IRAN, PAST AND PRESENT

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Introduction[1]

An ancient civilization

Iran, or Persia, is one of the most ancient civilizations that we know of. There is evidence that settled communities existed there as early as 7,000 BC. Later, during the Achaemenid period, 559 BC - 486 BC, the Persian Empire stretched from India in the east to Turkey and the shores of the Black Sea in the west, also including parts of Egypt and Libya in the south. In the Achaemenid period, the official religion of Iran was Zoroastrianism, one of the most ancient organized religions. Zoroastrian beliefs influenced many other religions, for example, the Jewish religion, Christianity, and Islam.

Poets of Iran

Iranians love poetry and often know many of the poems by their great poets like Ferdowsi or Hafiz by heart. Often at Iranian parties, someone will recite a verse of one of these poems. It is a challenge to the next person at the table. Can he or she recite the next verse? If so, the challenge passes to the next person at the table, and so on. A chapter in this book is devoted to Iranian poets.

Persian art and architecture

The tradition of Persian miniature painting is ancient, but it also continues today. Western artists such as Matisse have been influenced by the free use of space in Persian miniature painting. Persian architecture is also noteworthy and unique. A chapter in this book is devoted to these two aspects of Iranian culture.

Persian science

Throughout history, Persian scientists, such as al-Khwarizmi, Omar Khayyam and al-Razi, have made important contributions to mathematics, medicine, chemistry, astronomy and geography. Today Iran is a scientifically advanced

[1]This book makes use of book chapters that I have previously published, but most of the material is new

modern nation with a rapidly growing output of research papers, and a nuclear reactor program. The reactor has aroused fears the Iran will produce nuclear weapons, although the Iranian government has strenuously denied that it intends to do so,

Attacks on Iran

Modern Iran has never attached any of its neighbors, but has been attacked numerous times. These attacks include the British-supported revolution that overthrew the Qajar Dynasty and installed Reza Shah, the Allied invasion of Iran during World War II, the CIA and M5 overthrow Mosaddeh in 1951, and the attack on Iran by Saddam Hussein.

Current protests in Iran

A chapter is devoted to the brave protests which have erupted after the murder of Mahsa Amini by the "morality police" of the tyrannical clerical regime. Hundreds of protesters have been arrested and many thousands arrested, potentially facing the death penalty. The outside world extends its support and sympathy to the brave protesters and everyone hopes that the regime will in the end be overthrown. When religion and politics are mixed, the smell is really terrible!

Some persona memories of Iran.

I hope that readers will forgive me for concluding this book with some personal memories of Iran. In 1943, my father, who was then serving as Dean of Medicine at Boston University, was asked to go to Iran to become the Director General of Public Health for the allied occupation government of the country. After the end of World War II, he remained in Iran until 1950, as advisor to the Iranian Ministry of Health. Programs which my father started ultimately virtually eliminated malaria from country, saving an enormous number of lives.

In 1945, it became possible for my mother, myself and my elder brother Gordon to join my father in Tehran. We sailed on the Swedish hospital ship Gripsholm, crossed the desert, and joined my father. The final chapter of this book gives you some of my mother's memories of Iran as it was then, as well as some of my own memories.

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OK

Contents

Chapter 1

AN ANCIENT CIVILIZATION

1.1 The Medes unified Iran as a nation

Their language was not the same as Persian

The Medes were an ancient Iranian people who inhabited a region in northwestern Iran. They spoke a language different from Persian, but they are credited with unifying Iran as a nation. They also were able to build up a large empire, as is shown in the figure below.

The six tribes of the Medes

According to the ancient Greek historian Herodotus, **"Thus Deioces collected the Medes into a nation, and ruled over them alone. Now these are the tribes of which they consist: the Busae, the Paretaceni, the Struchates, the Arizanti, the Budii, and the Magi."**

The Magi are interesting because the English word magic is derived from their name. Also, according the the Book of Mathew in the New Testament, it was representatives of the Magi who came from the east to pay homage to Jesus.

1.2 The empire of the Medes

Figure 1.1: **The Medes at the time of their maximum expansion.**

Figure 1.2: **Iran, Gate of all nations.**

Figure 1.3: **Rhyton in the shape of a ram's head, gold - western Iran - Median, late 7th-early 6th century BC.**

Figure 1.4: **Protoma in the form of a bull's head, 8th century BC, gold and filigree, National Museum, Warsaw.**

Figure 1.5: **Depiction of united Medes and Persians at the Apadana, Persepolis.**

Suggestions for further reading

1. Boyce, Mary; Grenet, Frantz (1991), *Zoroastrianism under Macedonian and Roman rule*.
2. Bryce, Trevor (2009), *The Routledge Handbook of the Peoples and Places of Ancient Western Asia. From the Early Bronze Age to the Fall of the Persian Empire*, Taylor & Francis
3. Dandamaev, M. A.; Lukonin, V. G.; Kohl, P. L.; Dadson, D. J. (2004), *The Culture and Social Institutions of Ancient Iran*, Cambridge, UK: Cambridge University Press.
4. Diakonoff, I. M. (1985), *Media*, in Ilya Gershevitch (ed.), The Cambridge History of Iran, vol. 2, Cambridge, UK: Cambridge University Press, pp. 36-148.
5. Henrickson, R. C. (1988), *Baba Jan Teppe*, Encyclopaedia Iranica, vol. 2, Routledge & Kegan Paul.
6. Levine, Louis D. (1 January 1973), *Geographical Studies in the Neo-Assyrian Zagros: I2*, Iran, 11: 1-27.
7. Rollinger, Robert (2021). *The Median Dilemma*. In Jacobs, Bruno; Rollinger, Robert (eds.). A Companion to the Achaemenid Persian Empire. John Wiley & Sons. pp. 457-473.
8. Schmitt, RÃ$\frac{1}{4}$diger (2008), *Old Persian*, in Woodard, Roger D. (ed.), The Ancient Languages of Asia and the Americas, Cambridge University Press, pp. 76-100.
9. Soudavar, Abolala (2003), *The aura of kings: legitimacy and divine sanction in Iranian kingship*, Mazda Publishers.
10. Stronach, David (1968), *Tepe Nush-i Jan: A Mound in Media*, The Metropolitan Museum of Art Bulletin, New Series, 27 (3): 177-186.
11. Stronach, David (1982), *Archeology ii. Median and Achaemenid*, in Yarshater, E. (ed.), Encyclopedia Iranica, vol. 2, Routledge & Kegan Paul, pp. 288-296.
12. Tavernier, Jan (2007), *Iranica in the Achaemenid Period (ca. 550-330 B.C.): Linguistic Study of Old Iranian Proper Names and Loanwords, Attested in Non-Iranian Texts*, Peeters Publishers.
13. Van De Mieroop, Marc (2015), *A History of the Ancient Near East, ca. 3000-323 BC*, Wiley Blackwell Windfuhr, Gernot L. (1991), "Central dialects", in Yarshater, E. (ed.), Encyclopedia Iranica, pp. 242-251.
14. Young, T. Cuyler Jr. (1988),*The early history of the Medes and the Persians and the Achaemenid empire to the death of Cambyses*, in Boardman, John; Hammond, N. G. L.; Lewis, D. M.; Ostwald, M. (eds.), The Cambridge Ancient History, vol. 4, Cambridge University Press, pp. 1-52.
15. Young, T. Cuyler (1997), *Medes*, in Meyers, Eric M. (ed.), The Oxford encyclopedia of archaeology in the Near East, vol. 3, Oxford University Press, pp. 448-450,
16. Zadok, Ran (2002), *The Ethno-Linguistic Character of Northwestern Iran and Kurdistan in the Neo-Assyrian Period*, Iran, 40: 89-151.

Chapter 2

THE ACHAEMENID EMPIRE

2.1 Cyrus the Great and other rulers of the Achaemenid Empire

Here is a list of rulers of the Achaemenid Empire:

- 559-530 BC, Cyrus the Great
- 530-522 BC, Cambyses II
- 522-486 BC, Darius I
- 486-465 BC Xerxes I
- 465-424 BC Artaxerxes I
- 424-424 BC Xerxes II
- 424-423 BC Sogdianus
- 423-405 BC Darius II
- 405-358 BC Artaxerxes II
- 358-338 BC Artaxerxes III
- 338-336 BC Arses
- 336-330 BC Darius III

