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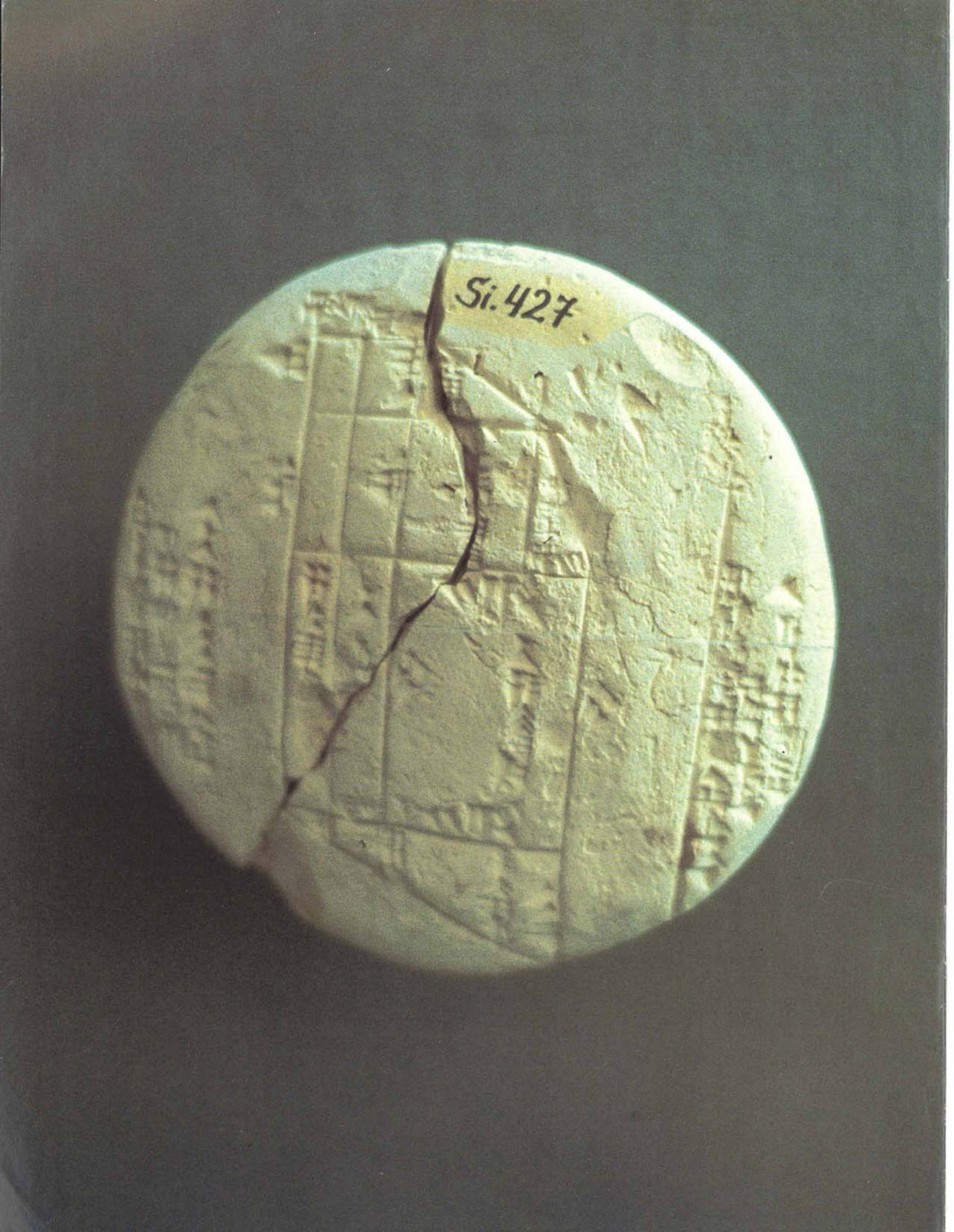
SEPTEMBER–OCTOBER 1979

Sesame opens!



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Cover: Broad research, special scripting and sheer fun are whipped together in a Kuwait studio to create *Iftah Ya Simsim*, the Arab world's bright adaptation of T.V.'s *Sesame Street*. Complete with two new Muppets – Nu'man and Malsun – the series will also include documentary and cartoon segments. The first of the 130 half-hour television programs will go on the air in October, reaching an audience of pre-school children that may number as many as 26 million from North Africa to the Gulf. Rear cover: Videotaping a segment on "Twentieth Street." Photographs by Burnett H. Moody.

◀ Cuneiform inscriptions, like this one in Istanbul's Museum of the Ancient Orient, became the life's work of Samuel Noah Kramer, today dean of American Sumerologists.

Desert Glass:

An Enigma

WRITTEN BY JOHN W. OLSEN *WITH JAMES R. UNDERWOOD*

Did it come from the moon? Did it come from the depths of a volcano? Or did a meteorite strike the earth?

In December 1932, an Egyptian Desert Survey expedition led by P. A. Clayton was sent southwest from Cairo to study the previously unexplored regions of the Egyptian Sand Sea, north of a broad plateau, the Gilf Kebir. On December 29 of that year, members of the expedition discovered, scattered about on the desert, transparent to translucent pieces of a pale yellow-green vitreous substance that has since become known as Libyan Desert glass.

Located in the Great Erg, or Sand Sea, on the Egyptian-Libyan frontier, the area where the glass is found measures roughly 80 miles north and south by 30 miles east and west in the corridors between a series of dunes *(saifs)* that rise abruptly above sharply contrasting weathered debris that overlies bedrock of the Nubian Sandstone deposited during the Early Cretaceous Epoch some 100 million years ago.

Although the glass was used for tools by Pleistocene man, and may have been discovered as early as 1846 by explorers, the inaccessibility of the region and the harshness of the terrain precluded any further investigation until Clayton went back in 1934 with L. J. Spencer, then Keeper of Minerals in the British Museum. And it was not until 1971, when a joint University of Texas-University of Libya team explored the western extremity of the area, that modern science had a look. Indeed, the terrain is so remote and inhospitable, that when the American-Libyan team neared the site of the glass deposits, they discovered an Egyptian plane, intact, with the remains of nine passengers scattered about, lying where they died of thirst several days after they landed, lost and out of fuel, more than three years earlier.

The glass has generated intense interest among scientists because its origin remains an enigma. Was it produced by the encounter of an extraterrestrial body with earth? Science isn't sure and, in fact, has come up with at least 10 theories to explain its origin.

Many researchers consider Libyan Desert glass to be a form of tektite (from the Greek *tektos*, meaning molten), a natural black, dark green, or dark brown glassy stone, resembling the volcanic glass obsidian, that may possibly be of extraterrestrial or meteoritic origin. Tektites, which occur in four large associations of distinctly different ages throughout the world known as *strewn fields*, are similar to Libyan Desert glass in that both substances are composed chiefly of silica (SiO_2– silicon dioxide); the silica

content of tektites ranges from 68-80 percent whereas that of Libyan Desert glass is approximately 98 percent. Both tektites and Libyan Desert glass are characterized by etched, pitted surfaces, which in the case of some of the silica glass may have been obscured by the scouring action of the fierce Saharan winds.

Tektites, first scientifically reported in 1788, have been the subject of investigation since that time. In 1844, for example, Charles Darwin, the great naturalist, described a specimen he was given in Australia while on the famous globe-circling voyage of *H.M.S. Beagle* from 1831-1836.

Undoubtedly of natural origin, tektites have been interpreted by various investigators as: (1) ejecta from terrestrial volcanoes, (2) meteorites, (3) ejecta from lunar volcanoes, (4) glassy material produced by lightning striking the earth, (5) glassy material produced by lightning discharge into the dusty, hot gases of a volcano's eruptive cloud, (6) the product of desiccating siliceous gels, (7) glassy debris from a disrupted planetary body with a glassy surface layer, (8) material produced by forest fires, (9) glassy material produced by meteorite impact on earth, or (10) similar material resulting from meteorite impact on the moon. It was even argued by some, for a time, that tektites had been produced by human activities such as furnace operations or as a by-product in the manufacture of glass.

The shape of tektites is varied; they may resemble buttons, teardrops, dumb-bells, rods, spheres, or disks. Some are blocky and layered. Although commonly about an inch in diameter, they range up to a maximum diameter of almost 12 inches and weigh as much as 28 pounds. Many tektites show the effects of surface etching and pitting – interpreted by most specialists as having developed through chemical action during burial on the earth's surface. Some tektites, especially those from Australia, show a distinctive surface sculpture almost certainly produced by aerodynamic ablation as the glassy object hurtled through the earth's atmosphere. It was this characteristic of some tektites that drew special attention to them as the pace of the U.S. space program to reach the moon quickened. Tektites provided a model for the design of heat shields with which to protect spacecraft returning to earth through the atmosphere. Suddenly these curious objects of heretofore relatively minor interest were center stage, because they had already journeyed through the earth's atmosphere, and many were readily available for study.

The chemical composition of tektites is similar to that of crustal rocks of the earth, and the discovery in some tektites of rare minerals produced only by extremely high pressure has led many to believe that tektites are a form of glass, *impactite*, produced by meteorite impact. This view

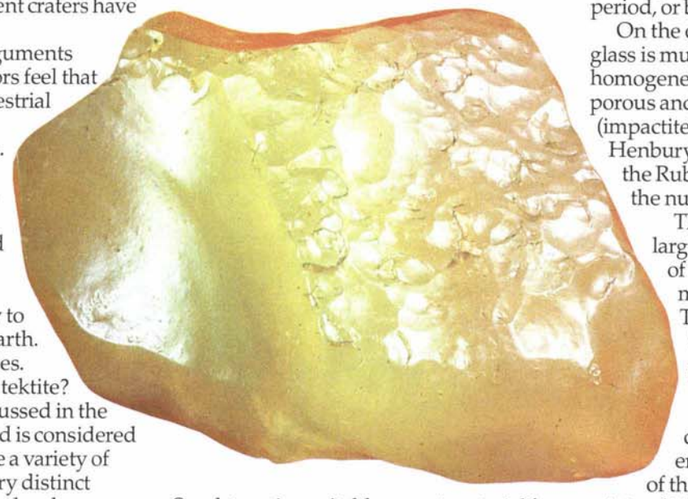
was further enhanced by the discovery in some tektites of small spheres (spherules) of nickel-iron, the material of which many meteorites are composed.

Specialists were divided, however, on whether tektites were produced by impact on earth and were consequently splashed into their strewn fields, or whether the impact events occurred on the moon with some of the ejecta reaching lunar escape velocity and reaching earth as a form of meteorite. The hypothesis of lunar origin of tektites was dealt a severe blow by the failure of samples returned from the moon by the Apollo missions to contain any tektite-like material or plausible tektite parent material.

Some large terrestrial impact craters have been identified as being of the correct age and location to be the parent craters for some of the tektite-strewn fields, but for some strewn fields no parent craters have thus far been identified. Based on aerodynamic arguments however, some investigators feel that tektites cannot have a terrestrial origin and be distributed as they are in strewn fields. They further maintain that tektites can only have come from certain lunar volcanoes that are believed to have erupted material at lunar escape velocity in the directions necessary to result in impact with the earth. And so the debate continues.

Is Libyan Desert glass a tektite? Although it usually is discussed in the same context as tektites and is considered by some investigators to be a variety of tektite, there exist some very distinct differences. Libyan Desert glass has a uniformly higher silica content than tektites, and it shows no evidence of aerodynamic sculpturing. Many of the fragments are tabular and layered, which is characteristic of only one kind of tektite, the so-called Muong-Nong tektites of southeast Asia. Libyan Desert glass never occurs in such distinctive shapes as dumb-bells, rods, spheres, disks, and teardrops as do tektites, and the color of the glass is rarely as dark as the color of typical tektites. In fact, some of the glass is quite colorless. It ranges in size from tiny flakes 0.01 mm in diameter up to pieces the size of a person's head and weighing over 16 pounds. Both tektites and Libyan Desert glass are harder than the steel in a knife blade, but no harder than the mineral quartz. Fragments of Libyan Desert glass are somewhat lighter weight than tektites of equal size. Both tektites and Libyan Desert glass may contain bubbles; those in the glass tend either to be elliptical, indicating deformation of the bubble during flow, or elongated and pointed, suggesting deformation of original pore space in material that barely melted.

Analyses of both major and trace elements of the glass and of the Nubian Sandstone upon which it rests, together with the stratification visible in numerous pieces, have revealed that the Nubian Sandstone is a suitable parent material for Libyan Desert glass and suggest that the glass could be of impact origin. What is not yet understood is the mechanism that produced, momentarily, heat intense enough to melt surface rock or weathered debris. For the quartz-rich Nubian Sandstone, the melting temperature would be about 2,800°F.



Although nickel-iron spherules have not been identified in the glass, it is still possible that it was formed by the impact of a stony meteorite (or aerolite). There are, for instance, two small craters in the desert glass area, and although there is no evidence relating the craters to the glass, it would be an unusual coincidence to find such rare material as Libyan Desert glass so close to such relatively rare structures as astroblemes (deeply eroded impact features) without some relationship.

Virgil Barnes has suggested that perhaps the glass was produced by the heat wave of a passing comet or by the intense heat generated by an exploding comet – neither of which would necessarily disrupt the surface rocks. Afterwards, the molten silica glass may have flowed into low areas, puddled and cooled – thus forming Libyan Desert glass. Later, it may have been broken up by weathering and then moved, either by running water, in an earlier, wetter climatic period, or by humans in prehistoric times.

