

Saudi Aramco world



Children 2006

Wealth and children are the embellishments of the life of this world.
—The Qur'an, Chapter 18 ("The Cave"), Verse 46

Gregorian and Hijri Calendars

New Generations in the Middle East

BY ELIZABETH WARNOCK FERNEA

Lubna is 15 years old and lives in Kuwait. She is a sophomore at a private high school where the classes are taught in English. Her father and mother, who work in banking and at Kuwait University, respectively, feel strongly that she should also have a formal background in Arabic, the language of her heritage and her Islamic faith, so Lubna spends Fridays at home being tutored by a local teacher.

Omar is 14. He lives in Cairo. His father died several years ago. Last year Omar had to drop out of his neighborhood public school and go to work to help support his mother and four younger siblings. Fortunately, his 16-year-old brother Gamal was already working in a small, privately owned factory, and the owner hired Omar as well. Omar is proud to be contributing to the family income, he says, but he regrets having to leave school, since that means he will not be able to rise much beyond his present unskilled job. Television is the family recreation. Omar loves westerns, as well as pop-music programs from both the West and the Arab world.

Nadia also lives in Cairo. She's 11, and she attends a private elementary school in well-heeled Zamalek, across the Nile from the city center. Both her parents work full-time. Her mother is a journalist and her father is in advertising. Thus Nadia and her eight-year-old sister, Hala, are escorted to and from school by the family nanny.

Abdul Hamid is 16 and lives in Morocco's capital, Rabat. The son of parents who are both lawyers, he is enrolled in a public school, but he receives special tutoring in mathematics. This tutoring, his parents hope, will help him score well on the national exams that determine whether or not he will go on to a university. On weekends, he often helps his father, who has started an extensive organic garden in the family's country house just outside Rabat.

Driss, a friend of Abdul Hamid's, wants to go to medical school, but his family cannot afford tutoring. Driss is the sixth of eight children, and he lives with his mother and seven siblings in a small two-room apartment. His father is a "guest worker" in France who regularly sends

money home, but Driss and his older brother still have to work part-time to help make ends meet.

Lubna, Omar, Nadia, Abdul Hamid and Driss are very different from the Middle Eastern children romanticized by writers in the past. The small figure, photographed in a nomadic or rural landscape, so isolated from—and foreign to—the urban world the writers inhabited, is gone. To begin with, more than half of all children in the Middle East today live in cities, not in the country or, rarer still, in desert oases. This shift to predominantly urban life has taken place in just over 40 years.

The new generation is growing also in numbers and in interconnectedness. Demographers point out that half of the Arab world's total population today is under the age of 15. These young people are growing up in a world of wider horizons and shorter distances than that of their parents, thanks in no small part to the communications revolution. Lubna, in Kuwait, and Omar, in Cairo—despite the differences between their social and economic positions—watch many of the same television programs and listen to the same commercial messages offering designer jeans and jogging shoes, sports equipment and electronics.

This is a generation with high material expectations and occupational ambitions. Children in this generation see themselves as citizens of modern nation-states. They take for granted the right to free education, something that, in some of their countries, was once limited to the elite. This raising of hopes is dramatic: Driss would have been unable to think of medical school in Morocco 20 years ago, and at that time, Omar's regret over leaving school would have been less, since he would have known that other choices were simply not available.

Lubna, Omar, Nadia, Abdul Hamid and Driss also live in societies where class systems are changing. A real middle class has emerged, recruited on the basis of merit and economic interest rather than lineage, and it is playing an important role in social and business life. But in this middle class, it is increasingly common to find both parents working full-time, so children end up spending time at home alone—another great change from the past.

Cover: A boy and a girl chase across a domed rooftop in Am Al Aboud, near Aleppo, Syria, one of a dozen villages which have retained this ancient architecture. Photo by Ed Kashi.

As more women work outside the home and women's roles in the family are gradually renegotiated—a bit more here and a bit less there—this, too, affects children by changing the traditional family unit and the relationships within it.

"A child is a gift from God." This saying, so common throughout the Middle East for centuries, expresses a basic cultural tenet held by Muslims, Christians and Jews of the region: Not only are children much desired and loved on their own terms, but they also have symbolic importance: An adult becomes a mature and full-fledged member of society only when he or she marries and has children. A family is a living symbol of continuity between the past and the present.