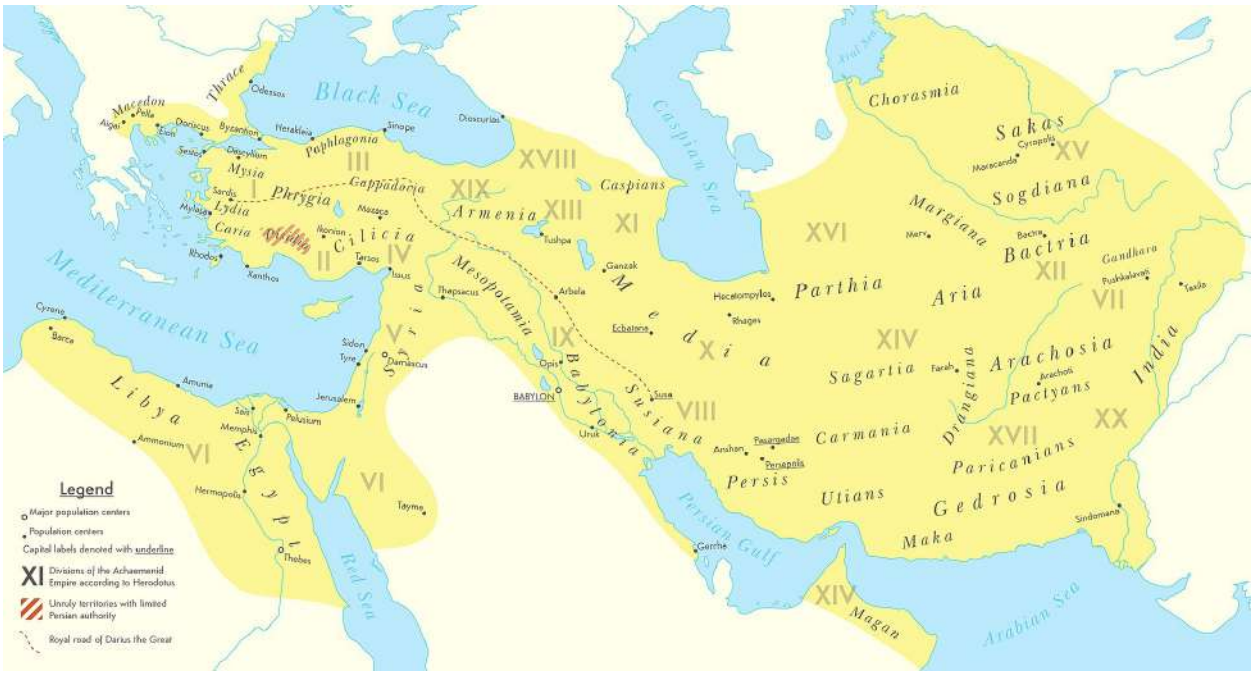

Figure 2.1: **The Achaemenid Empire at its greatest territorial extent under the rule of Darius I (522 BC-486 BC).**

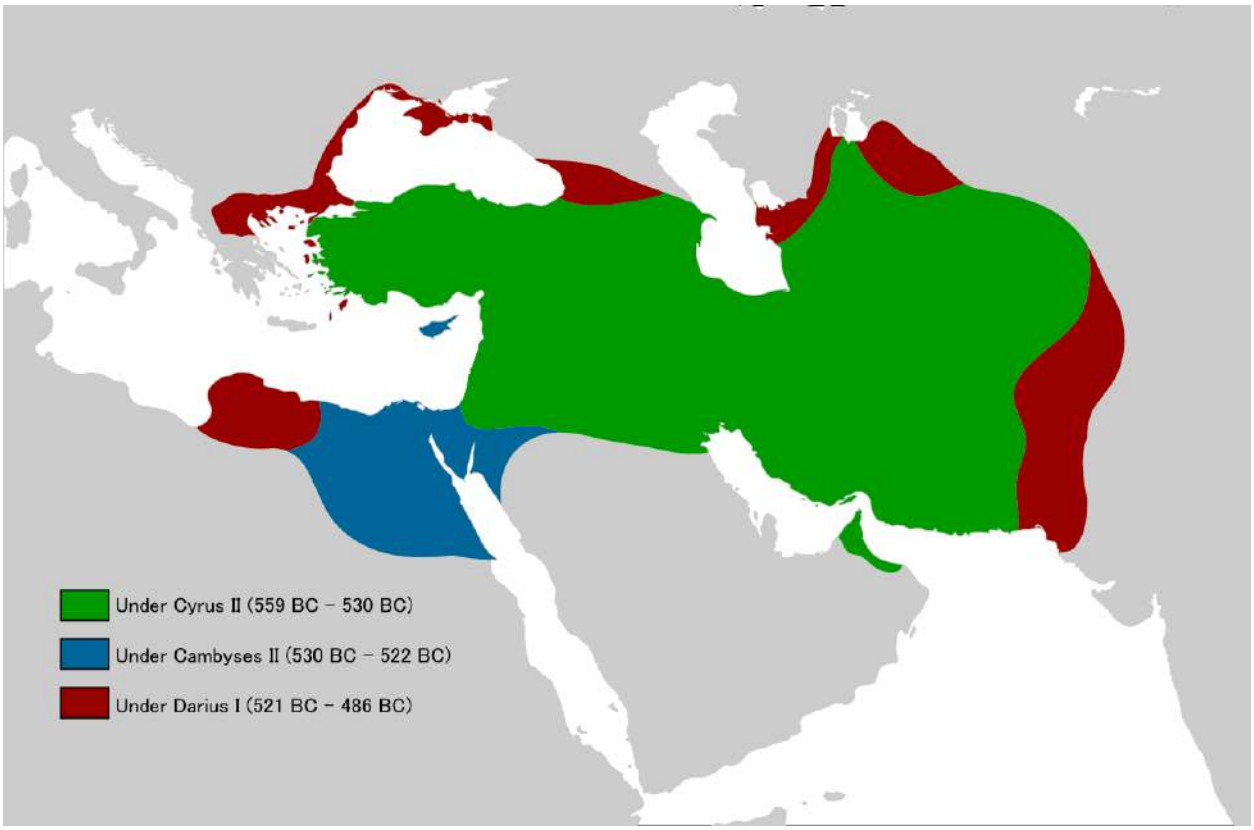

Figure 2.2: **Map of the expansion process of Achaemenid territories.**

Figure 2.3: **A section of the Old Persian part of the trilingual Behistun inscription. Other versions are in Babylonian and Elamite.**

Figure 2.4: **An Achaemenid rhyton, or drinking vessel.**

2.2 Zoroastrianism

The official religion of the Achaemenid Empire was Zoroastrianism, the religion initiated by Zoroaster or Zarothustra. It is unknown when he lived. It may have been as early as the second millennium BC. In any case, Zoroastrianism is among the earliest organized religions, and it had a strong influence on other religions, for example Judaism, Christianity and Islam.

Zoroastrianism is a monotheistic religion. The deity, called Auhura Mazda, is the god of wisdom, and creator of the world. There is a conflict between good and evil, with the good destined to be victorious in the end. Individual humans are believed to have free will. They will be judged after death for their deeds during life and will be rewarded by heaven or punished by hell. Zoroastrians believed in angels, and also in demons. Many of these beliefs have been adopted by later religions.

Zoroastrians believe the before being born, a child's soul is united with its *fravashi* or higher spirit, which has always existed.

Zoroastrians believe in reverence for nature, and thus Zoroastrianism can claim to be an ecological religion.

Figure 2.5: **Faravahar (or Ferohar), one of the primary symbols of Zoroastrianism, believed to be the depiction of a Fravashi or the Khvarenah.**

Figure 2.6: **The fire temple of Baku.**

Figure 2.7: **Fire Temple of Yazd.**

Figure 2.8: **Zoroastrian Eternal Flame at the Fire Temple in Yazd, Central Iran. Fire is sacred for Zoroastrians.**

Suggestions for further reading

1. Briant, Pierre (2002). *From Cyrus to Alexander: A History of the Persian Empire*. Pennsylvania State University Press.
2. Brosius, Maria (2006). *The Persians*. Routledge.
3. Brosius, Maria (2021). *A History of Ancient Persia: The Achaemenid Empire*. Wiley-Blackwell.
4. Cook, John Manuel (2006). *The Persian Empire*. Barnes & Noble.
5. Dandamaev, M. A. (1989). *A Political History of the Achaemenid Empire*. Brill.
6. Heidorn, Lisa Ann (1992). *The Fortress of Dorginarti and Lower Nubia during the Seventh to Fifth Centuries B.C. (PhD)*. University of Chicago.
7. Howe, Timothy; Reames, Jeanne (2008). *Macedonian Legacies: Studies in Ancient Macedonian History and Culture in Honor of Eugene N. Borza*. Regina Books.
8. Kosmin, Paul J. (2014). *The Land of the Elephant Kings: Space, Territory, and Ideology in Seleucid Empire*. Harvard University Press.
9. Kuhrt, Amélie (1983). *The Cyrus Cylinder and Achaemenid Imperial Policy*. Journal for the Study of the Old Testament. 8 (25): 83-97.
10. Kuhrt, Amélie (2013). *The Persian Empire: A Corpus of Sources from the Achaemenid Period*. Routledge.
11. Lavan, Myles; Payne, Richard E.; Weisweiler, John, eds. (2016). *Cosmopolitan Politics: The Assimilation and Subordination of Elite Cultures. Cosmopolitanism and Empire: Universal Rulers, Local Elites, and Cultural Integration in the Ancient Near East and Mediterranean*. Oxford University Press.
12. Olmstead, Albert T. (1948). *History of the Persian Empire*. University of Chicago Press.
13. Tavernier, Jan (2007). *Iranica in the Achaeamenid Period (ca. 550-330 B.C.): Lexicon of Old Iranian Proper Names and Loanwords, Attested in Non-Iranian Texts*. Peeters Publishers.
14. Wallinga, Herman (1984). *The Ionian Revolt*. Mnemosyne. 37 (3/4): 401-437.
15. Wiesehöfer, Josef (2001). *Ancient Persia*. Translated by Azodi, Azizeh. I.B. Tauris.
16. Black, Matthew; Rowley, H. H., eds. (1982), *Peake's Commentary on the Bible* , New York: Nelson,
17. Boyce, Mary (1984), *Textual sources for the study of Zoroastrianism*, Manchester: Manchester UP,
18. Boyce, Mary (1987), *Zoroastrianism: A Shadowy but Powerful Presence in the Judaeo-Christian World*, London: William's Trust
19. Boyce, Mary (1979), *Zoroastrians: Their Religious Beliefs and Practices*, London: Routledge
20. Boyce, Mary (2001). *Zoroastrians : their religious beliefs and practices*. London: Routledge.
21. Boyce, Mary (1975), *The History of Zoroastrianism, vol. 1*, Leiden: Brill.