On the other hand, most Libyan Desert glass is much more dense and homogeneous than the well described porous and impure "impact" glass (impactite) found in such craters as Henbury in central Australia, Wabar in the Rub'al-Khali of Saudi Arabia, or the nuclear test craters in Nevada.

The absence of an extremely large impact crater in the vicinity of the Libyan Desert glass, moreover, is not highly relevant. The glass has been reliably dated (by fission-track methods), as 28.5 million years old. That's so long ago that any impact crater may have been covered by shifting sands or erased by erosion. Opponents of the cometary or meteoritic origin of Libyan Desert glass say it is highly improbable that such large, homogeneous pieces of glass could be formed and freed of volatiles within the earth's atmosphere by any process of simple fusion of sand, while supporters contend that the chemical composition of Libyan Desert glass so closely resembles the Nubian Sandstone – upon which it rests – that the probability of finding two so similar yet unrelated materials together is extremely remote.

Obviously, the origin of Libyan Desert glass is unresolved and remains a topic of intense discussion among tektite specialists. But most scientists do agree that ancient man used the glass at a time when the Sahara's climate was quite different.

For nearly 10,000 years, the Sahara, of which the Great Erg or Sand Sea is a part, has been a hot, forbidding land, unattractive in most regions to human habitation.

But 50,000 years ago, what is today the Sand Sea may have closely resembled the Mediterranean environment of modern Greece and was thus more habitable. As a result, in the latter phase of the Palaeolithic (or Old Stone Age) there appeared the Aterian culture, named after an archaeological site in eastern Algeria.

Appearing about 30,000 years ago and persisting until perhaps 18,000 years ago, the Aterian people were apparently the first to recognize Libyan Desert glass and make use of its special properties. Like many types of glass, that from the Libyan Desert flakes conchoidally. That is, by striking the material a glancing blow with another rock, or baton of wood or bone, flakes may be removed in a predictable fashion so as to produce a variety of efficient cutting edges. The Aterian people used this property of Libyan Desert glass to their advantage and produced an array of skillfully-flaked implements (See page 4, top). After their expeditions in the 1930's, Clayton and Spencer said that at least 10 percent of the Libyan Desert glass flakes recovered exhibited some sign of human workmanship and Virgil Barnes and James Underwood, who visited the Libyan Desert glass strewn field in 1971, reported that the largest specimen collected during their expedition – a tabular cobble weighing nearly two pounds – shows percussion marks that suggest the piece may have been used as a pounding tool. Flakes of Libyan Desert glass have also been found in localized concentrations suggesting the manufacture of implements on the spot. Other fragments of the glass have been located some 140 miles from the known field – and in a few instances on the top of the *saif* dunes, suggesting transport by man.

On the basis of the above evidence it is logical to conclude that by Aterian times, Libyan Desert glass was used for the manufacture of lithic tools. But there is still an enigma: although Libyan Desert glass has been dated as 28.5 million years old, there is no evidence that man used it *before* Aterian times even though much older Nubian Sandstone handaxes have been found.

One plausible solution to this problem, offered by Virgil Barnes, is that the area that is now the Sand Sea may have been covered by thick deposits of sand prior to the climatic perturbation of the late Pleistocene age that could have whipped the sand up into *saif* dunes, thus exposing the Libyan Desert glass below.

On the other hand, the highly polished and faceted surface of many of the exposed Libyan Desert glass fragments indicates that *some* of them have been exposed to the abrasive actions of wind and sand for a good deal longer than 30,000 years. As Kenneth Oakley has pointed out in *Nature*, "...it is important to bear in mind that the glass was already corroded by sand-blast *before* it was worked into the [Aterian] bifaced points."

Naturally, it is possible that the Libyan Desert glass lay on the surface for some 26 million years or so before the arrival of humans on the scene and was then covered for a short period up to about 30,000 years ago when the Aterian people began to utilize the material. Nevertheless, it remains an important task for archeologists working in this region to investigate the possibility of pre-Aterian occurrences of Libyan Desert glass artifacts.

Since the time of the Aterian's utilization of the substance, humans have found no practical use for Libyan Desert glass. From a scientific viewpoint, however, its existence continues to provoke intense curiosity regarding the formation of such unique material. Fundamental questions relating to the nature of Libyan Desert glass have yet to be adequately resolved. Can it be considered a true tektite? How did Libyan Desert glass come to be formed in such large, relatively homogeneous masses? Why the striking similarity between the silica glass and the Nubian Sandstone upon which it rests? Coincidence? Perhaps; perhaps not. One hopes that continued diligent research will provide us with answers to these questions and perhaps shed light upon the origin of other tektites as well.

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Stamps and the History of the Hijaz

WRITTEN BY ROBERT OBOJSKI STAMPS FROM THE AUTHOR'S COLLECTION

Like James Joyce – who learned Norwegian simply to read Henrik Ibsen's plays in the original – a handful of American stamp collectors are studying Arabic so they can identify and enjoy some of the most interesting stamps ever issued: the stamps of the Hijaz, the western province of today's Saudi Arabia.

In the West, stamp collectors once shied away from Arab stamps; as with Arab coins (See *Aramco World*, July-August 1978), the inscriptions were difficult to decipher and distinguish. Philatelists today, however, prize Arab stamps to such an extent that such standard catalogues as Scott's and Gibbons' now provide thorough descriptions and even translate the inscriptions. This is particularly true of the stamps of the Hijaz, which offer the philatelic specialist a trove of overprints, double overprints and inverted overprints.

Stamps from the Hijaz, however, have an additional attraction. They tell, in their subtle way, the history of the Hijaz and – when added to the stamps of Najd – the dramatic story of 'Abd al-'Aziz ibn Sa'ud's long struggle to regain his patrimony.

Some stamps from the region, in fact, go back to the private postal systems established so Europeans abroad could post letters home. One, owned by an Italian firm, reached Jiddah in 1865 using Egyptian stamps cancelled with the word *Gedda*. Many of the early stamps still available from the Hijaz, however, are Turkish stamps – which the Ottoman Empire began to issue in 1840 and gradually introduced throughout its territory during the late 19th century – or stamps issued by the Sharif of Mecca, Husain ibn'Ali, who expelled the Turks from the Hijaz in 1916.

Known in the West as the leader of the Arab Revolt against the Ottoman Turks during World War I, Husain first clashed with 'Abd al-'Aziz after assuming the title of "King of the Hijaz". He launched an attack on the oasis of al-Khurmah on the route between the Hijaz and Najd. It was the beginning of a series of battles which did not end until December 1925, when 'Abd al-'Aziz entered Medina and Jiddah and, in 1926, accepted an invitation to take the title "King of the Hijaz".

On stamps, the first indications of a kingdom in the Hijaz appear in a 1916 set of three values. One was a ¼-piastre stamp showing the carved door panels of the al-Salih Tala'i mosque in Cairo (1), the second was the ½-piastre stamp, its central design taken from a page of a Koran in the mosque of Sultan Barquq in Cairo (2) and the third was a 1-piastre stamp depicting details of an ancient prayer niche in the al-Amri mosque at Qus in Upper Egypt (3).

1

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Later, those same designs were featured on a 1917-18 series of stamps, with all values being inscribed "Hijaz Postage", but in the 1917-18 series new designs were added. On the ⅛ piastre the central vignette is a Koranic passage, with the background from a stone carving on the entrance arch to the Ministry of Waqfs; on the 2-piastre stamp the central design is adapted from the first page of a Koran of the Mamluk Sultan Faraj (4). All of them, in philatelic circles, are noted for their complicated arabesque designs.

In 1922-24, Husain also produced a long series of stamps showing his arms as the Sharif of Mecca, the denominations ranging from ⅛ to 10 piastres (5); one of the 1924 series is particularly interesting because the arms were omitted, in a printing error, from at least one of the stamps (6). But from then on the Hijaz postal issues reflect the rise of 'Abd al-'Aziz.

The first of these – reflecting the succession of Husain's son on October 4, 1924 – includes several types of stamps issued from Jiddah in 1925 and inscribed with overprints recording the accession of 'Ali. A long series, these stamps include an almost bewildering variety of overprint and surcharge types. The overprints come in gold, red, blue (7) and black, while the surcharges come mostly in black, blue and red.

Then, in May-June 1925, 'Ali began to turn out his own stamps, bearing his name and title (8); a series of 27 regular-issue varieties, all inscribed with overprints, except one of the 10-piastre types. Altogether, according to *Scott's Standard Postage Stamp Catalogue*, there are 300 major varieties of these Hijaz-proper stamps, including postage-dues and other special issues, plus many scores of minor varieties.

In design, the Hijaz postage-due stamps are outstanding, at least as compared to other postage-due issues which tend to be bland in appearance. The 1917 set of three postage-due values, for example, features the portal of the mosque of al-Ashraf Barsbay in Shari' al-Ashrafiya, Cairo, as its central theme and they, from 1921 to 1925 were overprinted with various inscriptions. Another example is a new set of four postage-dues turned out at Jiddah in May, 1925; large-sized stamps, they feature the Arabic numeral of value as the central design. As in the case of the 1917 postage-dues, the 1925 series was also overprinted – in black, red (9) and blue – with various inscriptions.

Similarly, stamps record the end of 'Abd al-'Aziz's long campaign to unify the Hijaz and Najd.

A familiar story, it starts with the death of 'Abd al-'Aziz's grandfather, the Sultan of Najd, and the expansion of Turkish influence in Arabia while the succession was being contested. Later a rival dynasty, the Al Rashid, occupied Riyadh in 1892 and forced the Sa'ud family into exile in Kuwait until 'Abd al-'Aziz recaptured Riyadh and launched a long campaign against the House of Rashid.

To philatelists the story starts with 'Abd al-'Aziz's first Najd stamps, released in March-April 1925. Turkish stamps, they were overprinted in Arabic with an inscription reading "Post of the Sultanate of Najd" – a reminder that 'Abd al-'Aziz had fought not just the Rashids, but the Ottoman Empire as well. Then there is the 1922 set of Hijaz stamps – showing Husain's arms as the Sharif of Mecca – which 'Abd al-'Aziz had overprinted for use in Najd, and a number of other overprints for Najd. These included a series of eight that came out in late 1925, and had been prepared in anticipation of the surrender of Medina and Jiddah.

3 4 5 6 7 8 9 10 11

A high point in the story, of course, is the first set of stamps for a united country – issued by 'Abd al-'Aziz in February, 1926. The six values in the set are all inscribed "*Barid al-Hijaz wa Najd*" (Post of the Hijaz and Najd) (10). Then, in 1926-27, he issued a set of eight values which features his *tugra*, the elaborately calligraphed signature and emblem of a ruler. The inscription at the top reads: *al-Hukumat al-Arabiya* (The Arabian Government), while the inscription below the *tugra* reads, *Barid al-Hijaz wa Najd (11)*.

In 1929-30 the king issued a similar series of stamps – again with his *tugra* dominating the central design – which commemorated his accession to the throne of the Hijaz in January 1926 and, in 1934, the first stamps to bear the inscription "Kingdom of Saudi Arabia." They bore, at the right, 'Abd al-'Aziz's *tugra* and were put out to commemorate the proclamation of Prince Sa'ud, son of the king, as heir apparent.

Between 1934 and 1957 Saudi Arabia's long 14-value set of stamps continued to carry the *tugra* as its central theme (12), but in recent years, new elements have been introduced. The 4-piastre stamp of 1964, for example, issued to commemorate the crowning of 'Abd al-'Aziz's second son, Faisal, as king, bears King Faisal's portrait, as well as the arms of Saudi Arabia, and subsequent stamps have recorded elements in the modernization of the kingdom.

12

Until recently, most standard philatelic catalogues had separate entries for stamps of the Hijaz and for Najd-Saudi Arabia issues. But now most catalogues, including Scott's, have one major listing for Saudi Arabia, with the Hijaz and Najd classified as sub-categories, and general dealers usually put the Hijazi, Najdi and Saudi Arabian specimens into single packets or collections – reflecting, it seems, the passage into history of the era when the Hijaz had kings and Najd had sultans.

Robert Obojski, who writes frequently on stamps and coins for Aramco World, *is also a contributing editor to* Acquire *magazine and to* Canadian Stamp News.

Sesame Opens!

