greco-Roman glass. Beyond the unique and exciting story of these rediscovered treasures, the exhibition pays tribute to the history of Afghanistan, from the Bronze Age to the Kushan Empire, and celebrates the continuity, uniqueness and richness of Afghan culture and its many tributary influences. Many of the works on exhibit have been restored, with the aim of later reintegrating them into the Kabul Museum collections. Musée Guimet, **Paris**, through April 30.

**Stories in Stone:** Conserving Mosaics of Roman Africa presents a selection of masterpiece mosaics from the national museums of Tunisia. They are among the finest of the thousands produced between the second and sixth centuries in the Roman province of Africa Proconsularis, a portion of which is known today as Tunisia. These works, fashioned as pavements for both public buildings and private homes, depict flora and fauna, theater and spectacle, and myths, gods and goddesses. Mosaic art flourished in North Africa, where the diversity of limestone and marble fostered a tradition of multicolored work. Beginning in the late second century, mosaics made in Roman Africa became more colorful, featuring geometric designs embellished with floral patterns. During the third century, scenes with figures emerged. In public baths, for example, mosaics often related to the sea and depicted natural elements as well as marine gods. In the fourth century, increasingly original decorative motifs included laurel garlands and crowns as borders. Figural compositions portrayed vignettes of daily life, such as hunting, fishing, athletics and amphitheater games. Getty Villa, **Pacific Palisades, California**, through April 30.

**Louis Comfort Tiffany and Laurelton Hall:** An Artist's Country Estate is an opportunity to examine some 250 outstanding works by one of America's finest designers through the home, furnishings and garden he created for himself. The exhibition includes a Steinway piano whose case was designed by Tiffany in 1887 and inspired by ivory-inlaid woodwork from Damascus; Laurelton's central Fountain Court, an homage to the Alhambra; and art objects Tiffany collected from the Islamic world. Metropolitan Museum of Art, **New York**, through May 20.

**The Jazira:** A Cultural Landscape Between the Euphrates and the Tigris

presents the art and culture of the petty princes of the region—the *jazira*, or "island"—in the 12th and 13th centuries. The medieval dynasties of the Zanjids, Artuqids and Ayyubids favored a courtly lifestyle that manifested itself in opulent libraries and artistic production correlated with technical innovation, and featured extensive figurative representation in objects of art and architectural design. Artisans were encouraged to study the symbols of the illustrious past and to re-use them for the glorification of their princely patrons. Astrological symbols were employed on public buildings and in courtly surroundings alike, reflecting the ruler's supremacy. The exhibition's 70 objects include masterpieces, either unpublished or barely remembered, that acquire new dimensions in their historical context; they are drawn from the Museum of Islamic Art, the Oriental Department of the Staatsbibliothek and the Münzkabinett in Berlin, complemented by loans from the David Collection in Copenhagen and the Staatliches Museum für Völkerkunde in Munich. They exemplify one little-known but particularly interesting epoch in Islamic culture. Pergamonmuseum, Museum für Islamische Kunst, **Berlin**, through September 2.

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

**<<< January The Emperor's Terrapin** was carved around 1600 and found on the grounds of the fort at Allahabad in northern India in 1803. It is associated with Crown Prince Selim, later to be the Emperor Jahangir, son of the great Mughal emperor Akbar. "Turtles are marvelous sculptural pieces," said Sir David Attenborough, "and as such clearly inspired the Mughal artist working with a spectacular jade boulder." New Walk Museum and Gallery, Burrell Collection, **Glasgow**, January 18 through March 25; Cartwright Hall, **Bradford**, March 28 through June 3.

**Rupert Wace Ancient Art** exhibits at the Winter Antiques Show, displaying an Egyptian limestone relief of a male head from the Late Dynastic Period and a South Arabian alabaster dedicatory stele from the first century BC, among other objects. Seventh Regiment Armory, **New York**, January 19-28.

**Art & Islam:** Jafar Dabiri & Unaiza Karim. The exhibition focuses on traditional Islamic art techniques. Dabiri uses the Persian craft called *khatam*, skillfully

inlaying wooden objects. **Birmingham [UK] Museum & Art Gallery**, January 20 through March 18.