22. Boyce, Mary (1982), *The History of Zoroastrianism, vol. 2* , Leiden: Brill.
23. Boyce, Mary (1991), *The History of Zoroastrianism, vol. 3*, Leiden: Brill.
24. Boyce, Mary (1983), *Ahura Mazda*, Encyclopaedia Iranica, vol. 1, New York: Routledge & Kegan Paul pp. 684-687
25. Bulliet, Richard W. (1979), *Conversion to Islam in the Medieval Period: An Essay in Quantitative History*, Cambridge: Harvard UP.
26. Carroll, Warren H. (1985), *Founding Of Christendom: History Of Christendom, vol. 1*, Urbana: Illinois UP.
27. Clark, Peter (1998), *Zoroastrianism: An Introduction to an Ancient Faith*, Brighton: Sussex Academic Press.
28. Dhalla, Maneckji Nusservanji (1938), *History of Zoroastrianism*, New York: OUP
29. Duchesne-Guillemin, Jacques (1988), *Zoroastrianism*, Encyclopedia Americana, vol. 29, Danbury: Grolier pp. 813-815
30. Duchesne-Guillemin, Jacques (2006), *Zoroastrianism: Relation to other religions*, Encyclopedia Britannica (Online ed.), archived from the original on 14 December 2007, retrieved 31 May 2006
31. Eliade, Mircea; Couliano, Ioan P. (1991), *The Eliade Guide to World Religions*, New York: Harper Collins
32. Foltz, Richard (2013), *Religions of Iran: From Prehistory to the Present*, London: Oneworld publications.
33. Hourani, Albert (1947), *Minorities in the Arab World*, New York: AMS Press
34. Kellens, Jean, *Avesta*, Encyclopaedia Iranica, vol. 3, New York: Routledge and Kegan Paul pp. 35-44.
35. Khan, Roni K (1996), *The Tenets of Zoroastrianism*
36. King, Charles William (1998) [1887], *Gnostics and their Remains Ancient and Mediaeval*, London: Bell & Daldy.
37. Melton, J. Gordon (1996), *Encyclopedia of American Religions*, Detroit: Gale Research
38. Malandra, William W. (1983), *An Introduction to Ancient Iranian Religion.* Readings from the Avesta and Achaemenid Inscriptions, Minneapolis: U. Minnesota Press.
39. Malandra, William W. (2005), *Zoroastrianism: Historical Review*, Encyclopaedia Iranica, New York: iranicaonline.org
40. Moulton, James Hope (1917), *The Treasure of the Magi: A Study of Modern Zoroastrianism*, London.
41. Robinson, B.A. (2008), *Zoroastrianism: Holy text, beliefs and practices* , retrieved 1 March 2010
42. Russell, James R. (1987), *Zoroastrianism in Armenia (Harvard Iranian Series)*, Oxford: Harvard University Press.
43. Simpson, John A.; Weiner, Edmund S., eds. (1989), *Zoroastrianism*, Oxford English Dictionary (2nd ed.), London: Oxford UP.
44. Verlag, Chronik (2008), *The Chronicle of World History*, United States: Konecky and Konecky
45. Zaehner, Robert Charles (1961), *The Dawn and Twilight of Zoroastrianism*, London: Phoenix Press.

Chapter 3

AVICENNA

3.1 The Persian Leonardo

The greatest physician of the middle ages, Avicenna, (Abu-Ali al Hussain Ibn Abdullah Ibn Sina, 980-1037), was a Persian. More than a hundred books are attributed to him. They were translated into Latin in the 12th century, and they were among the most important medical books used in Europe until the time of Harvey. Avicenna also wrote on alchemy, and he is important for having denied the possibility of transmutation of elements.

Avicenna was born in present-day Uzbekistan, which was then a part of the Samanian Empire, a Persian empire that ruled the region between 819 and 999 AD. His father was a respected scholar from Afghanistan. By the age of 10, Avicenna had memorized the entire Koran. With the help of a merchant from India, he taught himself the Indian form of mathematics. At the age of 16, he turned his attention to medicine and not only learned medical theory, but also attended the sick without payment and discovered many new methods and treatments. Avicenna's later writings included an incredible range of topics - philosophy, medicine, astronomy, alchemy, geography. geology, psychology, Islamic theology, logic, mathematics, physics and works of poetry.

3.2 The Canon of Medicine

In 1025, Avicenna completed his masterpiece, *The Cannon of Medicine*, a five-volume encyclopedia of all the medical knowledge that the world possessed at that time. It included many of his own contributions. Translations reached the west, and it became the standard medical text both in Europe and in the Islamic world during the Middle Ages. Both *The Canon of Medicine* and Avicenna's other medical work, *The Art of Healing*, continued to be used as late as the 17th century. Because of his enormous influence, Avicenna has been called "the father of modern medicine".

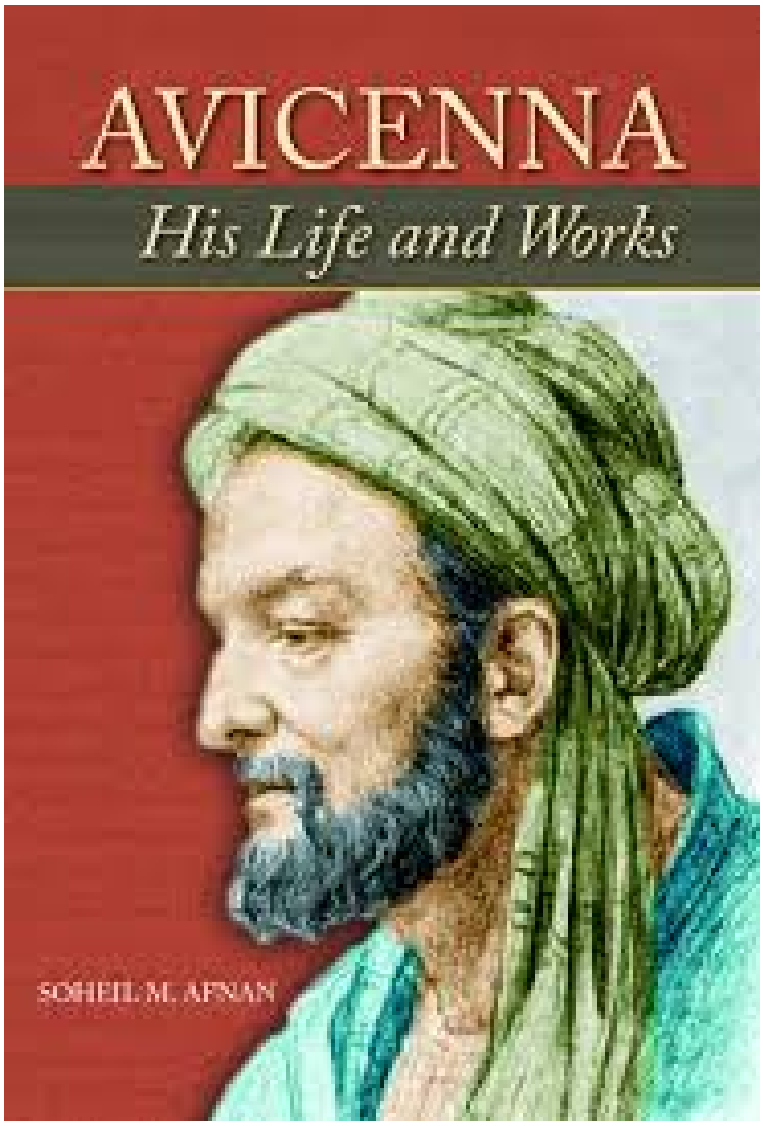

Figure 3.1: **Abu-Ali al Hussain Ibn Abdullah Ibn Sina, (980-1037), known in the west as Avicenna, was a universal genius. He is believed to have written 450 works, on philosophy, medicine, astronomy, alchemy, geography. geology, psychology, Islamic theology, logic, mathematics, physics and works of poetry. Of these, 150 have survived, including his books *The Book of Healing* and *The Cannon of Medicine*. These medical books were standard texts in Europe during the Middle Ages, and were even in use as late as the 17th century. Avicenna has been called "The father of modern medicine".**