New and ever greater differences between past and present make that linking role a difficult one, points out Mohammed Shoufani of Morocco's Ministry of Education. "Children are the most important and the most complicated people in our society today, pulled as they are between two worlds.... At a time when old absolutes are crumbling and old values are disregarded, ...young people...are endangered because they are, in terms of values at least, at sea."

Indeed, the future of the Middle East will be determined by the choices made by young people like Lubna, Omar, Driss, Abdul Hamid, Hala and Nadia. 🌐

This article is abridged from "A New Generation in the Middle East," *Aramco World*, January/February 1998.

Elizabeth Warnock Fernea, Ph.D., is professor emerita of English and Middle Eastern studies at the University of Texas at Austin, where she taught for 25 years. She is also the author, co-author or editor of 12 books, including *Middle Eastern Muslim Women Speak* and *The Arab World: Forty Years of Change*. *Children in the Muslim Middle East* was published in 1995 by the University of Texas Press and is being translated into Arabic. Her latest publication is *Remembering Childhood in the Middle East: Memoirs of a Century of Change*, also from the University of Texas Press.

Patterns of Moon, Patterns of Sun

BY PAUL LUNDE

The *hijri* calendar

In AD 638, six years after the death of the Prophet Muhammad, Islam's second caliph 'Umar recognized the necessity of a calendar to govern the affairs of the Muslims. This was first of all a practical matter. Correspondence with military and civilian officials in the newly conquered lands had to be dated. But Persia used a different calendar from Syria, where the caliphate was based; Egypt used yet another. Each of these calendars had a different starting point, or epoch. The Sasanids, the ruling dynasty of Persia, used June 16, AD 632, the date of the accession of the last Sasanid monarch, Yazdagird III. Syria, which until the Muslim conquest was part of the Byzantine Empire, used a form of the Roman "Julian" calendar, with an epoch of October 1, 312 BC. Egypt used the Coptic calendar, with an epoch of August 29, AD 284. Although all were solar, and hence geared to the seasons and containing 365 days, each also had a different system for periodically adding days to compensate for the fact that the true length of the solar year is not 365 but 365.2422 days.

In pre-Islamic Arabia, various other systems of measuring time had been used. In South Arabia, some calendars apparently were lunar, while others were lunisolar, using months based on the phases of the moon but intercalating days outside the lunar cycle to synchronize the calendar with the seasons. On the eve of Islam, the Himyarites appear to have used a calendar based on the Julian form, but with an epoch of 110 BC. In central Arabia, the course of the year was charted by the position of the stars relative to the horizon at sunset or sunrise, dividing the ecliptic into 28 equal parts corresponding to the location of the moon on each successive night of the month. The names of the months in that calendar have continued in the Islamic calendar to this day and would seem to indicate that, before Islam, some sort of lunisolar calendar was in use, though it is not known to have had an epoch other than memorable local events.

There were two other reasons 'Umar rejected existing solar calendars. The Qur'an, in Chapter 10, Verse 5, states that time should be reckoned by the moon. Not only that, calendars used by the Persians, Syrians and Egyptians were identified with other religions and cultures. He therefore decided to create a calendar specifically for the Muslim community. It would be lunar, and it would have 12 months, each with 29 or 30 days.

This gives the lunar year 354 days, 11 days fewer than the solar year. 'Umar chose as the epoch for the new Muslim calendar the *hijrah*, the emigration of the Prophet Muhammad and 70 Muslims from Makkah to Madinah, where Muslims first attained religious and political autonomy. The *hijrah* thus occurred on 1 Muharram 1 according to the Islamic calendar, which was named "*hijri*" after its epoch. (This date corresponds to July 16, AD 622 on the Gregorian calendar.) Today in the West, it is customary, when writing *hijri* dates, to use the abbreviation AH, which stands for the Latin *anno hegirae*, "year of the *hijrah*."

Because the Islamic lunar calendar is 11 days shorter than the solar, it is therefore not synchronized to the seasons. Its festivals, which fall on the same days of the same lunar months each year, make the round of the seasons every 33 solar years. This 11-day difference between the lunar and the solar year accounts for the difficulty of converting dates from one system to the other.