WRITTEN BY WILLIAM TRACY. PHOTOGRAPHED BY BURNETT H. MOODY

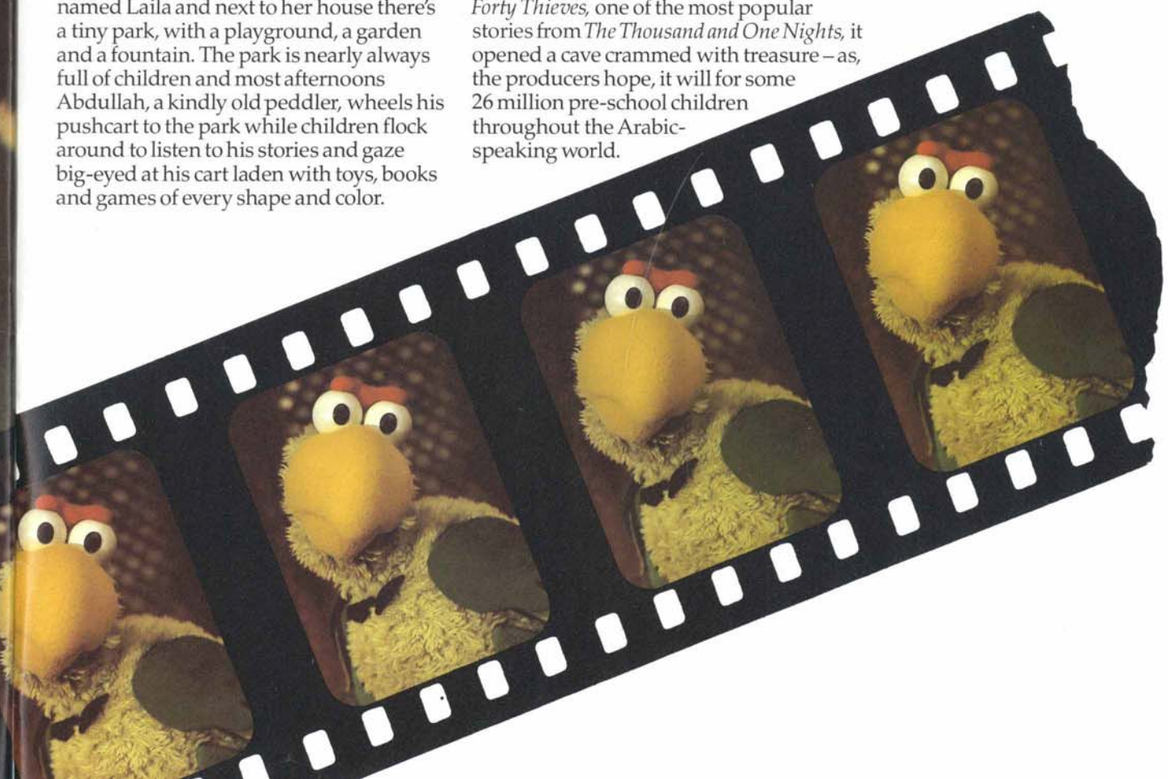
Shari' 'Ishrin ("Twentieth Street"), a pleasant cul-de-sac in a quiet neighborhood, could be located in any medium sized town or city in the Arab East or North Africa. Narrow alleys join it at irregular angles, ornate grills decorate the older houses and a colonnaded sidewalk runs along one side. After school, neighborhood children stop at No. 8 – "Khalil's Refreshments" – for a sweet, a glass of cold juice, or maybe just a chat with Khalil, and adults with newspapers from "Hisham's Shop," at No. 4, often sit at a table on the broad covered sidewalk reading or talking with friends.

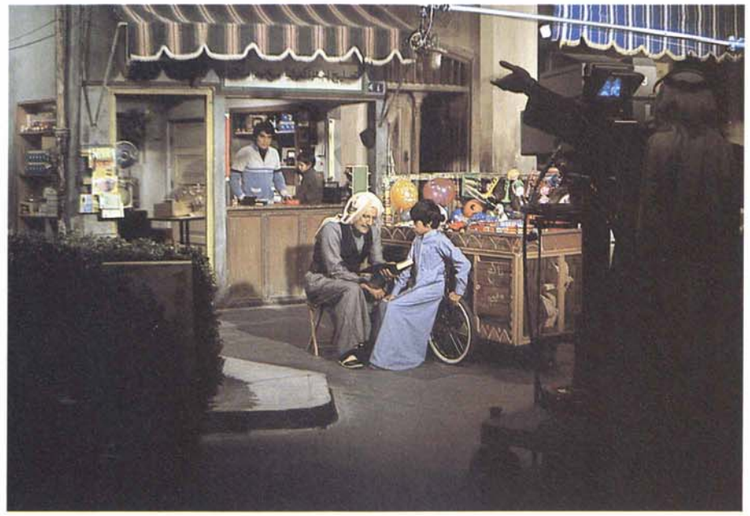
Across the street from Khalil's and Hisham's in No. 3, there's a large house with a veranda, where a young engineer named Hamad lives with his wife Fatima, a teacher. Next door there is a nurse named Laila and next to her house there's a tiny park, with a playground, a garden and a fountain. The park is nearly always full of children and most afternoons Abdullah, a kindly old peddler, wheels his pushcart to the park while children flock around to listen to his stories and gaze big-eyed at his cart laden with toys, books and games of every shape and color.

Shari' 'Ishrin, however, is not part of any real Arab town or city. It is located inside a spanking new 5,400 square foot television studio in Kuwait, where cameramen and sound men, lighting technicians, makeup and prop men, a script girl, producer and director and their assistants, any number of linguists and other educational consultants far outnumber the "residents". For *Shari' 'Ishrin* – "Twentieth Street" – is the Arab equivalent of "Sesame Street", the setting for the internationally famous educational series of the same name: *Sesame Street.*

In some ways the series seems to duplicate *Sesame Street.* Its title is *Iftah Ya Simsim* ("Open Sesame!") which, appropriately, goes straight back to the Arabic source that inspired the title of the U.S. programs. The magic command from the familiar children's tale *Ali Baba and the Forty Thieves,* one of the most popular stories from *The Thousand and One Nights,* it opened a cave crammed with treasure – as, the producers hope, it will for some 26 million pre-school children throughout the Arabic-speaking world.

The series is similar in other ways, too. As the goal is to use the lure of television to provide pre-school education for the very young, *Iftah Ya Simsim* uses the same fast-paced "magazine" format as a model and retains advisors from the Children's Television Workshop of New York, the originators of *Sesame Street. Simsim* even has its own "Muppets," one a fluorescent green parrot with a bright yellow beak called "Malsun," the other a great orange bearish creature called "Nu'man." But *Open Sesame!* is much more than an Arabic version of *Sesame Street.* As an American educational curriculum specialist said recently "It's *Iftah Ya Simsim.* It's *Open Sesame!* It is similar to the original in that it's bright and brisk and uses the whole bag of television tricks. But in its teaching goals, in its cultural context, it's completely Arab".





On the Shari' Ishrin *sound stage, Abdullah the toyseller teaches a boy to recite the Koran.*

Simsim, a $7-million series produced by the Arabian Gulf States Joint Program Production Institution (see box) is scheduled to be aired on TV stations throughout the Gulf, the Middle East and North Africa beginning this fall. It consists of 130 half-hour programs in color, which will run five days a week for six months and then be repeated in 26-week cycles as lessons are reviewed and as new children continually enter the three-to-six-year-old pre-school target groups.

The primary goal, as it was for *Sesame Street*, is to prepare pre-school children, informally and in an entertaining way, for later classroom instruction. In the words of the educators this means "giving them the opportunity to learn certain skills, concepts and attitudes which will be useful in school". It includes, for example, an introduction to Modern Standard Arabic which, though rarely heard among the many regional varieties of Arabic spoken in homes, is the language used throughout the Arab world in textbooks, newspapers and most radio and television broadcasts.

To define this goal, a team of Arab educators, including researchers, child psychologists and linguists, first drew up a detailed teaching curriculum. They came up with a list of 170 individual educational objectives – such as recognizing numbers, letters and geometric forms – grouped them in 10 categories and assigned priorities. For example, 390 minutes – 10 percent of the total 3,900 minutes available during the 130 programs – are to be devoted to "physical and mental hygiene", another 10 percent to "social development and economics."

In the next phase, the television writers, directors and producers began to shape programs that would simultaneously cover these objectives, yet also entertain young viewers – the "impossible marriage" of academic and television people, as CTW consultant Duncan Kenworthy put it, that is most responsible for the success of the original *Sesame Street* concept. "The researchers are tugging toward education, the producers tugging toward entertainment. The dynamic tension which results achieves *both* ends."

Technicians watch the "take" on a bank of monitors.

As eventually worked out, each of *Open Sesame!*'s half-hour programs includes six minutes of animated cartoons, six minutes of documentary films, eight minutes of skits featuring such original *Sesame Street* Muppets as Bert, Ernie and Kermit the Frog ("Badr," "Anis" and "Kamil" in Arabic) and, finally, 10 minutes of studio segments videotaped on *Shari' 'Ishrin*. These segments are particularly important, contributing day-to-day continuity to the series by presenting familiar characters in an unchanging setting. Unlike many animated, documentary and Muppet sequences, however, which are purposely repeated during the series, each studio segment is new and different. This is meant to reinforce the "live" effect and thus help pre-schoolers believe that *Shari' 'Ishrin* is a real street, where real people, real children – and their two Arab Muppet friends, Nu'man and Malsun – actually exist.

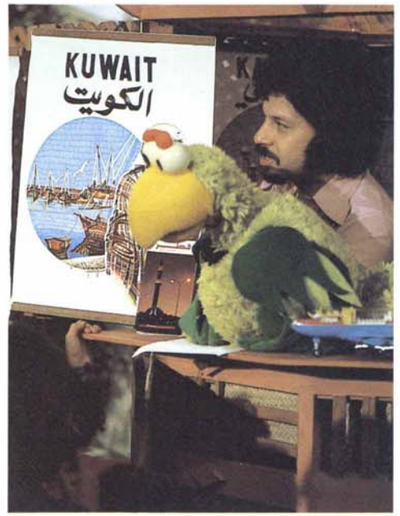
For this reason too, the studio set includes elements of regional architecture ranging from that of the Gulf to that of North Africa, a mix of new and old, urban and rural. Every child, producers hope, will see something to identify with, and be able to recognize the street as actually being in his or her own country.

The effect, in any case, is strikingly realistic: the awning above Hisham's shop has been faded by the sun, the packing boxes of vegetables and fruits in front of Khalil's shop are fresh each day and the trash barrel is sometimes full, sometimes empty. On a wall new posters are pasted over older ones tattered by the wind and drain pipes, clearly, have dripped for many rainy seasons over weathered stones.

The same careful attention to details has gone into defining characters and casting the roles. Both men and women are shown in positive terms, each, whatever his job, shown as contributing to the neighborhood and the community.

As to the actors and actresses – soon to be frequent and familiar visitors in homes throughout the Arab World – they too have an all-Arab character. Khalil the shopkeeper (played by Abdul Majid Qasim), Abdullah the toyseller (Ahmad al-Salah) and Hamad the engineer (Jasim Nabban) are all Kuwaitis. Fatima the teacher (Ahlam Muhammad) is a Bahraini, Laila the nurse (Sana Younus) comes from

Kuwaiti actor Abdullah Habail emerges from his Nu'man costume to discuss a scene with Laila the nurse.



Muppeteer Tawfiq al-Asha with Malsun, the parrot.

Saudi Arabia and Hisham the news vendor (Ka'id al-Na'mani) is from Iraq and the 20 permanent children in the cast represent no less than 12 Arab countries, including some as far away as Algeria. Picked from 200 children tested for the parts, and ranging in age from three to 10, they live with their families in Kuwait and use their real names on the program.

Of the two Muppets created especially for *Simsim*, Malsun the parrot is "played" by Syrian actor Tawfiq al-Asha, whose arm and hand animates the parrot while he sits on a low stool off-camera watching Malsun's performance on a silent television monitor at his feet. The second Muppet, roly-poly Nu'man, is played by Abdullah Hubail, a Kuwaiti who, in one sense, has the more difficult role, for he must wear the stifling costume beneath the hot lights for hours during the long taping sessions.

Open Sesame! is by no means the first foreign language adaptation of *Sesame Street* since it first appeared on public broadcasting stations across the United States in 1969. Conceived and produced by the Children's Television Workshop, the non-profit educational corporation in New York City, *Sesame Street* was a response to the discovery that America's TV-saturated youngsters seemed to remember the short, catchy jingles and slogans of the commercials more than the programs. By designing a "magazine" program for children based on an unlikely synthesis of academics and advertising, CTW produced a program that was an immediate success, not only with children but also with parents, teachers and critics. It was so successful that other countries

Actors, advisers and staff drawn from several Arab countries cluster on the Twentieth Street set.

A laughing line-up of Boy Scouts and a baffled scoutmaster try to help Nu'man learn left from right.

were soon clamoring for their own versions – and CTW began to help produce foreign versions.

In joining international co-productions, CTW, initially, simply eliminated segments of the U.S. series which were specifically tied to American customs or speech, and dubbed the soundtrack of the remaining "multicultural" segments into the appropriate foreign language. In Latin America, for example, *Plaza Sesamo* went on the air in Spanish and in Brazil *Villa Sesamo* delighted Portuguese-speaking children. Later, however, as they recognised the need to tie the program to indigenous cultures, local producers began adding new material based on the *Sesame Street* model and today the program in some form is transmitted worldwide in 13 languages in 40 different countries.

For all the sprightliness and sheer fun of *Sesame Street,* however, it should not be forgotten that it is, primarily, a serious program with serious objectives. So it is not surprising that the idea of an adaptation for Arabic-speaking children was first broached not by broadcasters, or even by educators, but by the Kuwait-based Arab Fund For Economic and Social Development, in conjunction with the United Nations Development Program (UNDP). Both bodies felt that, aside from its intrinsic educational and entertainment value, such a production could also have a significant impact on applied research in the social sciences in the Arab world, and in 1976 delegates to the fourth Arabian Gulf Television Conference not only agreed but assigned responsibility for development to an institution just formed: the Arabian Gulf States Joint Program Production Institution.

The proposed 130-program series was an ambitious project for the new production institution to cut its teeth on, but somehow during the following year, at the same time it was assembling a staff and setting up its own internal organization, the institution also managed to successfully conclude negotiations with CTW. In May 1977, for $2.5 million, it bought the Arab world rights to the *Sesame Street* concept for a nine-year period, as well as CTW's technical assistance, research and production advice and the services of a resident consulting producer during the production period in Kuwait. Under the agreement, CTW was also to provide 15 hours of cross-cultural material, such as animal or nature films, from the U.S. program, which would be selected by the institution as appropriate for Arab children and dubbed into Arabic.