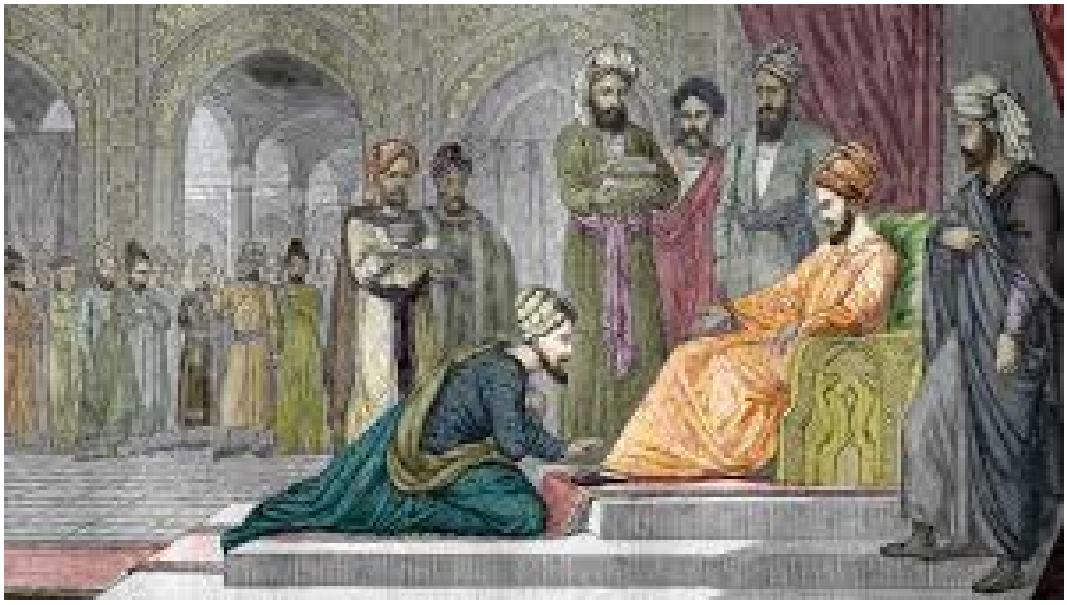

Figure 3.2: **Avicenna sought the patronage of rulers.**

Figure 3.3: **Avicenna writing one of his many books.**

Figure 3.4: **A monument to Avicenna in Qakh city, Azerbaijan.**

Figure 3.5: **Image of Avicenna on the Tajikistani somoni.**

Figure 3.6: **Avicenna statue in Milad Tower, Tehran, Iran.**

Figure 3.7: **The statue of Avicenna in United Nations Office in Vienna.**

Suggestions for further reading

1. Browne, Edward G.. *Islamic Medicine*. Fitzpatrick Lectures Delivered at the Royal College of Physicians in 1919-1920, reprint: New Delhi: Goodword Books, 2001.
2. Pormann, Peter & Savage-Smith, Emilie. *Medieval Islamic Medicine*, Washington: Georgetown University Press, 2007.
3. Prioreschi, Plinio. *Byzantine and Islamic Medicine, A History of Medicine, Vol. 4*, Omaha: Horatius Press, 2001
4. Avicenna (2005). *The Metaphysics of The Healing*. A parallel English-Arabic text translation. Michael E. Marmura (trans.) (1 ed.). Brigham Young University.
5. Avicenna (1999). *The Canon of Medicine, vol. 1*. Laleh Bakhtiar (ed.), Oskar Cameron Gruner (trans.), Mazhar H. Shah (trans.). Great Books of the Islamic World.
6. Avicenne: *Réfutation de l'astrologie*. Edition et traduction du texte arabe, introduction, notes et lexique par Yahya Michot. PrÃ©face d'Elizabeth Teissier (Beirut-Paris: Albouraq, 2006)
7. William E. Gohlam (ed.), *The Life of Ibn Sina. A Critical Edition and Annotated Translation*, Albany, State of New York University Press, 1974.
8. For Ibn Sina's life, see Ibn Khallikan's Biographical Dictionary, translated by de Slane (1842); F. Wüstenfeld's Geschichte der arabischen Aerzte und Naturforscher (Göttingen, 1840).

Chapter 4

POETS OF IRAN

4.1 Ferdowsi, c.940-1020

Alas for Youth
translated by R.A, Nicholson

Much have I labored, much read o'er
Of Arabic and Persian Lore
Collecting tales unknown and known;
Now two and sixty years have flown.
Regret and deeper woe of sin.
'Tis all that youth have ended in,
And I with mournful thoughts rehearse
Bu Táhir Khusrawáni's verse:
"I mind me of my youth and sigh,
Alas for youth, for youth gone by!"

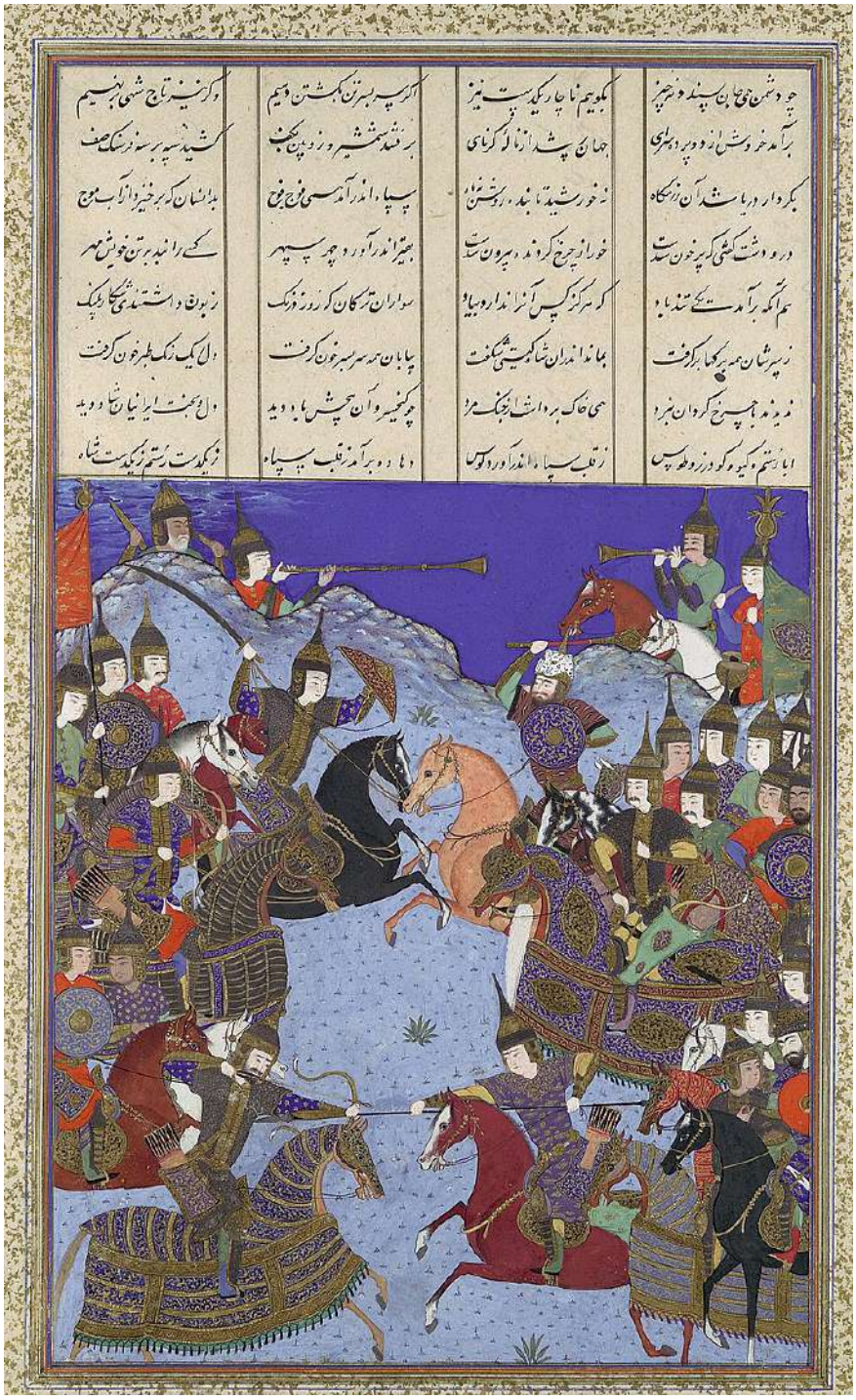

Figure 4.1: **An illustration to the long poem *Shahnemah* ("The Book of Kings") by Ferdowsi. It is one of the longest poem ever created by a single author, and is regarded as the national epic of greater Persia. Through his authorship of this epic, Ferdowsi became one of the most influential poets in history.**

4.2 Omar Khayyam, 1048-1131

The Rubáiyát
translated by Edward Fitzgerald. Only the first few verses are shown here

Awake! for Morning in the Bowl of Night
Has flung the Stone that puts the Stars to Flight:
And Lo! the Hunter of the East has caught
The Sultan's Turret in a Noose of Light.

Dreaming when Dawn's Left Hand was in the Sky
I heard a voice within the Tavern cry,
"Awake, my Little ones, and fill the Cup
Before Life's Liquor in its Cup be dry."

And, as the Cock crew, those who stood before
The Tavern shouted – "Open then the Door!
You know how little while we have to stay,
And, once departed, may return no more."

Now the New Year reviving old Desires,
The thoughtful Soul to Solitude retires,
Where the White Hand of Moses on the Bough
Puts out, and Jesus from the Ground suspires.

Iram indeed is gone with all its Rose,
And Jamshyd's Sev'n-ring'd Cup where no one Knows;
But still the Vine her ancient ruby yields,
And still a Garden by the Water blows.

And David's Lips are lock't; but in divine
High piping Pehlevi, with "Wine! Wine! Wine!
Red Wine!" – the Nightingale cries to the Rose
That yellow Cheek of hers to incarnadine.

Come, fill the Cup, and in the Fire of Spring
The Winter Garment of Repentance fling:
The Bird of Time has but a little way
To fly – and Lo! the Bird is on the Wing.