**Persian Visions:** Contemporary Photography From Iran presents more than 80 images that provide a revealing view of Iranian life and experience. The 20 artists featured are among Iran's most celebrated and include Esmail Abbasi (references to Persian literature), Bahman Jalali, Shariyar Tavakoli (family histories), Mehran Mohajer, Shoukoufeh Alidousti (self-portraits and family photographs) and Ebrahim Kahdem-Bayatvin. Some have lived abroad and returned to view their homeland from a changed perspective. Anti-exotic and specific, these images make up the first survey of contemporary Iranian photography to be presented in the United States. Johnson Museum of Art, Cornell University, **Ithaca, New York**, January 27 through March 18.

**Treasures from Olana:** Landscapes by Frederic Edwin Church features 18 of the artist's own paintings that he displayed in his carefully devised interiors at Olana. The majority are landscape oil sketches, which illustrate the artist's favorite domestic landscapes and his journeys not only to the Middle East, but also to South America and Europe. During a period of debate regarding the artistic merit of an oil sketch versus a finished painting, Church boldly exhibited these *plein-air* oil sketches as finished works of art alongside his precisely rendered "Great Pictures"—a testament to his belief in the quality of these smaller works. This is the first time they have been displayed together outside Olana. **Princeton [New Jersey] University Art Museum**, January 27 through June 10.

**Architecture of the Veil:** An Installation by Samta Benyahia—the first US museum exhibition by the Algerian artist—takes its theme from the *moucharabieh*, the openwork screens used in Mediterranean Islamic architecture to cover windows and balconies, allowing those inside—typically women—to view the outside world without being seen. The installation provides a beautiful and dynamic exploration of gender as well as the dialectic between interior and exterior, light and shadow, concealment and revelation, and private versus public space. Fowler Museum at UCLA, **Los Angeles**, January 28 through September 2.

**<<< February The Language of Carpets and The Magic Carpet Project** will be on exhibit at Mission Mill Museum, **Salem, Oregon**, February 1 through April 14.

**Tutankhamun and the Golden Age of the Pharaohs** includes 130 works from the Egyptian National Museum and presents a selection of 50 spectacular objects excavated from the tomb of Tutankhamun, including one of the canopic coffinettes, inlaid with gold and precious stones, that contained his mummified internal organs. Additional pieces in the exhibition derive from the tombs of royalty and high officials of the 18th



Events&Exhibitions

Continued from previous page

Dynasty, primarily from the Valley of the Kings. These additional works place the unique finds from the tomb of Tutankhamun into context and illustrate the wealth and development of Egyptian burial practice during the New Kingdom. The exhibition, more than twice the size of the 1979 “King Tut” exhibition, marks the first time treasures of Tutankhamun have visited America in 26 years. Franklin Institute, **Philadelphia**, from February 3 through September 30.

**2007 Middle East Festival One World Peace Concert** includes contributions of African music and dance, Indian classical dance, spiritual songs for peace, Senegalese music and dance, Chinese and Tibetan dance, theater and poetry. Queen’s Hall, **Edinburgh**, February 10.

**The Coming of the Neolithic in Central Asia** is the topic of an archeological lecture by Frédérique Brunet at 10 a.m. at the Institute of Art and Archaeology, 3 rue Michelet, **Paris** 75006, February 15.

**The Wanderer.** Cassandra and Jawaahir Dance Company’s seasonal concert explores the rich theme of the wanderer, or *sawwab*—the seeker, the immigrant, the expatriate, the refugee—through traditional and contemporary dances from the eastern and southern Mediterranean. Live Arab music provided by the Georges Lammam Orchestra of San Francisco. ① [www.jawaahir.org](http://www.jawaahir.org), 612-872-6050. Southern Theater, **Minneapolis**, February 15–18 and 21–25.