In July, five key *Simsim* staff members journeyed to New York to review and select CTW material and observe *Sesame Street* curriculum research and production techniques. The five included executive producer Ibrahim al-Yusuf, also director of the institution, chief producer Faisal al-Yasiri, formerly of the Baghdad Theater and Cinema Institution, chief writer Yasir al-Malih, a Syrian, and two associate directors of research: Dr. Abdullah al-Dannan, associate director for linguistics, and Dr. Said Abdul Rahman, associate director for psychological and educational affairs.

Because of the regional variations in spoken Arabic, the program's research teams immediately had to face a crucial problem: how to present a program that would be equally clear to children in all parts of the Arab world.

To get an answer they divided the Arab world into four linguistic regions: Eastern Arabia including the Gulf region and Iraq, the Eastern Mediterranean area, the Nile Basin and North Africa. They then conducted 15 linguistic, psychological and sociological tests among three-to-six-year-old children in a representative city of each region: Kuwait, Amman, Cairo and Tunis. The results convinced them of the importance of using Modern Standard Arabic for the series, as well as helping to determine particular goals and objectives.

Research on that scale, obviously, is time consuming, but finally, in March 1978, some 40 specialists in linguistics, psychology, education and broadcasting agreed, at a five-day seminar, on objectives and priorities and, after seeing pilot programs, okayed the start of production.

Production too, of course, was an enormous undertaking. Dubbing of CTW material, for example, was done at sound studios in Baghdad, while various new animation segments were assigned to specialized design studios in Australia, Egypt, Yugoslavia, Italy, Germany, England and the U.S.A. Arab composers were commissioned to write some 120 original children's songs and an equal number of musical "bridges," and camera teams moved out across the Arab world from North Africa to the Gulf to shoot more than 500 two-to-three minute "live-action" films on location: footage of natural and historic landmarks, mosques, museums, folklore, handicrafts and

Of Muppets and Puppets

WRITTEN BY CAROLINE STONE

The Muppets, first on Sesame Street *and then on their own show, must be the most successful puppet show in history. Audiences in 40 countries see them regularly and when the Arab adaptation of* Sesame Street *is aired next month, up to 26 million more viewers will be added.*

In the Middle East, however, puppets are by no means a new form of entertainment. For many centuries "shadow puppets", known in Arabia as "shadows of the fancy" and in Turkey as Karagoz, *or "black eyes", were a popular entertainment in much of the Islamic world, particularly Egypt, Turkey and North Africa.*

Given the prohibitions in Muslim countries against making images, it is perhaps surprising that puppet shows were permitted; and certainly the question was debated by theologians. But as it was generally decided that the shows could be moral and instructive, puppet shows flourished.

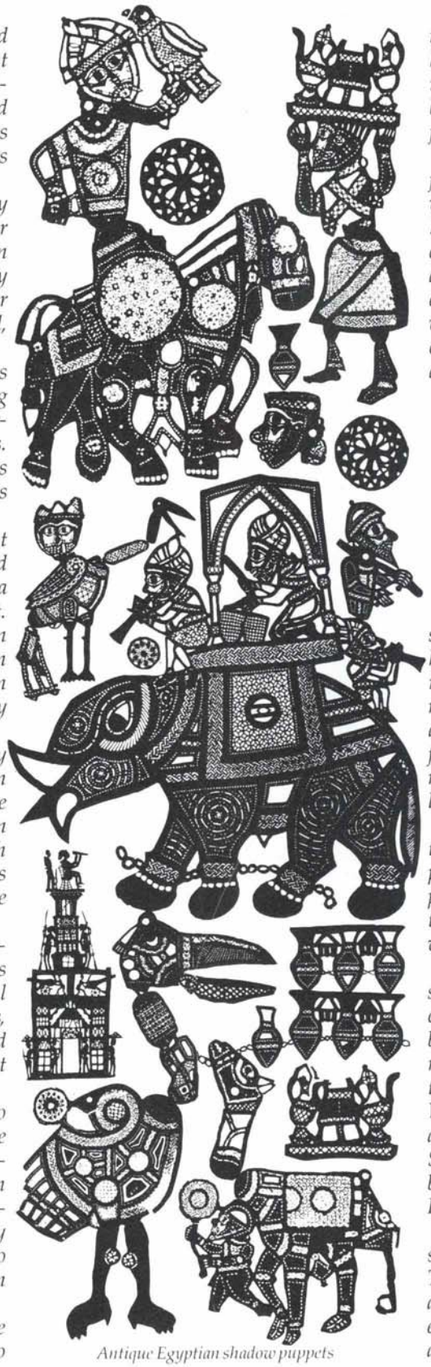
There is one story that reflects this. The great Saladin forced his scrupulous minister — and theologian — al-Qadi al-Fadil, to watch a puppet show and then asked him to comment. Al-Qadi al-Fadil answered, "What I have seen carries with a weighty lesson. I have seen kingdoms come and go, and when the curtain was rolled up, lo! The mover of all was only One."

The origins and history of puppets are very complicated. Ancient figures have been found in Egypt and in Etruscan tombs which may have been used as puppets, and there are hints of them in the classical authors. And certainly, both Greece and Rome had farces with characters whose function was that of Karagoz, *or of the more familiar "Punch" of Punch and Judy.*

Western puppets tended to be three dimensional, but in the Far East a different type was evolved: the shadow puppets, two-dimensional figures — sometimes cut into elaborate patterns, sometimes translucent and brilliantly colored — which were shown by pressing them against a white cloth screen lit by a powerful lamp.

In the Far East shadow puppets were used to recount the long, elaborate Hindu epics and the performances were considered religious. Interestingly, these stories are still presented in Malaysia and Indonesia, although both countries have been Muslim for centuries. But today they are presented as entertainment, and to them have been added, in some regions, Muslim stories relating the coming of Islam.

At some stage shadow plays are said to have passed from the Far East to the Turks, who invented a whole new style for the puppets: lively, plebeian and satirical, rather than romantic, heroic and poetic. The genre came to be called Karagoz, *after the main character, a folk hero.*



Antique Egyptian shadow puppets

In fact, the oldest surviving shadow plays are from 13th- and 14th-century Egypt. They were written by a man called Muhammed ibn Daniyal and give a valuable picture of the everyday life of the time with details unavailable in conventional sources. One play, for example, features Umm Rashid, an elderly woman who goes from house to house fulfilling commissions for the women and selling odds and ends:

> . . . and her pocket is never empty of chewing-gum and mirrors and rouge and powder and Maghrabine nutmeg, and powder for coloring the eyebrows and a lime preparation for the armpits and perfumed wool and skin cream and 'Beauty of Joseph' pomade and Barmakid scent and hair-dyes and violet scent.

The value of the shadow puppet plays as social history was recognized early by the Arab historians, but because of the difficulty in reading slang 700 years old — as well as what modern scholars discreetly describe as "unsuitable" passages — the old plays have been largely forgotten, except for the rare Karagoz *performance in Turkey — which sociologists and linguists often attend.*

From Egypt, Karagoz *puppet shows spread to Turkey, to Greece, to North Africa and perhaps to southern Italy and continued to be popular until the middle of this century, when the art suffered the same decline as American vaudeville and the British music hall.*

The shadow plays and their off-shoots — such as today's Muppets — shared certain characteristics with vaudeville and music halls: broad humor, above all, and a clear message that nothing secular was sacred. But more serious themes have also crept in. Elements of Molière's Le Medecin Malgré Lui *have been detected in a modern Greek shadow play and the old Sicilian puppet theater often focused on the battles of Charlemagne in his wars against Islam.*

Today's Muppets, of course, are far more sophisticated — yet the approach is similar. Through entertainment and laughter they — and the producers of Open Sesame! *— offer education and knowledge to their delighted audiences.*

A Vision in the Gulf

As, one by one, the six Arab states of the Gulf region entered the television age, they gradually realized that cooperation could enrich their programming and help solve many of their problems. As one step, they set up an organization called Gulf Vision, to coordinate various technical, scheduling and marketing projects. Later, however, information ministers in the six states — Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain and Iraq — decided that they needed to cooperate even more closely. Like concerned observers elsewhere, they realized that television was falling far short of its promise and that the flow of mass-produced entertainment from the West could have an unwanted influence on Arab traditions and customs. The result was the formation of the Arabian Gulf States Joint Program Production Institution in January 1976.

At the Arabian Gulf States Joint Program Production Institution's offices in Kuwait, Saud A. Dahlawi of Gulf Vision, Ibrahim al-Yusuf, director of the Institution, and Duncan Kenworthy of the Children's Television Workshop discuss plans to measure the educational impact of Iftah Ya Simsim *on its pre-school viewers.*

Financed by the six ministries of information, the non-profit institution was established to produce programs for radio, cinema and television, especially documentary films on the region's heritage, culture and social development — and to develop the talent needed to create and produce their own television programming: writers, directors, actors, cameramen and other technicians.

In Kuwait where the Institution was headquartered, Ibrahim al-Yusuf, its first director general, recently outlined the organization's goals. "Television is still a young art in the Arab world," al-Yusuf says. "So often it does not reflect people's lives and ideals. It's not their own. They feel divorced from it. The institution was established to produce programs which will really touch on the Islamic and Arab heritage of the Gulf."

Open Sesame! *was the institution's first project and, according to Duncan Kenworthy, the Children's Television Workshop's resident consulting producer, "It is a success, in a very important sense, even before the series goes on the air, because the transfer of technology is a key part of the project. The institution is using CTW's model of education-based, curriculum-based entertaining television. The people involved have achieved so much in the past two years that the project will leave a legacy of talent and experience that will have reverberations for years to come. It's very exciting."*

Chief producer Faisal al-Yasiri agrees "Already the institution has shown that if we give our Arab technicians, writers, directors and actors a solid base they can accomplish wonders. With Open Sesame! *we have followed a proven model and learned from the experience of successful people. It is the first time in Arab television that a major production has been completely planned in advance and then shot according to a production schedule. We knew what we wanted in each of the shows before we sent them to the writers. We were 64 weeks in production and we knew in advance what we were going to be shooting every single day, and we all worked together as a team to achieve the program's goals."*

This, moreover, is just the beginning. The institution is already studying proposals for 14 Gulf documentary films on folklore, the arts and industry — as well as several historical dramas. Its staff also has plans for a series on child care, designed for parents, and for an Islamic and Arab "visual encyclopedia," and in all those projects will adopt the careful planning and research learned in producing Open Sesame! *They plan, for example, to enlist professors from Gulf universities to help create programs to meet the specialized needs of specific audience groups: adult illiterates, mothers, rural youth and others.*

"Already the institution has become a truly Gulf organization," Kenworthy says. "People representing the various Gulf countries are all working together in close cooperation — in harmony, really. To me it's an example of the 'Arab family' in successful interaction. In fact, the institution itself is a mirror of what we hope to achieve with Open Sesame!"

In the park Abdullah helps the neighborhood children of Twentieth Street learn their letters.

industries with, in most cases, a child from the area narrating the sequence – "My father is a fisherman in Qatar," "I live in Damascus. My uncle is a glassblower."

Because of the size of the Arab world and the great differences in terrain, custom and history, these segments are as new to Arab children and adults as they would be to American children. As one director put it, "We are opening a window on the Arab world. Children will be able to see what other children look like. They'll see how farmers in different regions may do similar things in slightly different ways. They'll see how people in one area may have a different shade of skin or wear different clothes, but they are all Arabs. We have unity in diversity. The lesson is that people everywhere are basically the same."

In Kuwait, meanwhile, the *Shari' 'Ishrin* segments were being videotaped on a new set in the Kuwait television studios. Each day, between May and December during 1978, the producers would marshal their casts, run through the scripts and at 3 p.m., as soon as the children finished school, begin shooting. Because the younger children had to go to bed early, their segments were shot first, but for the others, filming, most evenings, continued until 11 p.m., the older children doing homework between scenes in a special room upstairs in the studio.

Compared to some programs the shooting schedule went slowly: roughly 10 minutes of final air time per day. The reason is that both an educational advisor and a linguistic supervisor were on the set at all times, authorized – and willing – to stop a take any time they felt that the point of a lesson was blurred or that a regional expression had inadvertently crept into an actor's speech.

During 1979 the producers assembled and edited the completed material, splicing Muppet, animation, filmed and *Shari' 'Ishrin* studio segments together into 130 precisely timed half-hour programs, and produced enough copies of the entire package to distribute to participating stations throughout the Arab world before October. Meanwhile the Joint Program Production Institution was readying a massive study to measure the impact of *Open Sesame!* Using research teams, the institution will test children who have seen *Open Sesame!* and compare their scores with those of control groups *not* exposed to the program. The results will not only enable the Institution to make revisions as the series is re-broadcast, but also to plan future programs.

What the Arab reaction will be is still unknown, of course, but when the Institution's pilot films were screened last year at an international conference on adaptations of *Sesame Street* held in Amsterdam, *Open Sesame!* won first place in an informal competition with six or more national versions. French television programers, furthermore, have expressed interest in buying rights to most of *Simsim's* films, especially those shot in North Africa, and Children's Television Workshop decided to buy a full hour of the documentary spots for use on the original *Sesame Street* in the U.S.A.

The *Open Sesame!* producers, meanwhile, were brimming with enthusiasm and predicting success. CTW's Duncan Kenworthy, for example, expects that when *Open Sesame!* opens, the series will affect acting styles throughout the Arab world. "The tradition of acting in the Arab world is definitely going to be influenced by *Simsim*," he says, "because the actors were *themselves* on the set. A spontaneity and naturalness comes across in the programs. The cast relates to the children as they would in real life, rather than as fellow actors." This, says al-Yusuf, is because the adult actors had to adjust to "the mood of the program" and the result, eventually, was a natural spontaneity.