Whether at Naishapur or Babylon,
Whether the Cup with sweet or bitter run,
The Wine of Life keeps oozing drop by drop,

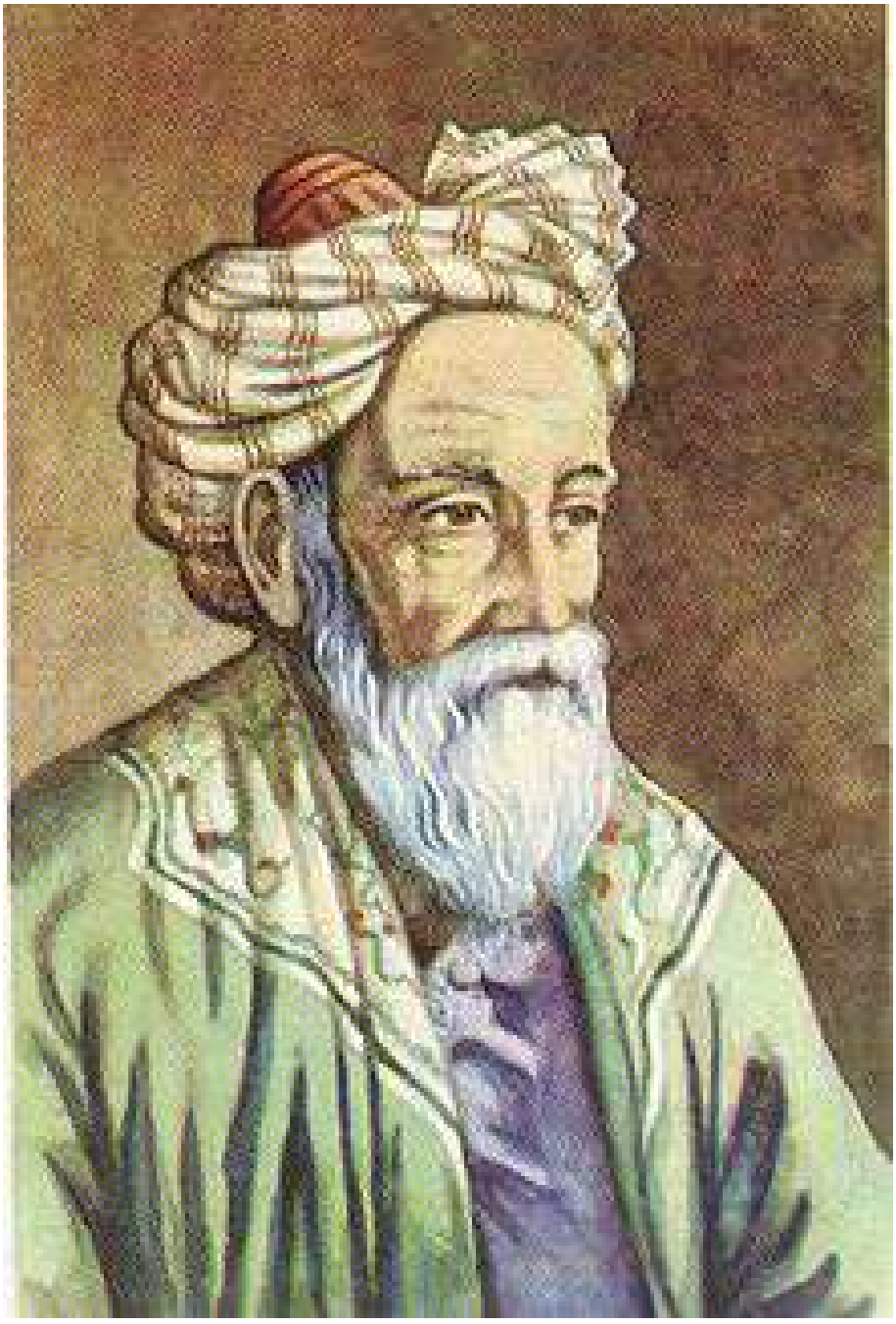

Figure 4.2: **Omar Khayyam was a Persian mathematician, astronomer and poet. His work in mathematics was notable for his solutions to cubic equations, his understanding of the binomial theorem, and his discussions of the axioms of Euclid. As an astronomer, he directed the building of an observatory to reform the Persian calendar. Omar Khayyam's long poem, *Rubaiyat*, is known to western readers through Edward Fitzgerald's brilliant translation.**

The Leaves of Life kep falling one by one.

Morning a thousand Roses brings, you say;
Yes, but where leaves the Rose of Yesterday?
And this first Summer month that brings the Rose
Shall take Jamshyd and Kaikobad away.

But come with old Khayyam, and leave the Lot
Of Kaikobad and Kaikhosru forgot:
Let Rustum lay about him as he will,
Or Hatim Tai cry Supper – heed them not.

With me along the strip of Herbage strown
That just divides the desert from the sown,
Where name of Slave and Sultan is forgot –
And Peace is Mahmud on his Golden Throne!

A Book of Verses underneath the Bough,
A Jug of Wine, a Loaf of Bread, – and Thou
Beside me singing in the Wilderness –
Oh, Wilderness were Paradise enow!

Some for the Glories of This World; and some
Sigh for the Prophet's Paradise to come;
Ah, take the Cash, and let the Promise go,
Nor heed the rumble of a distant Drum!

Were it not Folly, Spider-like to spin
The Thread of present Life away to win –
What? for ourselves, who know not if we shall
Breathe out the very Breath we now breathe in!

Look to the Rose that blows about us – "Lo,
Laughing," she says, "into the World I blow:
At once the silken Tassel of my Purse
Tear, and its Treasure on the Garden throw."

The Worldly Hope men set their Hearts upon
Turns Ashes – or it prospers; and anon,
Like Snow upon the Desert's dusty Face
Lighting a little Hour or two – is gone.

And those who husbanded the Golden Grain,

And those who flung it to the Winds like Rain,
Alike to no such aureate Earth are turn'd
As, buried once, Men want dug up again.

Think, in this batter'd Caravanserai
Whose Doorways are alternate Night and Day,
How Sultan after Sultan with his Pomp
Abode his Hour or two and went his way.

They say the Lion and the Lizard keep
The Courts where Jamshyd gloried and drank deep:
And Bahram, that great Hunter – the Wild Ass
Stamps o'er his Head, but cannot break his Sleep.

I sometimes think that never blows so red
The Rose as where some buried Caesar bled;
That every Hyacinth the Garden wears
Dropt in its Lap from some once lovely Head.

And this delightful Herb whose tender Green
Fledges the River's Lip on which we lean –
Ah, lean upon it lightly! for who knows
From what once lovely Lip it springs unseen!

Ah, my Beloved, fill the Cup that clears
To-day of past Regrets and future Fears –
To-morrow? – Why, To-morrow I may be
Myself with Yesterday's Sev'n Thousand Years.

Lo! some we loved, the loveliest and best
That Time and Fate of all their Vintage prest,
Have drunk their Cup a Round or two before,
And one by one crept silently to Rest.

And we, that now make merry in the Room
They left, and Summer dresses in new Bloom,
Ourselves must we beneath the Couch of Earth
Descend, ourselves to make a Couch – for whom?

Ah, make the most of what we may yet spend,
Before we too into the Dust descend;
Dust into Dust, and under Dust, to lie;
Sans Wine, sans Song, sans Singer, and – sans End!

Alike for those who for To-day prepare,
And those that after some To-morrow stare,
A Muezzin from the Tower of Darkness cries
"Fools! Your Reward is neither Here nor There!"

Why, all the Saints and Sages who discuss'd
Of the Two Worlds so learnedly, are thrust
Like foolish Prophets forth; their Works to Scorn
Are scatter'd, and their Mouths are stopt with Dust.

Oh, come with old Khayyam, and leave the Wise
To talk; one thing is certain, that Life flies;
One thing is certain, and the Rest is Lies;
The Flower that once has blown forever dies.

Myself when young did eagerly frequent
Doctor and Saint, and heard great Argument
About it and about; but evermore
Came out by the same Door as in I went.

With them the Seed of Wisdom did I sow,
And with my own hand labour'd it to grow:
And this was all the Harvest that I reap'd –
"I came like Water and like Wind I go."

Into this Universe, and Why not knowing,
Nor Whence, like Water willy-nilly flowing:
And out of it, as Wind along the Waste,
I know not Whither, willy-nilly blowing.

Up from Earth's Centre through the Seventh Gate
I rose, and on the Throne of Saturn sate,
And many Knots unravel'd by the Road;
But not the Master-Knot of Human Fate.

There was the Door to which I found no Key:
There was the Veil through which I could not see:
Some little talk awhile of Me and Thee
There was – and then no more of Thee and Me.

4.3 Rumi, 1207-1273

Longing is the core of mystery.
Longing itself brings the cure.
The only rule is, Suffer the pain.
Your desire must be disciplined,
and what you want to happen
in time, sacrificed
Rumi - The Essential Rumi - Coleman Barks

The Morning Wind Spreads
The morning wind spreads its fresh smell.
We must get up and take that in,
that wind that lets us live.
Breathe before it's gone
Rumi - 'The Essential Rumi' - Coleman Barks

Only Breath

Not Christian or Jew or Muslim, not Hindu
Buddhist, Sufi, or Zen. Not any religion
or cultural system. I am not from the East
or the West, not out of the ocean or up
from the ground, not natural or ethereal, not
composed of elements at all. I do not exist,
am not an entity in this world or in the next,
did not descend from Adam and Eve or any
origin story. My place is placeless, a trace
of the traceless. Neither body or soul.
I belong to the beloved, have seen the two
worlds as one and that one call to and know,
first, last, outer, inner, only that
breath breathing human being.

Enough words?

But that shadow has been serving you!
What hurts you, blesses you.
Darkness is your candle.
Your boundaries are your quest.
You must have shadow and light source both.
Listen, and lay your head under the tree of awe.