The Gregorian calendar

The early calendar of the Roman Empire was lunisolar, containing 355 days divided into 12 months beginning on January 1. To keep it more or less in accord with the actual solar year, a month was added every two years. The system for doing so was complex, and cumulative errors gradually misaligned it with the seasons. By 46 BC, it was some three months out of alignment, and Julius Caesar oversaw its reform. Consulting Greek astronomers in Alexandria, he created a solar calendar in which one day was added to

It is he who made the sun to be a shining glory, and the moon to be a light (of beauty), and measured out stages for her, that ye might know the number of years and the count (of time).

—The Qur'an, Chapter 10 ("Yunus") Verse 5

February every fourth year, effectively compensating for the solar year's length of 365.2422 days. This Julian calendar was used throughout Europe until AD 1582.

In the Middle Ages, the Christian liturgical calendar was grafted onto the Julian one, and the computation of lunar festivals like Easter, which falls on the first Sunday after the first full moon after the spring equinox, exercised some of

the best minds in Christendom. The use of the epoch AD 1 dates from the sixth century, but did not become common until the 10th. Because the zero had not yet reached the West from Islamic lands, a year was lost between 1 BC and AD 1.

The Julian year was nonetheless 11 minutes and 14 seconds too long. By the early 16th century, due to the accumulated error, the spring equinox was falling on March 11 rather than

where it should, on March 21. Copernicus, Christophorus Clavius and the physician Aloysius Lilius provided the calculations, and in 1582 Pope Gregory XIII ordered that Thursday, October 4, 1582 would be followed by Friday, October 15, 1582. Most Catholic countries accepted the new "Gregorian" calendar, but it was not adopted in England and the Americas until the 18th century. Its use is now almost universal worldwide. The Gregorian year is nonetheless 25.96 seconds ahead of the solar year, which by the year 4909 will add up to an extra day. 🌐

Historian **Paul Lunde** (paullunde@hotmail.com) specializes in Islamic history and literature. His most recent book is *Islam: Culture, Faith and History* (2001, Dorling Kindersley).

Though they share 12 lunar cycles—months—per solar year, the *hijri* calendar uses actual moon phases to mark them, whereas the Gregorian calendar adjusts its nearly lunar months to synchronize with the sun.

Converting Dates

The following equations convert roughly from Gregorian to *hijri* and vice versa. However, the results can be slightly misleading: They tell you only the year in which the other calendar's year *began*. For example, 2006 Gregorian spans both 1426 and 1427 *hijri*, but the equation tells you that 2006 "equals" 1427, when in fact 1427 merely began during 2006.

$$\text{Gregorian year} = [(32 \times \text{hijri year}) \div 33] + 622 \quad \text{hijri year} = [(\text{Gregorian year} - 622) \times 33] \div 32$$

Alternatively, there are more precise calculators available on the Internet: Try www.rabiah.com/convert/ and www.ori.unizh.ch/hegira.html.



JANUARY

DHU AL-HIJJAH 1426 — MUHARRAM 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
	1 1	2 2	3 3	4 4	5 5	6 6
7 7	8 8	9 9	10 10	11 11	12 12	13 13
		<small>'Id al-Adha</small>				
14 14	15 15	16 16	17 17	18 18	19 19	20 20
21 21	22 22	23 23	24 24	25 25	26 26	27 27
28 28	29 29	30 30	31 1			

FEBRUARY

MUHARRAM — SAFAR 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
				1 2	2 3	3 4
4 5	5 6	6 7	7 8	8 9	9 10	10 11
11 12	12 13	13 14	14 15	15 16	16 17	17 18
18 19	19 20	20 21	21 22	22 23	23 24	24 25
25 26	26 27	27 28	28 29			



MARCH

SAFAR — RABI' AL-AWWAL 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
				1 1	2 2	3 3
4 4	5 5	6 6	7 7	8 8	9 9	10 10
11 11	12 12	13 13	14 14	15 15	16 16	17 17
18 18	19 19	20 20	21 21	22 22	23 23	24 24
25 25	26 26	27 27	28 28	29 29	30 1	31 2

APRIL

RABI' AL-AWWAL — RABI' AL-THANI 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
1 3	2 4	3 5	4 6	5 7	6 8	7 9
8 10	9 11	10 12	11 13	12 14	13 15	14 16
15 17	16 18	17 19	18 20	19 21	20 22	21 23
	Easter					
22 24	23 25	24 26	25 27	26 28	27 29	28 30
29 1	30 2					