Habib Hasan, a Kuwaiti graduate of New Mexico State University and a film director agrees. "You can't just *direct* children. You almost have to *be* one of them and learn to just play with them and show them what you want them to do."

As air time neared this month, actors, directors and producers, as well as the show's researchers and educators were, undeniably, feeling the tension, but if the experience of previous *Sesame Street* adaptations hold true, some 26 million Arabic-speaking pre-schoolers will soon be singing *Simsim* songs, making friends with Nu'man and Malsun, listening to Khalil and the other residents of *Shari' 'Ishrin* and, not incidentally, reading letters, identifying animals, vegetables, sounds, sizes, shapes and colors. They will also – along with a great many of their elders – be enjoying every single one of its 3,900 minutes.

William Tracy, formerly an Assistant Editor of Aramco World, *now writes for Aramco's public relations department in Dhahran.*

Kramer of Sumer

WRITTEN BY MARY LUCY WOOD
PHOTOGRAPHED BY KATRINA THOMAS AND ROBERT ARNDT

At 82, Samuel Noah Kramer, a scholar who describes himself as a man who "knows mostest about the leastest," is still engaged in what he calls "the universal quest for origins." For Dr. Kramer, now Professor Emeritus of the University of Pennsylvania, that quest has meant 52 years devoted to the translation of man's first written records: the clay tablets on which the people called the Sumerians inscribed the wedge-shaped writing known as cuneiform about 3,500 years ago.

According to archeology, the Sumerians, who called themselves the "blackheaded people," were among the first civilizations. Nomads, migrating from some place still unknown, they settled near and between the two great rivers of Mesopotamia – the Tigris and the Euphrates – about the 35th century B.C., and began to develop the fundamentals of civilization. They systematized agriculture, developed irrigation, constructed the first wagon wheel and the potters' wheel, a great technological breakthrough, experimented with a form of democracy, built cities and – Professor Kramer's lifelong studies show – wrote poetry and literature that in the West still echo through the pages of the Bible.

Over the millennia, however, Sumer vanished, as did its successors, Babylon and Assyria. Abandoned, and gradually covered by the earth, Sumer disappeared and was forgotten for over 2,000 years, its cities and culture buried in mounds of earth looming up from the muddy flatlands of the "land between the rivers," in what is now southeastern Iraq. But then, about 140 years ago, the first of the great Middle East archeologists began to dig into those mounds, called "tells", found artifacts and gradually – as they uncovered temples, monuments, tombs, sculpture, ornaments, tools and finely worked gold – drew a profile of a complete, hitherto unknown, civilization. More important, they also unearthed quantities of clay tablets, inscribed with the earliest known system of writing, one of the pivotal achievements of mankind.

In archeology such discoveries are the stuff of legends. But they are also just a beginning. For until they are deciphered, such finds as the tablets recently unearthed at Ebla in Syria (See *Aramco World*, March-April 1978) are relatively useless. The discovery of cuneiform tablets in Mesopotamia, therefore, was just a first step. Still to come was the decipherment and translation of the script early workmen called "a bird's footprints" by men like George Grotefend, Henry Rawlinson and George Smith (See *Aramco World*, January-February 1971) and, in this century, Samuel Noah Kramer – a Sumerologist.

A Sumerologist is, obviously, a specialist. Indeed, as Dr. Kramer himself says in the introduction to his book *History Begins at Sumer*, he is "one of the narrowest of specialists…" Yet the work of the Sumerologists involves them in all aspects of that ancient culture – business transactions, codes of law, home remedies, hymns, battles, mythology and poetry – all impressed in wet clay by the scribes of Sumer nearly five thousand years ago.

Writing, Dr. Kramer says, was developed when "the need arose to record business transactions or at least to tally inventories and lists of gifts brought to the temples as offerings." First attempts were pictographic, simple line drawings of such objects as an ear of barley, a bird, an ass head, a star for "heaven" or a bowl of food – with action represented by, for example, a drawing of a foot for "walking" or a head and mouth for "eating."

Through the centuries, however, the Sumerians reduced the pictures to simple wedge-shaped symbols – the cuneiform signs – made by the end of a reed stylus pressed into wet clay, and by the second half of the third millennium B.C., Dr. Kramer says, "Sumerian writing technique had become sufficiently plastic and flexible to express without difficulty the most complicated historical and literary compositions, many of which had been handed down by the oral tradition."

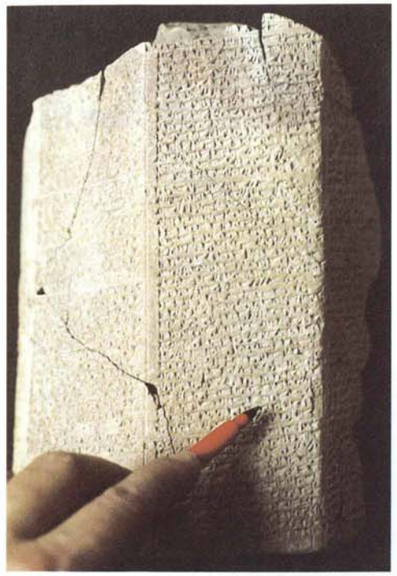
For Dr. Kramer it was the Sumerian literary compositions that drew him deeply into Sumerology in 1930 and that still, 49 years later, absorb his attention and time. Although he has retired from teaching – to a comfortable house in Philadelphia, filled with art from around the world collected by his wife – Professor Kramer is still slim and vigorous, still writes, lectures and travels and this spring will publish still another book on Sumer: *From the Poetry of Sumer.* And in spite of an occasional wry comment about himself as the "pinpoint historian" or the "Toynbee in reverse," Professor Kramer, in discussing his research into Sumerian language and literature, discloses a curiosity of enormous proportions, and a diligence not often equaled.

A Sumerologist, says a Sumerologist, is a man who knows mostest about the leastest

Samuel Noah Kramer began his personal journey to Sumer when he came to the University of Pennsylvania as a graduate student in 1927 and as part of the program for a doctor's degree in Assyriology began to read cuneiform. Then, in 1930, he participated in two digs in Iraq. The first was at Tell Billah in the north, near modern Mosul. Here no tablets were found despite considerable effort, and Kramer, whose whole purpose in being there was to decipher tablet inscriptions, began to regard himself as useless. His unhappiness was compounded when he came down with an acute attack of appendicitis so severe that there was no time to move him to Baghdad. Instead he was taken to a two-room hospital nearby where the doctor in charge, working with limited equipment, saved his life. A souvenir of the event was a scar running virtually the entire length of his stomach. Apparently the operation was longer and more complicated than normal and the doctor, with justifiable pride, displayed the appendix rather like a trophy.

After a month of slow recovery, Dr. Kramer was asked to go south to a second excavation being carried out at Tell Fara, on the site of ancient Shuruppak. The careful work turned up a quantity of tablets, many in groups, probably where a school had been, or where the clay "books," no longer needed, had been used as filler in clay walls. Some of these were brought back to the museum for study. "It was at this point that I began to be curious about the literary tablets that occasionally came to light," explained Professor Kramer.

His curiosity, however, could not be satisfied right away as, shortly after his return from Iraq, he was invited to Chicago to help in the compilation of an Assyrian dictionary. "I went to work on the dictionary in 1932, at the Oriental Institute, funded by the Rockefeller Foundation, where one of the editors was Arno Poebel, a leading Sumerologist of the day who taught me to read Sumerian."



A six-sided cuneiform tablet in the Istanbul museum.

Four years later, he got the chance to develop his interest in the cuneiform literary texts when he won a prestigious Guggenheim Fellowship and went to Istanbul to investigate some of what are called the Nippur tablets. "Considerably before my time," Professor Kramer explained, "between 1898 and 1900, the university sent expeditions to excavate the ancient city of Nippur in Iraq, then under Turkish control. There the archeologists found some 50,000 clay tablets bearing cuneiform writing. Half were sent to Istanbul to the Museum of the Ancient Orient, and half to Philadelphia, to the University of Pennsylvania Museum."

By the time the trip to Istanbul became possible, Sam Kramer had married a pretty University of Chicago graduate student, Millie Tokarsky, and had two children, Daniel and Judy. They traveled to Turkey by freighter "and half the passengers aboard were the four Kramers," Millie recalls.

"Every morning I washed the family's clothes by hand and sterilized baby bottles. We had a playpen on deck and a red coaster wagon to convey the children around towns when we could go ashore."

The crew taught Judy, age one, to walk, coaxing her back and forth on deck. "She was," says Millie Kramer, "the belle of the ship." The trip was uneventful except for a tense moment in the Strait of Gibraltar. The Spanish Civil War was raging and Franco's men searched the freighter for weapons they suspected were being smuggled to Loyalists. None were found.

In Istanbul at the Museum of the Ancient Orient, Kramer set to work piecing together approximately 200 of the cuneiform literary texts written in the Sumerian language – as distinct from, say, the Assyrian language, which was also written in cuneiform but was nevertheless a separate language.

It was not, Kramer smiled, an easy task; on the contrary, copying was painstaking, eye-straining, dusty work. With many of the baked clay tablets broken or cracked and the inscriptions half obliterated, efforts to translate them were frustrating, particularly when Dr. Kramer realized that many tablets were fragments of larger pieces which could be anywhere: in London or Berlin or Baghdad or Philadelphia, or possibly lost forever. But the efforts did lead to one fascinating discovery: a poetic essay on suffering, in Sumerian cuneiform, that bore a startling resemblance to the Bible's Book of Job.

Early in this century two fragments from tablets in the Nippur collection in Philadelphia had been published, both dealing with the theme of human suffering. Now, in Istanbul, Kramer recognized and copied two additional fragments belonging to the same essay. It was an exciting discovery but it was not the only one. Later, after he had returned to Philadelphia and joined the faculty of the University of Pennsylvania, he also identified the fifth and sixth fragments of the same essay; in fact, he and an assistant were startled to discover, the two pieces in Istanbul had been broken off the very tablets they were examining in Philadelphia.

Altogether, the six fragments yielded a poetic essay of some 139 lines, the first ever found on suffering and submission, very like the Book of Job, but written more than 2,000 years before the compilation of the Old Testament. As described by Professor Kramer in *History Begins at Sumer,* the Sumerian version of the Job story does seem to parallel the Biblical version.

In the essay, the sufferer is a man who had been wealthy and good, blessed with family and friends, until one day sickness and adversity overwhelm him. He refuses to accuse his god or condemn him for allowing such evil; instead, he humbles himself and with tears offers prayer and supplication. As a reward for such devotion, the god heeds the prayer, delivers the man from suffering, and restores his well-being.

The Job contribution, furthermore, was not Professor Kramer's only addition to Sumerology. In 1952, again working in Istanbul's Museum of the Ancient Orient, he also – on a tip from another cuneiform scholar – translated a tablet that turned out to be part of the Ur-Nammu code of law – which antedates the famous Code of Hammurabi by about 300 years.

Earlier, in 1947, one of Kramer's assistants had discovered a tablet in the Nippur Collection of the University Museum inscribed with a law code promulgated by the king Lipit-Ishtar which antedated Hammurabi's code by 150 years. In 1948, Taha Baqir, a former student of Professor Kramer's and then curator of the Iraq Museum in Baghdad, announced the excavation of two tablets inscribed with a still earlier code, but written about a century later than the Ur-Nammu Code discovered in Istanbul.

In this important discovery, as Professor Kramer points out, luck played a significant role. "In all probability I would have missed the Ur-Nammu tablet altogether had it not been for an opportune letter from F. R. Kraus, professor of cuneiform studies at the University of Leiden in Holland. He mentioned 'tablet number 3191' in Istanbul which he had noticed when serving as curator there. I sent for the tablet, and after days of hard work, I realized that what I held in my hand was a copy of the oldest law code as yet known to man."

His translation, Professor Kramer explained, included five of 25 known laws dating to the third dynasty of Ur – one of Sumer's ancient city states – which ruled about 2050 B.C., some 300 years before King Hammurabi ruled Babylon. They cover divorce, perjury and adultery, and in some ways penalties were lighter than the "eye for an eye" retribution mentioned in the Old Testament; fines, for example, were specified for some offenses instead of corporal punishment.

In 1965, two new fragments of the Ur-Nammu law code were recognized among the tablets excavated by Leonard Woolley at Ur. These added 39 new laws, many of which are unfortunately fragmentary.

The constant comparisons of Sumerian literature with the Bible, Professor Kramer says, are by no means accidental. Sumerologists are fascinated by the apparent

A property list from Nippur and a receipt for grain.

links between Sumerian literature and Old Testament stories. The story of Dilmun, for example, is seen by Sumerology as paralleling the story of Adam and Eve.

According to the Sumerologists, Dilmun was a "pure," "clean" and "bright" place, in which neither sickness nor death contaminated the fruit-filled garden where the great earth-mother Ninhursag had caused eight divine plants to grow. But then, the story goes on, Enki – usually a

Sumerologist copies out cuneiform text in Istanbul.

wise god – comes along and innocently eats them all, and Ninhursag abandons him until, through intervention of a council of gods, she relents.

As with the story of Job, the parallels with Adam and Eve seem clear: a garden, a forbidden plant and punishment for eating it.

Another Biblical story with possible antecedents in Sumerian literature is the story of the Flood as translated from one of the Nippur tablets by Arno Poebel in 1914. Although many lines were missing, those that were legible gave strong evidence of being the earliest story of the Deluge yet found.