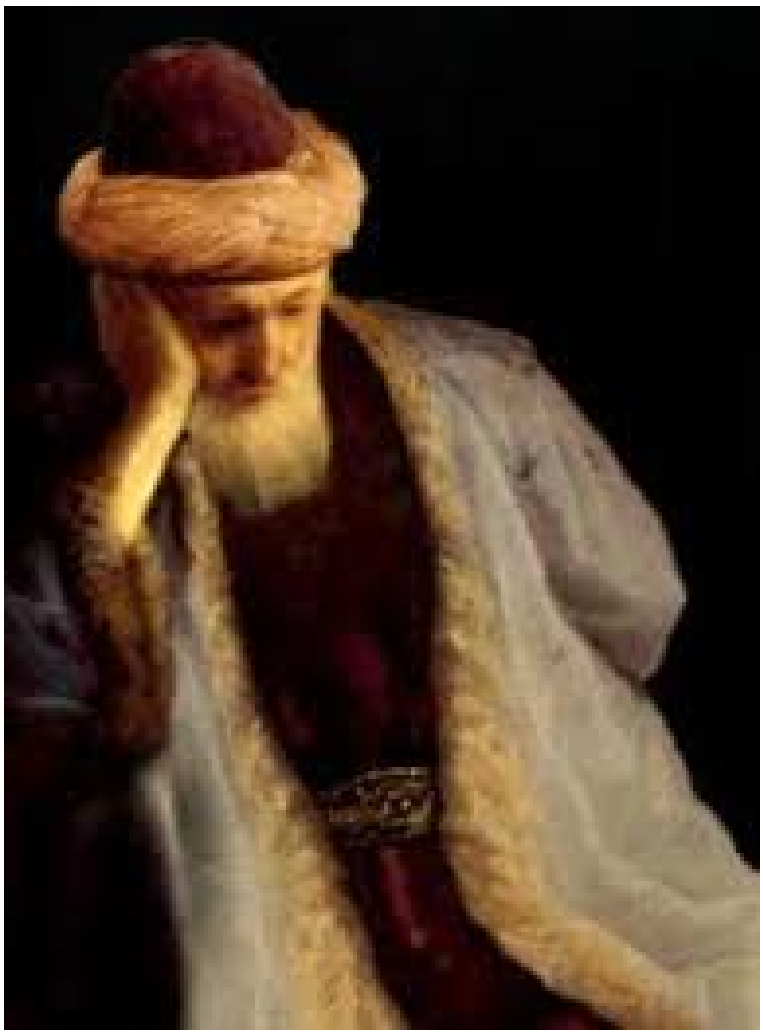

Figure 4.3: **Jalaluddin Rumi, saint and mystic, inspiration for the Mevlevi Order of the whirling dervishes, is highly revered for his great poem *Mathnawi* which is a grand tribute to the depth of spiritual life. Rumi's poems have been translated many languages and he is read by Iranians, Tajiks, Turks, Greeks, Pashtuns, other Central Asian Muslims, and the Muslims of the Indian subcontinent. He is also a popular and widely-read poet in the United States. His name, "Rumi", means "Roman", and it refers to the fact that he was born in Anatolia, a region that was once part of the eastern Roman Empire.**

Two kinds of intelligence

There are two kinds of intelligence: one acquired,
As a child in school memorizes facts and concepts
With such intelligence you rise in the world.
There is another kind of tablet, one
Already completed and preserved inside you.
This other intelligence does not turn yellow or stagnate.
It's fluid, and it doesn't move from outside to inside
Through the conduits of plumbing-learning.
This second knowing is a fountainhead
From within you, moving out.

4.4 Saadi Shirazi, 1210-1292

How could I ever thank my Friend?
No thanks could ever begin to be worthy.
Every hair of my body is a gift from Him;
How could I thank Him for each hair?
Praise that lavish Lord forever
Who from nothing conjures all living beings!
Who could ever describe His goodness?
His infinite glory lays all praise waste.
Look, He has graced you a robe of splendor
From childhood's first cries to old age!
He made you pure in His own image; stay pure.
It is horrible to die blackened by sin.
Never let dust settle on your mirror's shining;
Let it once grow dull and it will never polish.
When you work in the world to earn your living
Do not, for one moment, rely on your own strength.
Self-worshiper, don't you understand anything yet?
It is God alone that gives your arms their power.
If, by your striving, you achieve something good,
Don't claim the credit all for yourself;
It is fate that decides who wins and who loses
And all success streams only from the grace of God.
In this world you never stand by your own strength;

Figure 4.4: **Saadi in a rose garden, from a Mughal manuscript of his work. Saadi of Shiraz (1215-1292) was a great poet of Persia, author of the *Gulistan* ("Rose-Garden") and the *Bostan* ("Orchard"). He also wrote many odes and lyrics. His pen name was simply Sadi. Saadi is famous for the depths of his social and moral thoughts.**

It is the Invisible that sustains you every moment

4.5 Hafiz, 1315-1390

The Green Sea of Heaven
translated by Elizabeth T. Gray Jr

I speak frankly and that makes me happy:
I am the slave of love, I am free of both worlds.

I am a bird from heaven's garden. How do I describe that separation,
my fall into this snare of accidents?
I was an angel and highest paradise was my place.
Adam brought me to this monastery in the city of ruin.

The hours' caress, the pool and shade trees of paradise
were forgotten in the breeze from your alleyway.

There is nothing on the tablet of my heart but my love's tall alif.
What can I do? My master taught me no other letter.

No astrologer knew the constellations of my fate.
O lord, when I was born of mother earth which stars were rising?

Ever since I became a slave at the door of love's tavern
sorrows come to me each moment with congratulations.

The pupil of my eye drains the blood from my heart.
I deserve it. Why did I give my heart to the darling of others?

Wipe the tears from Hafiz's face with soft curls
or else this endless torrent will uproot me.

Figure 4.5: **Entrance to the tomb of Hafiz. Hafiz of Shiraz was the greatest lyric poet of Persia. He took the poetic form of the *ghazal* to unparalleled heights of subtlety and beauty. People in the Persian-speaking world often learn his poems by heart, and use them as proverbs.**

4.6 Jami, 1414-1492

Whether your destiny is glory or disgrace,
Purify yourself of hatred and love of self.
Polish your mirror; and that sublime Beauty
From the regions of mystery
Will flame out in your heart
As it did for the saints and prophets.
Then, with your heart on fire with that Splendor,
The secret of the Beloved will no longer be hidden.
Jami, translation by Andrew Harvey and Eryk Hanut - 'Perfume of the Desert'

Who is man?
The reflection of the Eternal Light.
What is the world?
A wave on the Everlasting Sea.
How could the reflection be cut off from the Light?
How could the wave be separate from the Sea?
Know that this reflection and this wave are that very Light and Sea.

Figure 4.6: **Jami (Nur al-Din 'Abd al-Rahman ibn Ahmad al-Jami) is commonly called the last great classical poet of Persia. Saint and mystic, he composed numerous lyrics and idylls, as well as many works in prose. His *Salaman and Absal* is an allegory of profane and sacred love. Some of his other works include *Haft Awrang*, *Tuhfat al-Ahrar* and *Fatihat al-Shabab*. Jami was a prolific Sufi scholar, theologian and writer.**

Figure 4.7: **Youth seeking his father's advice about love, an illustration for one of Jami's poems.**

Suggestions for further reading

1. Dabashi, Hamid (2012). *The World of Persian Literary Humanism*. Harvard University Press.
2. DahlÃ©n, Ashk (2016), *Literary Interest in Zoroastrianism in Tenth-Century Iran: The Case of Daqiqi's Account of Goshtasp and Zarathustra in the Shahnameh*, in Williams, Alan; Stewart, Sarah (eds.), The Zoroastrian Flame: Exploring Religion, History and Tradition, I.B. Tauris.
3. Ferdowski, Abolqasem (2006). Shahnameh: The Persian Book of Kings. Translated by Davis, Dick. Penguin.
4. Kia, Mehrdad (2016). *The Persian Empire: A Historical Encyclopedia [2 volumes]: A Historical Encyclopedia*. ABC-CLIO.
5. Huart, Cl. & Mass'é, H. (1971). *Firdawsi*. In Lewis, B.; Ménage, V. L.; Pellat, Ch. & Schacht, J. (eds.).
6. Khaleghi-Motlagh, Djalal (1999). *Ferdowsi, Abu'l-Qasem i. Life*. In Yarshater, Ehsan (ed.). Encyclopedia Iranica, Volume IX/5: Fauna III-Festivals VIII. London and New York: Routledge & Kegan Paul.
7. Rosenberg, Donna (1997). *Folklore, Myths, and Legends: A World Perspective*. McGraw Hill Professional.
8. Ghani, Cyrus (2000). *Iran and the Rise of Reza Shah: From Qajar Collapse to Pahlavi Power*. Bloomsbury Academic.

Chapter 5

PERSIAN ART AND ARCHITECTURE

5.1 Persian miniatures

Parallels with European manuscript illumination

Persian miniature painting is in many ways similar to the tradition of illuminating manuscripts which flourished in Europe during the Middle Ages. Although, strictly speaking, Islam forbids the depiction of the human form, the Persian miniatures circumvented this prohibition since they were intended for private owners, rather than for public exhibition.

Chinese influences

During the period 1190-1220 AD, the Khwarezmid Empire of Persia was very much larger than present-day Iran, and it extended far into eastern Asia. However, in 1221 a short-lived peace treaty broke down, and the Mongols under Genghis Khan invaded an conquered the Khwarezmid Empire. Through this invasion, Chinese traditions of art came to influence Persian painting.

Matisse inspired by Persian miniatures

Henri Matisse visited an exhibition of Persian miniatures in Munich in 1910, and he found them very inspiring. He later wrote: "The Persian miniatures showed me the possibility of my sensations. That art had devices to suggest a greater space, a really plastic space. It helped me to get away from intimate painting."