**Uncomfortable Truths:** The Shadow of Slave Trading on Contemporary Art and Design displays new and specially commissioned work to address the ways in which the legacy of slavery informs contemporary art and design. The exhibition commemorates the bicentenary of Britain’s abolition of the trans-Atlantic slave trade, and features the work of artists from the United States (Michael Paul Britto and Fred Wilson), Britain (Anissa-Jane, Lubaina Himid, Keith Piper and Yinka Shonibare), Africa (El Anatsui, Tapfuma Gutsa, Romuald Hazoumè and Julien Sinzogan) and

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death. The earliest textile in the exhibition is more than 2000 years old; others include an ancient Peruvian tunic border fragment, a Turkish velvet panel, a Chinese rank badge, a Navajo rug, a couture ball gown, an AIDS Awareness ribbon and a series of photographs depicting the use of red textiles in contemporary life. Gallery talk and tour, February 3, 11 a.m. Rug and Textile Appreciation Morning: “Red in Rugs and Textiles,” March 10, 10:30 a.m. Textile Museum, **Washington, D.C.**, February 2 through July 8.

**A 19th-century suzani made in Tashkent, Uzbekistan. For an article on these textiles, go to [www.saudiaramcoworld.com/issue/200304/splendid.suzanis.htm](http://www.saudiaramcoworld.com/issue/200304/splendid.suzanis.htm)**

Europe (Christine Meisner). A two-day interdisciplinary conference, “From Cane Field to Tea Cup: The Impact of the Transatlantic Slave Trade on Art and Design,” will take place on February 24 and 25. Victoria & Albert Museum, **London**, February 20 through June 17.

**Armenian Photographers View the East.** In the second half of the 19th century and the first decade of the 20th, many Armenians living in large cities of the Middle East chose photography as their livelihood. Whereas early western travelers in the region photographed mostly archeological remains and biblical sites, the Armenian photographers made their living doing studio photography, often in working-class or lower-middle-class areas. Their images now constitute extremely valuable sociological records of 19th-century Istanbul, Beirut, Damascus, Cairo and Palestine. The exhibition presents works of Abdullah Frères, G. Lékégian, Garabed Krikorian, Abraham Guirogossian, Yessayi Garabedian, Sarrafin Bros., Halladjian, Van Leo and Angelo, and ends with the colorized prints of the “Carnets d’Egypte” of Katia Boyadjian, the last of the line. Institut du Monde Arabe, **Paris**, February 20 through April 1.

**Gardens in Asia.** The cultivation of gardens has played a central role in the ceremonial, religious and economic life of Asia for centuries. This exhibition explores garden traditions practiced by Chinese, Indian, Japanese, Persian, Turkish and other cultures as seen through works of art: some 60 finely painted screens, hanging scrolls and manuscript illustrations, ceramics, lacquered vessels and gold-inlaid metalwork. Sackler Gallery, **Washington, D.C.**, February 24 through May 20.

**The Gulf Art Fair** will showcase contemporary works of art from

**RED** explores the use and meaning of this potent color in textiles across time and place. From the pre-Columbian high Andes to the 21st-century streets of New York, red textiles are a compelling symbol, representing passion, power, status and human emotion itself. Before the invention of synthetic dyes, achieving this highly evocative color in textiles was no easy task. The difficulty of its production heightened the importance and allure of red cloth, which became a prestige commodity in many societies. The textiles on view illustrate the complex usage of red—not only to denote prestige, but also to celebrate love and beauty, to protect against evil, to promote good fortune and to mark such life cycle passages as marriage and

more than 50 galleries in Europe, India, America and the Far East, bringing together leading artists—including contemporary artists from throughout North Africa and the Middle East—and collectors. Madinat Arena and Jumeirah Beach, **Dubai**, March 8–10.

**The Heartland Seminar on Arabic Music** offers a five-day residential program focusing on classical Arab music and designed both for participants who want to begin their study as well as for those who seek to improve their skills. The seminar features internationally recognized academics and performers who offer individualized instruction in *qanun*, violin, *ney*, ‘*ud*, percussion and voice. ① [www.heartlandseminar.com](http://www.heartlandseminar.com). DeKoven Center, **Racine, Wisconsin**, March 25–30.