This account tells of Ziusudra, a pious, god-fearing king, who is instructed by the gods to build a giant boat to save himself, and presumably others, because "a flood will sweep over the cult centers; to destroy the seed of mankind... is the decision... of the gods." A long break in the text prevents our knowing precisely what action followed, until these lines become legible:

All the windstorms, exceedingly powerful, attacked as one,
At the same time, the flood sweeps over the cult centers.
After, for seven days and seven nights,
The flood had swept over the land,
And the huge boat had been tossed about by the windstorms on the great waters,
Utu (sun-god) came forth, who sheds light on heaven and earth,
Ziusudra opened a window on the huge boat,
The hero Utu brought his rays into the giant boat.
Ziusudra, the king,
Prostrated himself before Utu,
The king kills an ox, slaughters a sheep.

As that translation suggests, Sumerian mythology contained tantalizing bits of information that have been repeated in the Bible, and, in some instances, verified by science. But from the same translation it is clear that Sumerian mythology was also literature – at least as translated by Professor Kramer.

In the story of Job, for example, the Kramer translation was rich and rhythmic:

The righteous words... his god accepted.
The words which the man prayerfully confessed pleased the... god.
And his god withdrew his hand from the evil word... which oppresses the heart...
The encompassing sickness-demon, which had spread wide its wings, he swept away.
The evil fate which had been decreed for him in accordance with his sentence,
He turned aside
He turned the man's suffering into joy
Set by him the kindly genii as watch and guardian
Gave him... angels with gracious mien.

And that is but one example. Dr. Kramer's numerous and varied writings on the Sumerians are filled with lyrical and significant stories, essays and proverbs – many as appropriate today as they were 5,000 years ago:

A restless woman in the house
Adds ache to pain.

Who possesses much silver may be happy,
Who possesses much barley may be happy,
But who has nothing at all can sleep.

Friendship lasts a day,
Kinship endures forever.

There are also in Dr. Kramer's translations vignettes of everyday life that suggest how the average Sumerian thought or reasoned, how he worked his way through the big questions asked by human beings of all times, or faced a typical day's dilemmas. One schoolboy solution to an age-old problem sounds rather modern:

I recited my tablet, ate my lunch, prepared my (new) tablet, wrote it, finished it.

But the teacher says: "Your hand (copy) is not satisfactory," and canes him. That night the boy suggests at home that his parents invite the teacher to dine. They do, and present him gifts as well. Mollified by such generosity, the teacher says:

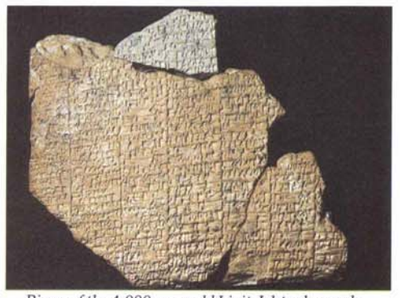
Young man, because you did not neglect my word, did not forsake it, may you reach the pinnacle of the scribal art, may you achieve it completely... You have carried out well the school's activities, you have become a man of learning.

This vignette, it seems, was a popular story; 21 copies in various states of preservation had been found in various collections when Dr. Kramer found missing pieces of the first fragmented translation and completed it. Another translation that will strike a chord in an America rebelling against high taxes and costly government was made of a tablet from Lagash, a city of 4,500 years ago. It listed the abuses of the corrupt administration:

... the inspector of the boatmen seized the boats. The cattle inspector seized the large cattle, seized the small cattle. The fisheries inspector seized the fisheries.

The writer, in Kramer's translation, then goes on to say that when a sheep was brought to the palace for shearing the owner had to pay five shekels if the wool was white. When a man divorced his wife, the *ishakku,* or local governor, received five shekels and his vizier took another. Furthermore, "the oxen of the gods plowed the *ishakku's* onion patches," meaning that the temple equipment was used for the governor's own benefit, and the *ishakku* had planted his personal onion and cucumber patch "in the god's best fields."

And then "there were the tax collectors," as the historian observed. Even after death, officials could claim quantities of a man's barley, bread, beer, even furnishings. Matters were at low ebb in Lagash until, at last, a good man – Urukagina by name – came to power, an honest, god-fearing ruler who threw out the corrupt administrators, righted wrongs, ended unjust treatment of the poor, and rid the city of thieves, usurers and murderers.



Pieces of the 4,000-year-old Lipit-Ishtar law code.

Even these lively accounts barely scratch the surface; only a relatively small number of the Sumerian tablets have been studied in detail. But much of what has been learned about Sumeria is the work of Samuel Kramer. As put by two professors at the University Museum in Philadelphia, who are compiling a dictionary of the Sumerian language, "He reconstructed the whole of Sumerian literature. We build on him."

Mary Lucy Wood was educated in Florida, did graduate work at Columbia University and spent a year doing historical research in Uruguay and Argentina where her interest in archeology was sparked by the discovery of Inca bones in Peru.

For the silks of Cathay, amber from the Baltic...

Treasures of the North

WRITTEN BY BARRY HOBERMAN ILLUSTRATED BY NEVILLE MARDELL

It would seem to be a fact," wrote the Greek historian Herodotus, "that the remotest parts of the world have the finest products."

Herodotus' observation probably says far more about human nature than about the natural resources of far-off lands. Since recorded history began, the desire for rare and unusual goods has been well-nigh universal. Western man, for example, traditionally turned to the Orient for exotic luxuries – references to "the silks of Cathay," the fabled "Spice Islands," and "caravans bearing frankincense and myrrh from Arabia Felix" are frequent in medieval literature.

But where, one wonders, did the *Orient* look for exotic treasures? Where, for instance, did the Arabs – who themselves traded frankincense and myrrh – go for Herodotus' "finest goods?" Curiously, they went north.

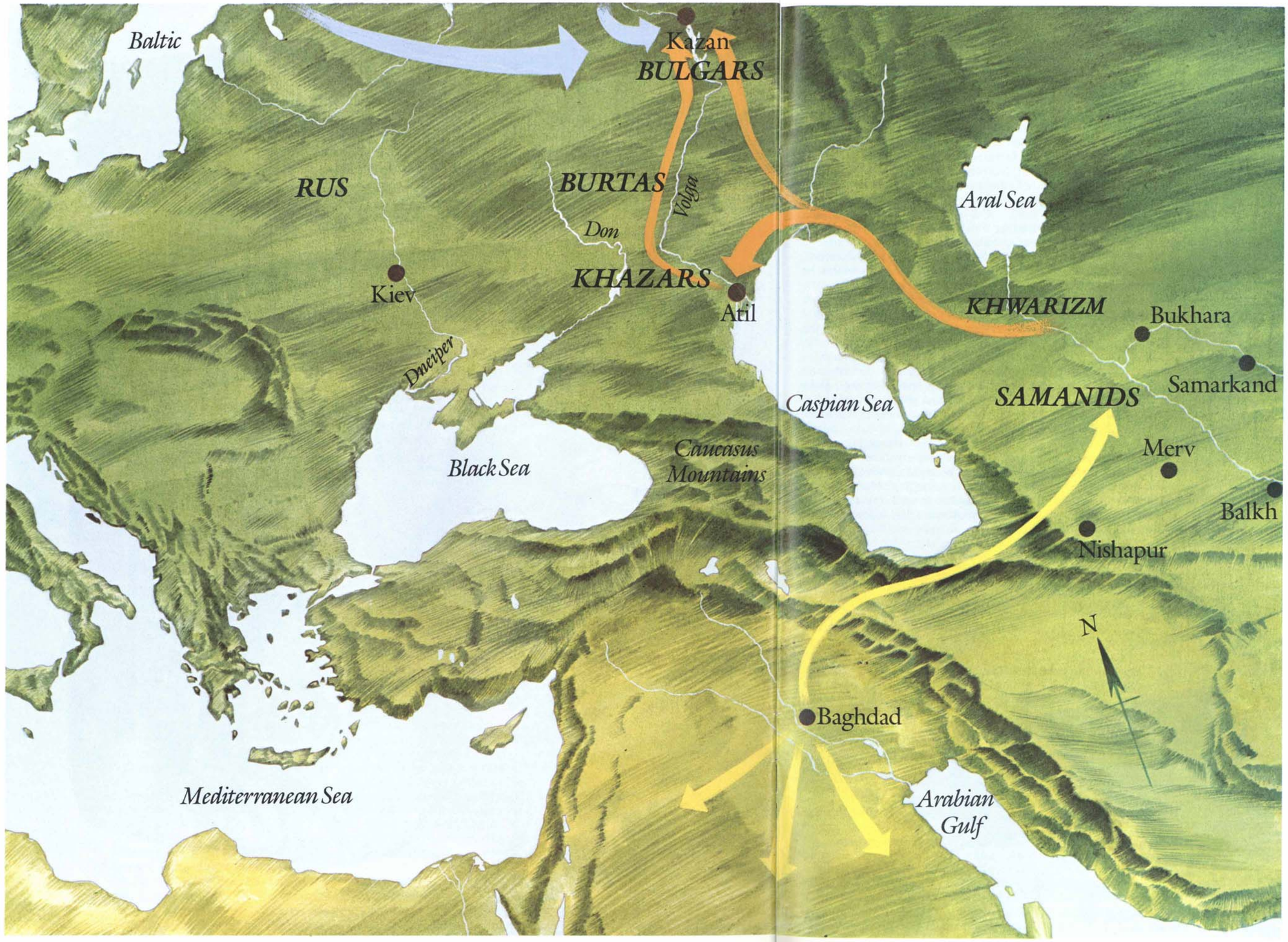
The world of Islam certainly traded with the Far East too – India, Indonesia and Malaysia – but, especially in medieval times, the Arabs and Persians also looked to the north – to eastern and northern Europe – as a source of precious commodities. From early Islamic times, and especially in the ninth and tenth centuries, a flourishing trade linked the Arab East and Central Asia with the distant North, a land of fearsome cold and long winter nights.

Although this was the period when the Abbasid Caliphate attained its cultural zenith, it was also the era when the Samanid dynasty ruled almost autonomously in Central Asia. Much of the impetus for the northern trade, therefore, came from the Samanids, whose domain included the great cities of Nishapur, Merv, Balkh, Bukhara, Samarkand, and – an all-important region – Khwarizm.

Located south of the Aral Sea and close to some of the major emporia of eastern Europe, Khwarizm's role in international commerce was pivotal. Its caravans skirted the northern shore of the Caspian Sea to reach Atil, at the mouth of the Volga and controlled by the Khazars – Turks who ruled the entire lower Don-Volga area, just north of the Black Sea, the Caucasus Mountains and the Caspian. Although it was an exceptionally barren and resource-poor country, the Khazars nonetheless succeeded in amassing substantial wealth on the basis of the trade which passed through the markets of Atil, where foreign merchants filled Khazar coffers with transit tolls and customs dues until the second half of the 10th century, when the Russians apparently won control of the local trade.

Khwarizmian merchants also journeyed to the country of the Volga Bulgars, Muslim Turks who originally formed part of the same people for whom Bulgaria is named. The Bulgar country lay far to the north of Khazaria, around the intersection of the Volga and Kama Rivers – near the present-day Russian city of Kazan. It could be reached via a direct caravan route from Khwarizm, or by sailing up the Volga from Atil.

Except for the famous account of Ibn Fadlan, a member of the embassy sent by the Caliph al-Muqtadir to the Bulgars in 921 (See *Aramco World*, March-April 1979),



very little was known in the Islamic world about the peoples of eastern and northern Europe. Muslim geographers tended to classify the remaining groups under the rubrics Saqaliba, Rus or Turk, and they were not, in fact, clear about who the Saqaliba and Rus were. Scholars have shown that the word Saqaliba was used to designate not only Slavs, but on occasion Finns, Turks, and Germans as well. As for the term Rus, some interpreters say it meant the native Slavs who founded the early Russian state, but others say it refers to bands of Scandinavian interlopers – the eastern European equivalent of the people known in Western history as the Vikings. Recent investigations suggest, however, that the Rus of Arab authors should be understood not as a single ethnic group, but as a multinational association of "nomads of the sea."

But if Muslim writers were unfamiliar with the people of eastern and northern Europe – what is now the Ukraine, European Russia, Poland and Scandinavia – they were totally familiar with the area's treasures. From numerous accounts – Ibn Khurradadhbih, in the ninth century Ibn Rusta, Ibn Fadlan, al-Istakhri, al-Mas'udi, Ibn Hawqal, the anonymous author of *Hudud al-'Alam* – and al-Maqdisi, all in the 10th century; al-Biruni, Gardizi, and al-Bakri in the 11th century; Marvazi and Abu Hamid al-Gharnati al-Andalusi, in the 12th century and Muhammad 'Awfi in the 13th century – experts have pieced together a picture of a booming commercial network that brought the treasures of the North to all the major centers of Islamic civilization.

Foremost among these treasures were furs – sable, ermine, mink, marten, fox, beaver, squirrel, and otter. Furs were in demand above all in Central Asia and on the Iranian plateau, but even in the warmer Arab lands fur was used to trim the garments of the well-to-do.

Fur-bearing animals were so numerous in eastern and northern Europe, that pelts served as a basic unit of exchange in these regions until the 12th century, if not later. In the heartlands of Islam, however, furs remained a precious luxury, esteemed and coveted no less than Chinese silks. Muslim merchants journeyed to the markets of Atil, Bulgar, and Suwar, perhaps even as far afield as Kiev, to obtain pelts in exchange for cash – silver *dirhams* – or such items as silver and copper plates, bowls, cups and jewelry, silk and cotton textiles, weapons and fruit. The furs were transported back to Khwarizm, and from there routed throughout the Islamic East, or west to Baghdad, the

political, intellectual and economic hub of the Abbasid Caliphate, and from there to the furthest limits of the Muslim world.