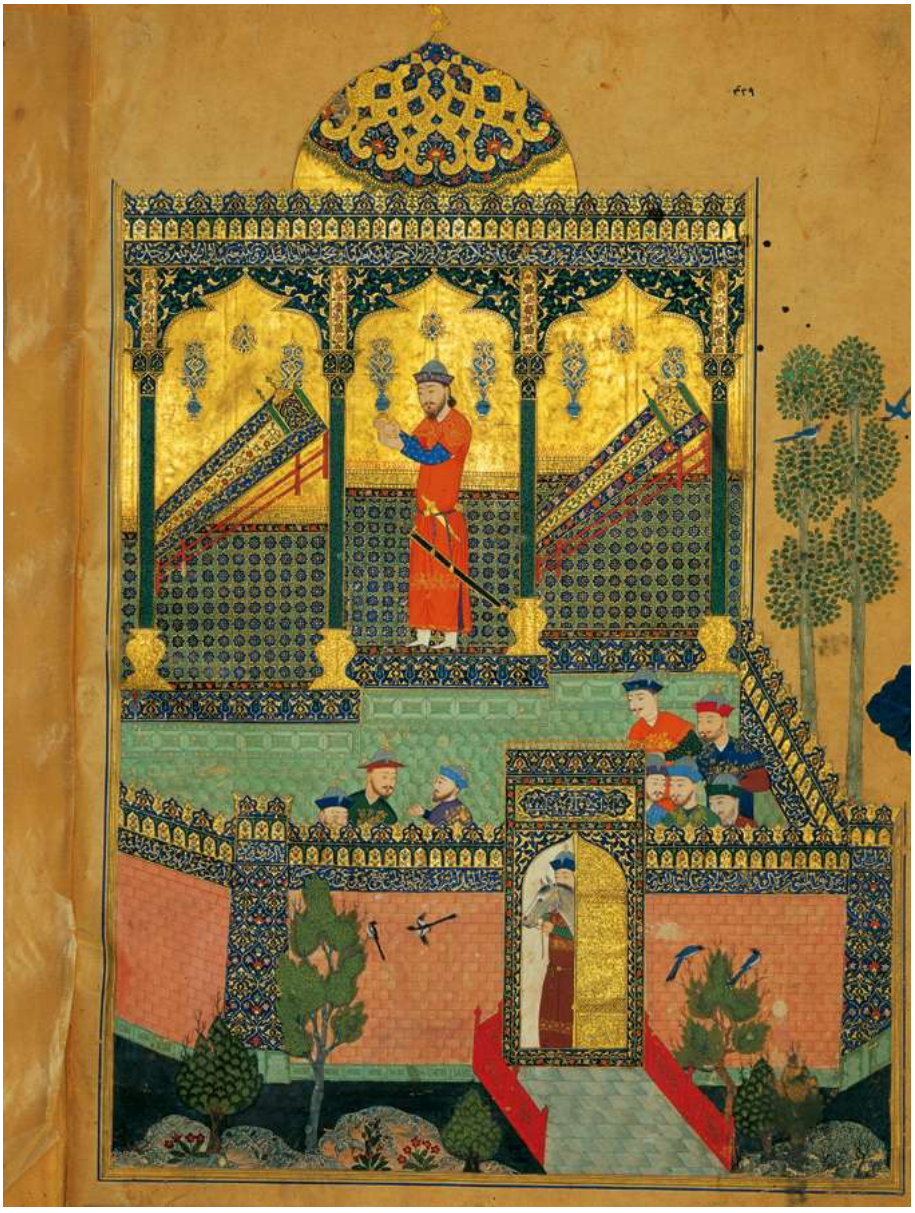

Figure 5.1: ***Baysonghor Shahnameh*, 1430. Baysonghor Shahnameh was an important patron of the Herat painters.**

Figure 5.2: ***Khusraw discovers Shirin bathing in a pool*, 1548.**

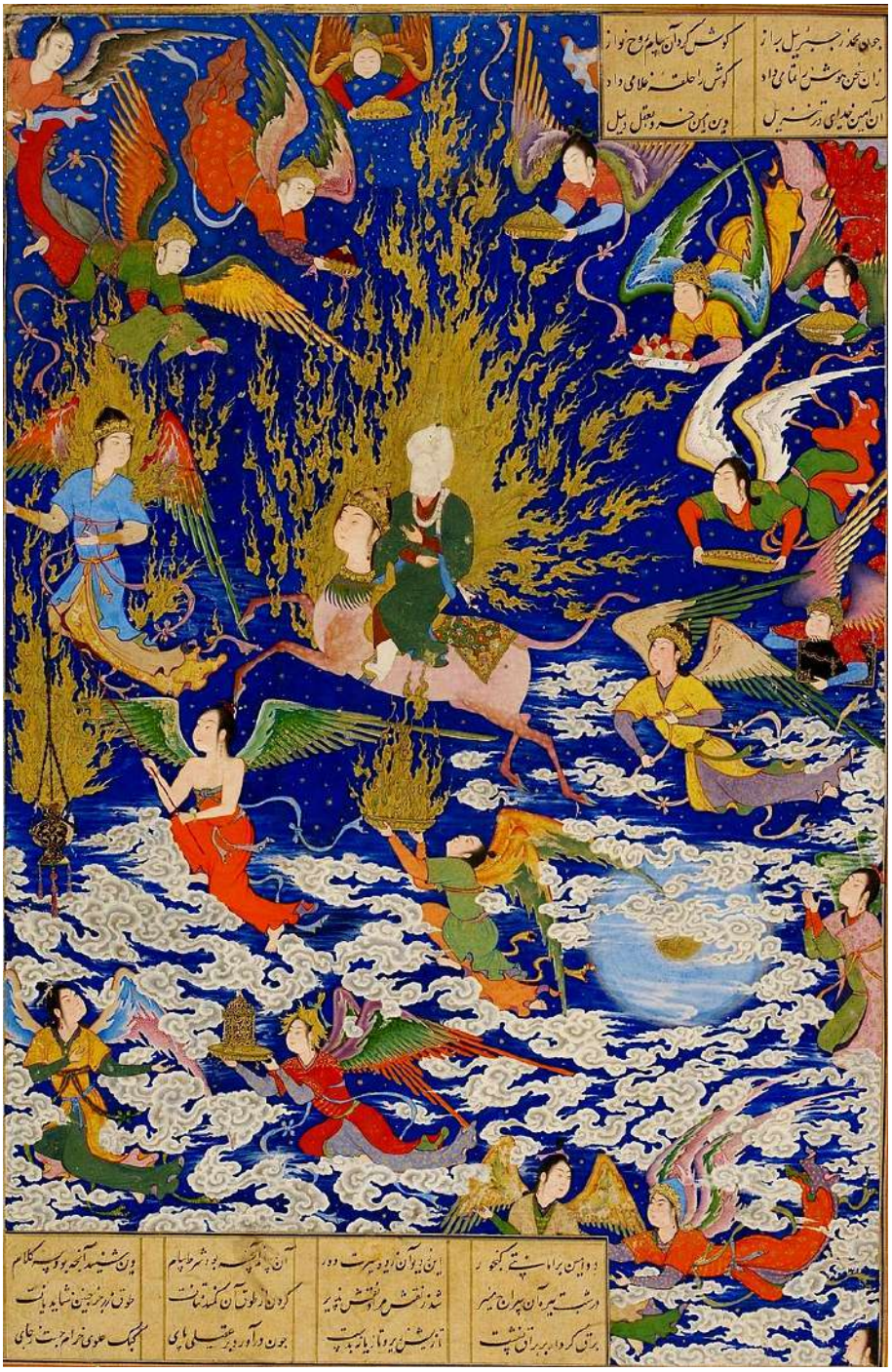

Figure 5.3: ***Mi'raj of the Prophet by Sultan Muhammad*, 1539-1543. We can see here a Chinese influence in the representation of clouds and angels.**

Figure 5.4: **Scene from the Demotte or "Great Mongol Shahnameh", a key Ilkhanid work, 1330s.**

Figure 5.5: **Poetry, wine and gardens are common elements in later works - 1585.**

Figure 5.6: **Youth reading, 1625-6 by Reza Abbasi.**

Figure 5.7: **Page from the Turkmen "Big-head Shahnameh", Gilan, 1494**

Figure 5.8: **Bath-house scene by Behzäd**

Figure 5.9: **Qajar princess painting.**

5.2 Persian architecture

Here is a list of UNESCO designated World Heritage Sites for buildings designed by Iranian architects, both inside and outside Iran's present borders:

- Arg-é Bam Cultural Landscape, Kerman
- Naghsh-i Jahan Square, Isfahan
- Pasargadae, Fars
- Persepolis, Fars
- Tchogha Zanbil, Khuzestan
- Takht-e Soleyman, West Azerbaijan
- Dome of Soltaniyeh, Zanjan
- Mausoleum of Sultan Sanjar, Turkmenistan
- Ruins of Konye-Urgench, Turkmenistan
- Mausoleum of Khoja Ahmed Yasavi, Kazakhstan
- Historic Centre of Baku
- Historic Centre of Ganja
- Historic Centre of Bukhara
- Historic Centre of Shahrisabz
- Itchan Kala of Khiva
- Samarkand - Crossroads of Cultures
- Citadel, Ancient City and Fortress Buildings of Derbent, Daghestan
- Baha'i Gardens
- Bibi-Heybat Mosque, Azerbaijan
- Tuba Shahi Mosque, Azerbaijan
- Palace of Shaki Khans, Sheki, Azerbaijan
- Behistun Inscription

Figure 5.10: **Azadi Tower, by architect Hossein Amanat. His ideas were based upon classical and post-classical Iranian architecture.**

Figure 5.11: **Si-o-se Pol, one of the bridges of Isfahan.**

Figure 5.12: **Persian-style column as seen in Persepolis.**

Figure 5.13: **Jamkaran Mosque.**

Suggestions for further reading

1. Grabar, Oleg, *Mostly Miniatures: An Introduction to Persian Painting*, 2001, Princeton University Press.
2. Hillenbrand, Robert. *Shahnama: the visual language of the Persian book of kings*, Ashgate Publishing, 2004.
3. Robinson, B. W., *Islamic painting and the arts of the book*, London, Faber and Faber, 1976.
4. Robinson, B. W., *Persian paintings in the India Office Library, a descriptive catalogue*, London, Sotheby Parke Bernet, 1976.
5. Schmitz, Barbara, and Desai, Ziyaud-Din A. *Mughal and Persian paintings and illustrated manuscripts in the Raza Library, Rampur, 2006*, Indira Gandhi National Centre for the Arts.
6. Swietochowski, Marie Lukens & Babaie, Sussan (1989). *Persian drawings in the Metropolitan Museum of Art.* New York: The Metropolitan Museum of Art.
7. Welch, S.C. (1972). *A king's book of kings: the Shah-nameh of Shah Tahmasp.* New York: The Metropolitan Museum of Art.
8. Swietochowski, Marie & Carboni, Stefano (1994). *Illustrated poetry and epic images : Persian painting of the 1330s and 1340s.* New York: The Metropolitan Museum of Art.