**Venice and the Islamic World, 828–1797** explores one of the most important and distinctive facets of Venetian art history: the exchange of art objects and the interchange of artistic ideas between the great maritime city and her Islamic neighbors in the eastern Mediterranean. Glass, textiles, carpets, arms and armor, ceramics, sculpture, metalwork, furniture, paintings, drawings, prints, book bindings and manuscripts—nearly 200 works of art—tell the story of Islamic contributions to the arts of Venice during her heyday, from the medieval to the baroque eras. (The exhibition’s bookend dates are 828, the year two Venetian merchants stole St. Mark’s body from Muslim Alexandria and brought it to their native city, and 1797, when Venice fell to Napoleon Bonaparte.) The exhibition opens with a gallery dedicated to the Venetian experience of traveling to and living in Islamic lands: Trade, travel and cultural and diplomatic relations were the most important vehicles for the exchange of artistic ideas. The main body of the

exhibition unfolds chronologically, with the earliest Islamic objects to arrive in Venice, often for use in Venetian ecclesiastical settings. Also important were medieval Islamic scientific instruments and manuscripts, far more advanced than anything then available in Europe. The heart of the exhibition is composed of objects from the 15th and 16th centuries, when Venetian interest in the Islamic world peaked, with painter Gentile Bellini’s visit to the court of Sultan Mehmet II as a point of departure. Metropolitan Museum of Art, **New York**, March 27 through July 8.

**Architectural Textiles:** Tent Bands of Central Asia highlights a unique and fundamental weaving: the tent band. The trellis tent has made nomadic life possible across Central Asia for at least 1500 years. An important component of its construction is a woven tent band which girdles the lower part of the wooden roof struts. This critical engineering element provides the tension necessary to brace the roof dome against outward collapse under the load of heavy felts and the force of strong steppe winds. Beyond serving a utilitarian function, tent bands are often elaborately decorated. The exhibition includes approximately 40 tent bands made by different Central Asian ethnic groups, including Turkmen, Kyrgyz, Uzbek and Kazakh, and representing a wide range of structures, colors, designs and materials. Period photographs of nomadic life and weaving, as well as other supplemental materials, will provide context, and an educational gallery will teach visitors how to “read” a tent band. Textile Museum, **Washington, D.C.**, March 30 through August 19.

**CVRA AQVARVM IN JORDANIA:** The 13th International Congress on the History of Water Management and Hydraulic Engineering in the

Mediterranean Region will include presentations on water and its use under arid and semi-arid conditions in the Middle East. ① [fahlbusch@fh-luebeck.de](mailto:fahlbusch@fh-luebeck.de). **Petra and Amman, Jordan**, March 31–April 9.

**Butabu: Adobe Architecture of West Africa:** Photographs by James Morris. For centuries, complex adobe structures, many of them quite massive, have been built in the Sahel region of western Africa—Mali, Niger, Nigeria, Togo, Benin, Ghana and Burkina Faso. Made of earth mixed with water, these ephemeral buildings display a remarkable diversity of form, human ingenuity and originality. The exhibition’s lush, large-scale photographs by British photographer James Morris offer a visual survey of these structures, from monumental mosques to family homes. UCLA Fowler Museum of Cultural History, **Los Angeles**, April 22 through July 15.

**Tenth International Congress on the History and Archaeology of Jordan** will focus on the many peoples and cultures that crossed the Jordan River from the earliest times to the present, and on the conservation of Jordan’s heritage. George Washington University, **Washington, D.C.**, May 23–28.

**Encompassing the Globe:** Portugal and the World in the 16th and 17th Centuries brings together approximately 300 extraordinary objects reflecting the unprecedented cross-cultural dialogue that followed the establishment of Portugal’s world trading network in the 16th and 17th centuries. Portugal was the first European nation to build an extensive commercial empire, which soon reached to Africa, India, China, Southeast Asia, Japan and Brazil. Portuguese contact with these regions, which had been virtually unknown to Europeans, led to the creation of highly original works of art, some intended for export and others for domestic consumption in their countries of origin. Initially displayed in princely “wonder cabinets”—the ancestors of the modern museum—and now scattered throughout the world, the paintings, sculptures, manuscripts, maps, early books and other objects assembled here provide a rich image of a “new world” during its formation. Sackler Gallery, **Washington, D.C.**, June 23 through September 16.

**Edge of Arabia:** Contemporary Art in Saudi Arabia and Yemen explores the individual expression of values and beliefs in a climate of change, and features works by 10 leading artists including Ahmed Mater al-zaid Aseeri, Abdulaziz Ashour, Khalid Yousseff, Ayman Yosry Daydban, Fuad al-Futaih, Abdullah Alameen and Amnah al-Nasiri. SOAS Brunei Gallery, **London**, July 11 through September 22.