In addition to its role as an emporium for the fur trade, the country of the Volga Bulgars was itself a key reservoir of furs – sables in particular. Another country renowned for its splendid furs was that of the Burtas – Finns who dwelled in the forests along the banks of the middle Volga, between the Khazars and the Bulgars. Ibn Rusta, whose account of the Burtas is the most detailed to have survived, notes that most of their wealth derives from marten pelts. The versatile traveler, historian, and geographer al-Mas'udi discusses the fox fur of the Burtas in two of his works, *Muruj al-Dhahab* ("The Meadows of Gold") and *Kitab al-Tanbih* ("The Book of Admonition").

In the first book, he relates that a single black fox pelt from the Burtas country may be worth more than 100 gold *dinars*. "Arab and non-Arab kings wear the black ones, and take extraordinary pride in doing so. They regard them as being more valuable than sable, weasel, and similar furs. The kings also have these pelts made into hats, kaftans, and mantles. In fact, it is impossible that there would be a king who does *not* own a kaftan or mantle lined with this black fox fur of Burtas."

In the second work, al-Mas'udi adds that the distinctive Burtas fox fur "is not found anywhere in the world except in this district and its environs." He also narrates the account of an experiment by which the Caliph al-Mahdi determined to his own satisfaction that the black fox fur of Burtas was warmer than all other furs.

Two rather enigmatic fur-producing territories were the land inhabited by a people whom the Muslim geographers call Wisu or Isu, and that of another people named Yura or Yughra. Various authors report that Bulgar merchants journeyed to these snowbound precincts in dogsleds, returning after many months with the finest quality furs. Marvazi writes that the Yura "are a savage people, living in forests and not mixing with other men, for they fear that they may be harmed by them." The Wisu and Yura have been successfully identified with groups who to this day occupy areas in northern Russia where fur-bearing animals are plentiful. They deserve mention here not only for their part in the fur trade, but because they represent the northernmost limits of medieval Arab and Persian geographical knowledge.

Though furs were the major commodity in the trade with the North, many other goods also achieved the status of luxury items. Amber, the mysterious substance capable of imprisoning unwary insects and attracting straw like a magnet, found its way to the Arab East all the way from the shores of the Baltic. It was commonly used for both ornamental and medicinal purposes. Al-Biruni, himself a Khwarizmian, declares that many Turks employ amber as a talisman, to insure protection against the evil eye, and though some writers offered fantastic theories to explain the occurrence of amber in nature, the majority of those who mentioned it had a fairly accurate understanding of its origin.

Perhaps the most exotic of all the northern products were walrus and narwhal tusk ivory, carried from Arctic seas via a lengthy chain of intermediaries. Once again the encyclopedic al-Biruni furnishes colorful information on the subject at hand. He identifies the "fish-teeth" brought from the "Northern Sea" by the Volga Bulgars with the rare and precious material *khutu*, out of which were carved elaborate sword hilts and dagger handles. Al-Biruni adds that the Egyptians would sometimes purchase this substance for up to 200 times its actual value, so highly did they esteem it.

Like amber, *khutu* – usually walrus or narwhal ivory but perhaps including mammoth ivory from Siberia – was reputed by Muslim authors to have therapeutic and magical properties. Throughout the Middle Ages, walrus tusks were referred to as "fish-teeth" in a variety of languages, including Arabic, Persian, Turkish and Russian. It is also interesting to note that the unique spiraled tusk of the narwhal – like the horn of the oryx – resembles that of the legendary unicorn.

Chief among the remaining goods imported from eastern and northern Europe were honey and wax, the twin products of bee-keeping. Honey was a more popular sweetener than sugar, which was already known to the Muslims but was still extremely scarce.

Dried fish and hazel-nuts were two other foodstuffs regularly procured from the North. The Rus merchants also dominated the brisk trade in sword blades, and texts also mention trade in arrows, spears and armor, and scattered references to leather, birch bark, isinglass and lead help to provide a fuller idea of the range and diversity of northern commodities appreciated in the Muslim world in the ninth and tenth centuries.

Besides the literary documentation, there is ample archeological evidence of extensive trade with the North. Hundreds of hoards of Islamic silver *dirhams* have been uncovered in eastern, northern and central Europe, particularly along the Volga and around the Baltic. These finds have been concentrated in European Russia, the Baltic republics of the U.S.S.R., Poland, Finland and Sweden – especially the island of Gotland – and have extended as far as Germany, Denmark, Norway, Great Britain – and even Iceland. In 1960 it was estimated that some 200,000 coins had come to light in these parts and the total now must be considerably higher.

From these hoards, which occur in such surprising quantities and over such a wide area, it is apparent that for many centuries, Islamic silver coins were accepted – or even preferred – as currency in regions of Europe that were never touched by the religion and civilization of Islam. That *dirhams* were used as genuine currency, and not simply as merchandise to be exchanged, is implied by the fact that many halves and quarters of coins have been found.

Additional silver in the form of bracelets, plates, bowls, and cups was often buried along with the coins. It appears that the practice of hoarding silver represents a medieval precursor of the modern savings account. The discovery of Sassanian silver objects in the extreme northeast of European Russia further suggests that this custom antedates the rise of Islam.

The caches of Islamic silver found in eastern, northern, and central Europe serve to complement and corroborate written accounts of Muslim trade with the North. The dates on the coins – the majority of which are ninth and tenth century coins – coincide with the dates of the geographers' reports.

A large percentage of the coins originate from Samanid mints in Central Asia, emphasizing what was said previously about the Samanid role in the northern trade.

Some archeologists have argued that by pinpointing on a map all the places where coin hoards have been discovered, one can trace the routes followed by Muslim traders, but it is doubtful that Arab, Persian, and Khwarizmian merchants themselves often ventured beyond Bulgar and Suwar in the country of the Volga Bulgars. The Rus – whether Scandinavians, Slavs, or both – clearly controlled the inland water routes, reaching the Islamic world via the Volga and the Caspian as they did Byzantium via the Dneiper and the Black Sea. The Khazars traditionally exercised sovereignty over land routes in the North Caucasus and the area of the present-day Ukraine, and the Bulgars probably handled much of the trade with the distant Wisu and Yura. Finally, the Vikings were masters of the entire Baltic, and as such are probably responsible for the massive numbers of coin hoards found on its coasts.

Nor can it be assumed that a given cache of silver was necessarily buried along a

trade route. Here the quantity of evidence is important, and plotting the finds on a map is helpful. A rough idea of at least certain routes can be gained by tracing through the regions in which hoards have been most densely concentrated. Occasional finds of camel bones have also been utilized in locating caravan routes, but unfortunately, a camel bone cannot furnish the identity of that camel's rider.

The last comment, however facetious it might sound, raises a serious question. It has proven terribly difficult to integrate the spectacular archeological discoveries into an overall synthesis of the data concerning Islamic trade with the North. Coin hoards, in spite of the undoubted fascination they hold and the speculation they inspire, are mute. They tell us nothing about the human side of trade, about the social conditions that created a substantial demand for sable or amber in the medieval Islamic world. Only a literary source – such as al-Mas'udi's statement that it would be impossible to find a king who did not own a garment lined with black Burtas fox fur – can do that. A coin hoard cannot reveal the nationality of the person who hid it, his precise reasons for doing so, or the circumstances under which he obtained the coins in the first place. We can try, of course, to imagine what colorful tales of human initiative are suggested by a cache of Arab coins in Norway or Iceland, but without written evidence there can be only surmise.

The hoards of coins have led to another significant conclusion, however: a decline in trade in the 11th century. Almost no Muslim coins bearing dates beyond the early 11th century have been found, although hoards containing Byzantine and western European money from this period do appear. Even in hoards dating from the late 10th century, there are increasing proportions of Christian coins. This supports suggestions in written sources that there was a dramatic ebb in the trade between the Islamic lands and eastern Europe after the year 1000.

The reasons for this decline are but imperfectly known. A key factor was obviously the fall of the Samanids in A.D. 999. Their realm was carved up between the Karakhanid Turks in the north, and the Turkish Ghaznavid house of Mahmud of Ghazna in the south. The general upheavals in Central Asia at this time, and specifically the failure of the Karakhanids to cultivate good relations with other Muslim dynasties, must have had a tremendous impact on international commerce. The meteoric rise of the Russian state, with its capital at Kiev on the Dneiper, altered time-honored economic patterns in eastern Europe. A further explanation for the falling off of trade pins much of the blame on an internal silver shortage that developed in the Islamic East toward the end of the Samanid period.

Whatever the reasons for the downturn, it should not be assumed that trade ground to a complete halt. Northern products continued to reach the world of Islam, albeit with less frequency. But for all practical purposes, our story ends here.

In every age of history, the romantic image of rare and unusual luxuries from distant lands has exerted a unique hold over men's minds. Medieval Islam, demonstrably no exception, was thus drawn by the exotic lure of treasures from the North. The record of Islamic trade with eastern and northern Europe is a spellbinding saga of sable and ermine pelts, of amber from the Baltic and ivory from the Arctic, of doughty Muslim merchants and obscure Finnish forest dwellers. It is the story of a faraway time, and of desires that are timeless.

Barry Hoberman, now a freelance writer, has a B.A. degree from Duke University, an M.A. from Harvard, where he began his study of Arabic, and another M.A. – in Central Asian history – from the University of Indiana, where he continued his study of Arabic, specializing in medieval texts.

IT IS WRITTEN

WRITTEN BY ROBERT ARNDT *WITH KATRINA THOMAS*
PHOTOGRAPHED BY KATRINA THOMAS
EXHIBIT PHOTOGRAPHS COURTESY OF THE ASIA HOUSE GALLERY

"The pen is the beacon of Islam, and a necklace of honor with princes, kings and chiefs."

In the United States, recently, Middle East exhibits have been packing them in at museums from coast to coast. In New York, for example, an exhibit of King Tut's treasures, after being displayed in Louisiana, California and Washington, D.C., had New Yorkers lined up at the Metropolitan Museum of Art for four months (See *Aramco World*, May-June 1977). About the same time an exhibit of The Sudan's Nubian art, after opening in Brooklyn, toured the U.S. and drew fine crowds too (See *Aramco World*, July-August 1979). Coupled with the popularity of the Metropolitan's new Egyptian wing – with its handsome Temple of Dendur – those exhibits reflect a new awareness of and interest in the cultures of the Middle East.

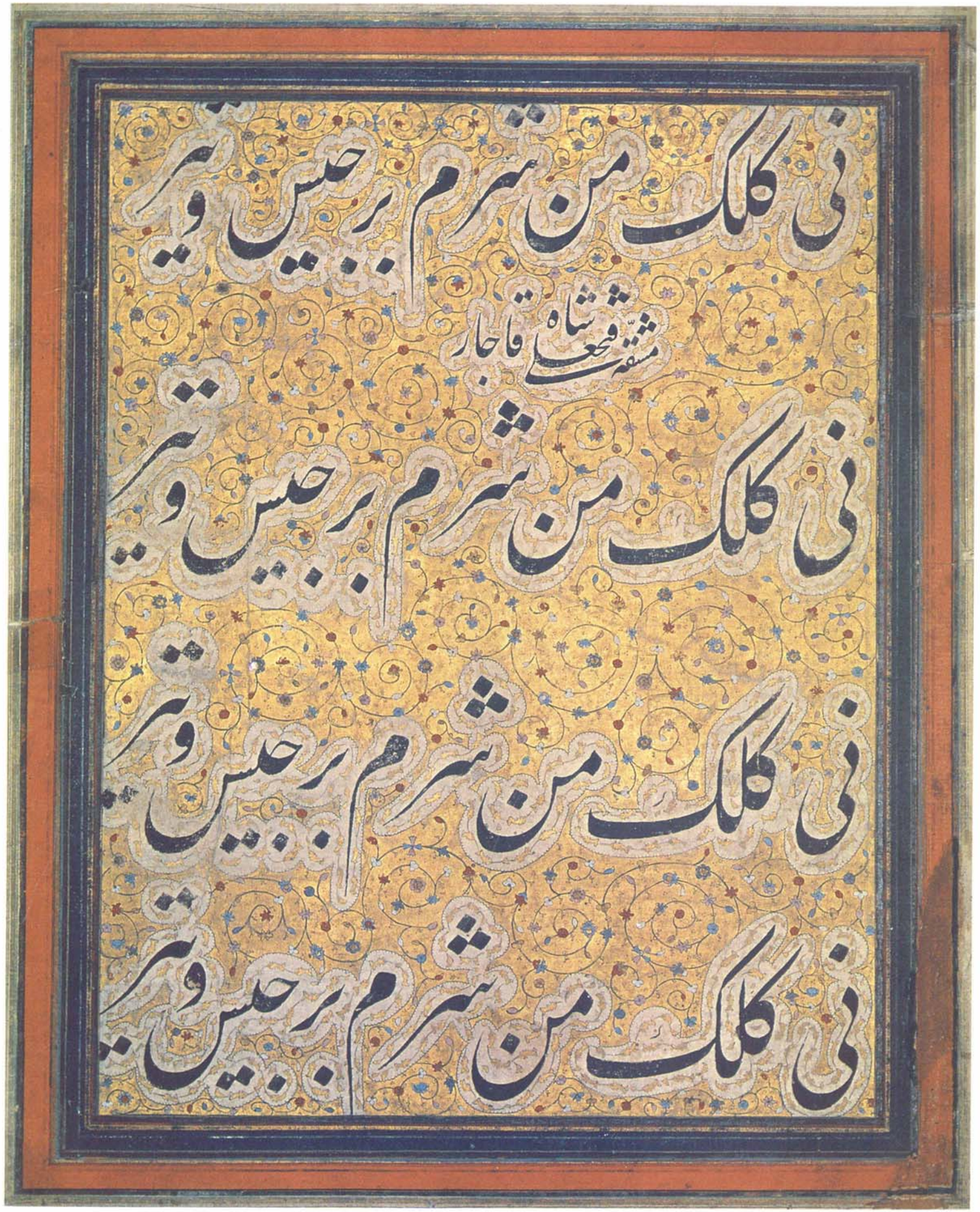
Because of the publicity accorded them, however, a smaller exhibit that opened in New York almost simultaneously was somewhat overshadowed. This exhibit, in some ways more striking than the other two, was "It Is Written: Calligraphy in the Arts of the Muslim World." It opened in New York in Asia House, and from there went to Cincinnati, Seattle and St. Louis where, for six weeks this fall, it drew high praise and large crowds.