MAY

RABI' AL-THANI—JUMADA AL-ULA 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
		1 3	2 4	3 5	4 6	5 7
6 8	7 9	8 10	9 11	10 12	11 13	12 14
13 15	14 16	15 17	16 18	17 19	18 20	19 21
20 22	21 23	22 24	23 25	24 26	25 27	26 28
27 29	28 1	29 2	30 3	31 4		

JUNE

JUMADA AL-ULA—JUMADA AL-AKHIRA 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
					1 5	2 6
3 7	4 8	5 9	6 10	7 11	8 12	9 13
10 14	11 15	12 16	13 17	14 18	15 19	16 20
17 21	18 22	19 23	20 24	21 25	22 26	23 27
24 28	25 29	26 30	27 1	28 2	29 3	30 4



JULY

JUMADA AL-AKHIRA — RAJAB 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
1 5	2 6	3 7	4 8	5 9	6 10	7 12
8 12	9 13	10 14	11 15	12 16	13 17	14 18
15 19	16 20	17 21	18 22	19 23	20 24	21 25
22 26	23 27	24 28	25 29	26 1	27 2	28 3
29 4	30 5	31 6				

AUGUST

RAJAB — SHA'BAN 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
			1 7	2 8	3 9	4 10
5 11	6 12	7 13	8 14	9 15	10 16	11 17
12 18	13 19	14 20	15 21	16 22	17 23	18 24
19 25	20 26	21 27	22 28	23 29	24 30	25 1
26 2	27 3	28 4	29 5	30 6	31 7	



SEPTEMBER

SHA'BAN — RAMADAN 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
						1 8
2 9	3 10	4 11	5 12	6 13	7 14	8 15
9 16	10 17	11 18	12 19	13 20	14 21	15 22
16 23	17 24	18 25	19 26	20 27	21 28	22 29
23 30	24 1	25 2	26 3	27 4	28 5	29 6
30 7						

OCTOBER

RAMADAN — SHAWWAL 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
	1 8	2 9	3 10	4 11	5 12	6 13
7 14	8 15	9 16	10 17	11 18	12 19	13 20
14 21	15 22	16 23	17 24	18 25	19 26	20 27
21 28	22 29	23 1	24 2	25 3	26 4	27 5
28 6	29 7	30 8	31 9			



NOVEMBER

SHAWWAL — DHU AL-QA'DAH 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
				1 10	2 11	3 12
4 13	5 14	6 15	7 16	8 17	9 18	10 19
11 20	12 21	13 22	14 23	15 24	16 25	17 26
18 27	19 28	20 29	21 30	22 1	23 2	24 3
25 4	26 5	27 6	28 7	29 8	30 9	

DECEMBER

DHU AL-QA'DAH — DHU AL-HIJJAH 1427

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
						1 10
2 11	3 12	4 13	5 14	6 15	7 16	8 17
9 18	10 19	11 20	12 21	13 22	14 23	15 24
16 25	17 26	18 27	19 28	20 29	21 30	22 1
23 2	24 3	25 4	26 5	27 6	28 7	29 8
		Christmas				
30 9	31 10					



In November 1949, the Arabian American Oil Company (Aramco) launched an interoffice newsletter named *Aramco World*. Over the next two decades, as the number of Americans working with Saudi colleagues in Dhahran grew into the tens of thousands, *Aramco World* grew into a bimonthly educational magazine whose historical, geographical and cultural articles helped the American employees and their families appreciate an unfamiliar land.

The magazine is now published by Aramco Services Company in Houston, Texas on behalf of Saudi Aramco, which succeeded Aramco in 1988 as the national oil company of Saudi Arabia. In 2000, *Aramco World* changed its name to *Saudi Aramco World* to reflect this relationship.

Today, *Saudi Aramco World's* orientation is still toward education, the fostering of cooperation and the building of mutual appreciation between East and West, but for the last four decades the magazine has been aimed primarily at readers outside the company, worldwide, as well as at internal readers. Its articles have spanned the Arab and Muslim worlds, past and present, with special attention to their connections with the cultures of the West.

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