**Overlapping Realms:** Arts of the Islamic World and India, 900–1900 presents a sampling of visual arts produced by the varied peoples who inhabited the region stretching from southern Europe through South Asia.

Successive and shifting kingdoms and empires in the temporal world profoundly affected these artists who, in turn, contributed to its complex mix of cultures and identities. Different faiths, in particular Abrahamic and Indic religions, also influenced the artists’ worldviews and in many ways determined their opportunities and modes of expression. Relying primarily on ceramics and metalwork, the exhibition emphasizes commonalities and continuities, even as it explores diversity of intention and technique. Sackler Museum, **Cambridge, Massachusetts**.

**The Jameel Gallery of Islamic Art,** renovated thanks to the Abdul Latif Jameel Group, houses treasures from the V&A’s collection of 10,000 Islamic objects from the Middle East, including the famous Ardabil Carpet from 16th-century Iran and an exquisite rock-crystal ewer from 11th-century Egypt. The displays explain how Islamic art developed from the great days of the Islamic caliphate in the eighth and ninth centuries. Other objects include ivories from Spain, metalwork from Egypt, Iznik ceramics from Ottoman Turkey and oil paintings from 19th-century Iran. The collections highlight the fruitful interchange between the Islamic world and its neighbors in Europe and Asia. Victoria & Albert Museum, **London**.

**Arts of the Islamic World Gallery** at Doris Duke’s estate, Shangri-La, houses her magnificent collection of tiles, textiles, paintings, jewelry and furniture and other objects reflecting both the secular and the religious life of Islam in countries around the world. ① 866-385-3849. **Honolulu Academy of Arts**.

**Nubian Gallery.** A new permanent installation of artifacts documents Nubia from the fourth millennium BC into the common era. The gallery displays sculpture, glass, pottery and metalwork, including never before exhibited objects such as a heavily tooled archer’s quiver and 2000-year-old textiles. Oriental Institute Museum, **Chicago**.

**Glimpses of the Silk Road:** Central Asia in the First Millennium documents an astonishing amalgam of different influences, combining Hellenistic imagery and Near Eastern motifs with Chinese and Indian features. Goods and raw materials as well as new ideas, religious beliefs, artistic styles and motifs, and technological innovations were transmitted throughout the region along the Silk Road. Wall paintings from the Kushan kingdom and later Kucha illustrate this blend of eastern and western traditions. Two Parthian ivory rhytons from Nysa exemplify the transmission of technology and motifs in the applied arts, combining Iranian and Greek themes and styles. Metropolitan Museum of Art, **New York**.

**Egypt Reborn:** Art for Eternity is an installation of over 1200 Egyptian artifacts that makes available masterpieces of every period of ancient Egyptian history, including some of the most important in the world. The exhibition ranges from the Predynastic Period (ca. 4400 BC) to the 18th Dynasty reign of Amunhotep III (ca. 1353 BC), including such treasures as an exquisite chlorite head of a Middle Kingdom princess, an early stone deity from 2650 BC, a relief from the tomb of a man named Akhty-hotep

and a highly abstract female terracotta statuette created more than 5000 years ago. Additional exhibits illustrate themes in Egyptian culture, including women’s roles, permanence and change, temples and tombs, technology and materials, art and communication, and Egypt and its relationship to the rest of Africa. Brooklyn Museum, **New York**.

**Alexander’s Image and the Beginning of Greek Portraiture** illustrates the reign of Alexander the Great of Macedon and the beginning of portraiture through ancient coins. Alexander opened the way to revolutionary economic and ideological changes in the ancient monetary system, and his idealization and deification on the coins of his successors led to new ways of representing the human figure. With the images of Alexander the Great, the use of individualized portraiture for purposes of political propaganda began in the western world. Sackler Museum, **Cambridge, Massachusetts**.

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

Information is correct at press time, but please reconfirm dates and times before traveling. Most institutions listed have further information available on the World Wide Web, and our Web site, [saudiaramcoworld.com](http://saudiaramcoworld.com), contains more extensive listings. Readers are welcome to submit information for possible inclusion in this listing.

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