Assembled for New York's Asia House Gallery by Anthony Welch, a Canadian Islamic scholar, "It Is Written" ranges through time, geography and style. Although calligraphy means simply "beautiful writing," the Islamic world used it in many different ways in many different places – as the exhibit makes clear. From Kairouan, south of today's Tunis, there is a page from a Koran that was written more than 1,000 years ago. From a road outside Jerusalem there is a milestone carved about A.D. 700. And from Iran there is a 16th-century ceremonial iron anchor. In the space of hardly more than 100 carefully chosen objects, the exhibit encapsulates the full sweep of calligraphy in Islamic art and suggests what the written word meant – and means – in Islam and its visual arts.

The importance of the written word to Islam has no parallel. Christianity, for example, is primarily expressed, according to its adherents, in a divine incarnation and Buddhism in the teachings of an enlightened individual. But Islam began with an order to the Prophet to "read" a scroll – on which were written what are now the first five verses of the 96th Sura of the Koran. Muslims believe those verses, as well as the rest of the Koran, existed – had always existed – in heaven, in written form, and in Arabic. Thus, when the revelations were written down by man and collated to become the Koran, the reverence due a heavenly original was also accorded to the earthly copy, and extended as well to the Arabic language itself.

To Muslims, therefore, the act of writing is freighted with an emotion and a significance unknown in the West since printing in the 15th and 16th centuries superseded monastic copyists. Even today, on the streets of Mecca, Cairo, Damascus or Jerusalem, old men will pick up a scrap of paper on the street, roll it up and tuck it into a crevice of a wall – because any scrap *might* have the divine name inscribed on it and so should not be left where it could be ignominiously trodden underfoot.

Stressing this in the excellent catalogue he prepared for the exhibit, Dr. Welch points out that since writing was the vehicle of divine revelation, it carried its own authority quite apart from the importance of what it said or signified – and quite apart from whether the person who saw it could read it or not. According to Islamic tradition, when the Prophet wrote to the Byzantines and needed a seal to lend authority to his letter, he had a seal-ring made that carried no drawing or figure, but only his name and title in Arabic: Muhammad the Messenger of God. And from about A.D. 700 onward, the coins of the expanding Islamic empire bore no portraits or emblems – as those of the Byzantine, Persian and Roman empires had – but only the written word.



Fath 'Ali Shah Qajar's calligraphic exercise. At left: A 16th-century Indian calligrapher created this horse from one entire verse of the Sura al-Baqara *of the Koran.*

Inevitably, therefore, the very act of writing in Arabic took on personal importance for Muslims. To write a copy of the Koran, or of a part of it, to write the 99 most beautiful names of God, or to write *Bismillah* ("In the name of God") beautifully was an act of piety (See *Aramco World,* July-August 1977). As Welch quotes, "The pen is the beacon of Islam, and a necklace of honor with princes, kings and chiefs."

Eventually calligraphy – the *art* of writing – became part of the general culture of the Islamic world. It was codified, written about and elaborated into styles and schools; there were even biographies of its great practitioners. The Arab author al-Tawhidi called it "jewelry fashioned by the hand from the pure gold of the intellect," and, with figurative painting discouraged or forbidden, calligraphy became Islam's most important visual art.

Over the years the original pre-Islamic script (See *Aramco World,* March-April 1976, September-October 1965) evolved. At first there were but two forms: one angular – dignified, regular and somewhat monumental – and one cursive – fluent, limber and much easier to write. But by the eighth century a considerable variety of different styles in the two classes had developed. One particular variant of the angular class – developed in the city of Kufa, on the Euphrates – was called Kufic, and that term has since come to include all the various styles of the angular class.

In the Asia House exhibit the Kufic inscriptions tend to be among the older ones, partly because Kufic was more commonly used than other scripts for monumental inscriptions on durable substances. Thus the 22-inch-wide Jerusalem milestone is engraved in a squared-off, plain script, unadorned and as easy to read as a highway marker should be. It names the Caliph 'Abd-al-Malik (A.D. 685-705), the builder of Jerusalem's Dome of the Rock, the ruler who first had the empire's administrative documents written in Arabic instead of other languages, and who was responsible for shifting coinage designs from portraits to Arabic script.

For all the plainness of the lettering, however, the milestone's base bears a modest flourish of arabesque tracery – "the beginnings," writes Welch, "of what is to be a vital and continuing connection between script and ornament."

Ornament, however, is conspicuously lacking on another Kufic piece, possibly the most beautiful item in the whole exhibit thanks to its very simplicity. It is the page from a Kairouan Koran, written on a piece of deep blue vellum about 11 by 14 inches large, in gold ink.

Only three or four Korans on colored vellum still exist, says Welch, and the use of gold or silver for decoration was rare when the volume from which this page came was written in the late ninth or early tenth century. According to one source quoted in the exhibit catalogue, the volume was written at the orders of the Abbasid caliph al-Ma'mun for the tomb of his father Harun al-Rashid; if so, work on it must have begun before A.D. 833, when al-Ma'mun died. In any case, says Welch, it is "one of the wonders of Islamic calligraphy", and the climax of a tradition of vellum Kufic Korans.

Welch points out that the 15 lines of Kufic script on this beautiful page are drawn in a very severe style, "hugging the horizontal ... sparing only the basic letter forms and eschewing all distractions ... This script is designed for beauty more than legibility," and while it would have given a professional reciter of the Koran no trouble, the average ninth-century reader would have found the script as hard to puzzle out as today's readers of Arabic do.

At the time that the vellum Koran was probably being written, one of the greatest of the ancient calligraphers was beginning to introduce certain principals of order. This was Ibn Muqla of Baghdad. Often called the inventor of the six basic styles of Arabic calligraphy, Ibn Muqla, in fact, put a foundation of geometry under various styles of writing that already existed, and wrote rules for calligraphy that guided practitioners of the art for the next 100 years.

What Ibn Muqla actually did was to establish the diamond-shaped dot left by the reed pen as the basic measure for all Arabic letters. A calligrapher, for example, could set the height of his letter *alif* – a vertical line – as being three or five or seven dots high and then write other letters in proportion to either the diamond shaped dot or the *alif.* The result was what Ibn Muqla called "proportioned script," and although no examples of his own work survive, his methods are basically the same ones used by Western typographers and Arab calligraphers even today. His influence, at least indirectly, is an unseen element throughout the Asia House exhibit.

The exhibit touches too on a technological event of great importance in the development of calligraphy: the introduction of paper. Until the ninth century, vellum, parchment and papyrus (See *Aramco World,* July-August 1973) had been the usual writing materials. Each, however, had disadvantages. Papyrus was expensive and brittle, and both vellum and parchment, although durable, required skilled preparation. The supply was relatively small, the thickness of the sheet varied and the two sides of the sheet absorbed ink and color unpredictably.

When paper was introduced in the ninth century, therefore, it was revolutionary. It was flexible, and of more uniform quality. It could be cut, pasted and erased, it could be manufactured in larger quantities, and above all, it was cheaper.

To the scribes and calligraphers, that was important: it meant they could practice to perfect their art. In the exhibit, for example, is a practice sheet from early 17th-century Iran – a page from a calligrapher's sketch-book – which is no more than a blur of repeated individual letters and a few recognizable words. But it is a beautiful blur.

In the development of calligraphy, says Welch, grace and elegance became the ultimate criteria for judging. But, he says, "there was a certain etiquette of script as well." Certain styles were suitable for certain purposes, and inappropriate otherwise. Because the stately Kufic demanded almost as much skill to read as it did to write, it was gradually replaced by the simpler, more legible *naskhi* script for the texts of Korans. One example is a

The text of this gold-on-blue Koran page from Kairouan, below, is another part of the Sura al- Baqara. *In other photos, museum visitors admire a milestone from Jerusalem and a series of brass and bronze basins and trays.*

Koran written about 1500 by the greatest of Ottoman calligraphers: Hamd Allah Mustafa.

Another script – *thuluth* – was more often used for sonorous titles and honorifics. In the exhibit, one lovely example appears on a 30-inch bronze tray made in Egypt in the middle of the 14th century for the Yemeni ruler al-Malik al-Mujahid. The inscription is inlaid in silver, and it reads, "Glory to our lord, our king, the ruler of our age and our time, the sultan al-Malik al-Mujahid . . . endowed with the glory of the two masteries, of the sword and of the pen." For all the magniloquence – and the full inscription includes more names and a little genealogy as well – the visual effect of the calligraphy is stunning: Welch points out that *thuluth* verticals cluster to form a spoke-like, wheeling pattern, and each group of them looks like a mass of spears surrounding and protecting the central five-petaled flower, emblem of the dynasty.

Some scripts developed regionally. Conservative northern Africa, for example, which did not adopt the principles of Ibn Muqla or the refinements of the 10th-century calligrapher Ibn al-Bawwab, developed its own Maghribi cursive scripts directly from Kufic. These could be enormously bold, strong and evocative (See *Aramco World*, July-August 1977), or as deliberate, open and rhythmic as a page of the Koran written in 12th-century Spain and included in the exhibit. Probably from the court of the Almohad dynasty in Seville, this example, says Welch, shows what was a characteristic of North African calligraphy: "virtuosity of word or line of text [which] is esteemed more highly than virtuosity of letter."

For other purposes, or in other places, there were other scripts that might be used. *Ta'liq* script was commonly used for literature and *nasta'liq* often for poetry, in Persia, and *diwani* for official documents in the Ottoman empire especially. And in Muslim India – as shown by a flowery Koran in the exhibit – there was a script called Bihari; this Koran has an interlinear Persian translation.

In some cases, varied scripts were used together, but again only certain combinations were deemed suitable. In the exhibit, for example, a pair of wooden doors from late 16th-century Iran contrasts a blocky Kufic script with large panels of tall, elegant and sweeping *thuluth* text – and with the woodcarver's signature, an unobtrusive small panel of dignified *naskhi*.

Calligraphy was not merely technique and taste; the calligrapher's soul, everyone agreed, was as important as the way he trimmed his reed pen – and whole volumes of instruction were written about both topics. Welch, for example, tells the story of the governor of Khorasan who refused a petitioner because his petition was badly written. "If you had been truthful in stating your case, the movement of your hand would have aided you," he said. Nevertheless skill was vital, and young calligraphers who were adept at the art could expect, at the very least, steady employment in government office or workshop. At best, they might receive honors and rewards beyond those of almost any other profession in the Muslim world.

This 10th-century marble tombstone from Iran or northern Mesopotamia is inscribed in six different varieties of script. Except for a name and a date, the texts are all carefully selected Koranic passages.

Calligraphic skill, in fact, could even add to the luster of a king's name. The exhibit includes a beautiful page of *nasta'liq* calligraphy written by Fath'Ali Shah Qajar, ruler of Iran from 1797 to 1834 – and written, what is more, as a demonstration of his skill. The four lines all repeat the same "quick brown fox" text ("My reed pen shames Birjis and Tir."), traditionally a test of skill and steadiness of hand, and between two of them is the proud statement, "Fath'Ali Shah Qajar drew this." Also in the exhibit are two majestic lines from a huge, nearly six-foot high Koran written about 1425 by Prince Baisungur, Tamerlane's grandson and, clearly, a very skilled calligrapher. He is known to have written the inscriptions for the mosque and *madrasa* of his mother, Gawhar Shad, in Mashhad, among other works. (See *Aramco World*, September-October 1977.)

Calligraphy, then, as a part of Muslim culture, and as the center of Muslim art, was a vital element in the Islamic world – and beyond. For, quite apart from its cultural connections, its value as pure design was appreciated in Europe too. There, Christian artisans used Arabic calligraphy in their work – often unknowingly – simply because it was beautiful, as the exhibit shows. There is, for example, a priest's chasuble embroidered with imitation *thuluth* lettering from 14th-century Italy, and, from Limoges, France, a 13th-century 10-inch gilt and blue-enamel copper plaque bearing the figure of Mary Magdalen. The plaque, once, was nailed or screwed onto the left end of a large altar cross, and all around its edge is an exotic, rhythmic pattern of "pseudo-Kufic" letters. They mean nothing, and they probably meant nothing to the medieval French artisan who used them – but they were clearly adapted, as Welch points out, "from decorative treatment of the single most important and repeated word in Muslim inscriptions – Allah."

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