Chapter 6

PERSIAN SCIENCE

6.1 al-Khwarizmi

Wikipedia says of him:

"Muhammad ibn Musa al-Khwarizmi (c.780-c.850), Arabized as al-Khwarizmi and formerly Latinized as Algorithmi, was a Persian polymath who produced vastly influential works in mathematics, astronomy, and geography. Around 820 CE he was appointed as the astronomer and head of the library of the House of Wisdom in Baghdad.

"Al-Khwarizmi's popularizing treatise on algebra (The Compendious Book on Calculation by Completion and Balancing, c. 813-833 CE) presented the first systematic solution of linear and quadratic equations. One of his principal achievements in algebra was his demonstration of how to solve quadratic equations by completing the square, for which he provided geometric justifications. Because he was the first to treat algebra as an independent discipline and introduced the methods of 'reduction' and 'balancing' (the transposition of subtracted terms to the other side of an equation, that is, the cancellation of like terms on opposite sides of the equation), he has been described as the father or founder of algebra. The term algebra itself comes from the title of his book (the word al-jabr meaning 'completion' or 'rejoining'). His name gave rise to the terms algorism and algorithm, as well as Spanish and Portuguese terms algoritmo, and Spanish guarismo and Portuguese algarismo meaning 'digit'.

"In the 12th century, Latin translations of his textbook on arithmetic (*Algorithmo de Numero Indorum*) which codified the various Indian numerals, introduced the decimal positional number system to the Western world. The *Compendious Book on Calculation by Completion and Balancing*, translated into Latin by Robert of Chester in 1145, was used until the sixteenth century as the principal mathematical text-book of European universities.

"In addition to his best-known works, he revised Ptolemy's *Geography*, listing the longitudes and latitudes of various cities and localities. He further

produced a set of astronomical tables and wrote about calendaric works, as well as the astrolabe and the sundial. He also made important contributions to trigonometry, producing accurate sine and cosine tables...”

Al-Khwarizmi’s life

Muhammad ibn Musa al-Khwarizmi (c.780-c.850) was born in the Persian province of Khwarazm, shown on the map in Figure 4.4. During his lifetime, Muslim conquests made Baghdad the most important intellectual center, and scholars from as far away as China were attracted to the Arab capitol. Al-Khwarizmi also traveled to Baghdad, where he worked at the “House of Wisdom”, which had been established by Caliph al-Ma’mun. Here he was able to study both Greek and Sanskrit manuscripts on science and mathematics, and to carry out his highly influential original work.

The father of algebra

Al-Khwarizmi has been called “the father of algebra”. J. J. O’Connor and E. F. Robertson wrote in the MacTutor History of Mathematics archive:

“Perhaps one of the most significant advances made by Arabic mathematics began at this time with the work of al-Khwarizmi, namely the beginnings of algebra. It is important to understand just how significant this new idea was. It was a revolutionary move away from the Greek concept of mathematics which was essentially geometry. Algebra was a unifying theory which allowed rational numbers, irrational numbers, geometrical magnitudes, etc., to all be treated as ‘algebraic objects’. It gave mathematics a whole new development path so much broader in concept to that which had existed before, and provided a vehicle for future development of the subject. Another important aspect of the introduction of algebraic ideas was that it allowed mathematics to be applied to itself in a way which had not happened before.”

In modern terms, one of the methods introduced by al-Khwarizmi corresponds to moving terms in an equation freely to the right or left of the equal sign in an equation, with a change of sign. He also introduced a systematic method for solving quadratic equations. However, modern notation had not been invented at the time, and al-Khwarizmi described all of the operations for solving a problem in words, even using words rather than symbols for numbers. He introduced the decimal positional number system to the west. When we speak of “Arabic numerals”, it is because of his work. However, positional number systems had long been in use, both in Mesopotamia and in India.

In 1145. Al-Khwarizmi’s book *Compendious Book on Calculation by Completion and Balancing,* was translated into Latin by Robert of Chester, and for many centuries it was the principle book on mathematics used at European universities.

Figure 6.1: **Statue of al-Khwarizmi in front of the Faculty of Mathematics of Amirkabir University of Technology in Tehran. Iran.**

Figure 6.2: **A stamp issued September 6, 1983 in the Soviet Union, commemorating al-Khwarizmi's (approximate) 1200th birthday.**

Figure 6.3: **Statue of Al-Khwarizmi in Uzbekistan.**

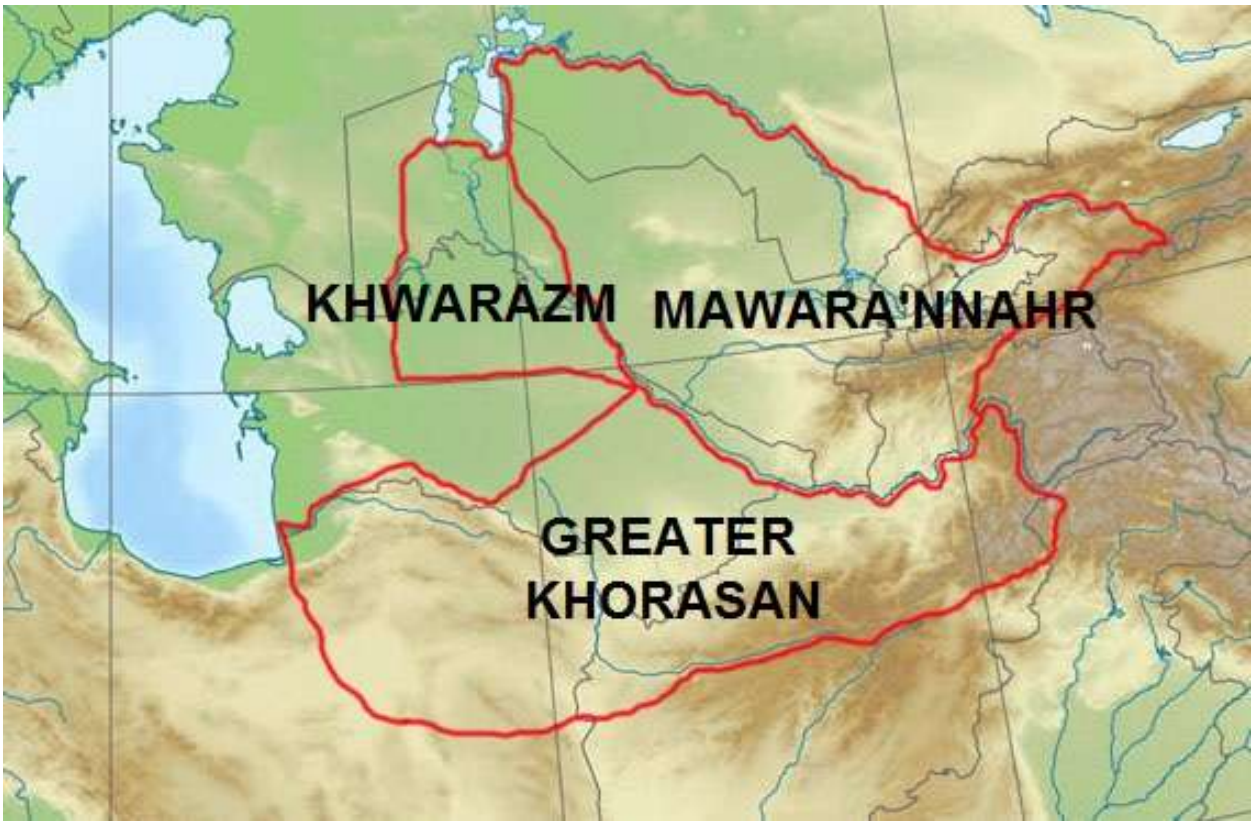

Figure 6.4: **This map shows Khwarazm, the place of Al-Khwarizmi's birth. It lies to the east of the Caspian Sea.**

Figure 6.5: **Scholars at the library of the House of Wisdom in Baghdad. Illustration by Yahyá al-Wasiti, 1237.**

Contributions to astronomy

Al-Khwarizmi's book on astronomy, *Zij al-Sindhind*, consisted of approximately 37 chapters on calendars and calculations. and 116 tables. The tables give the values of trigonometric functions and calculated locations of the sun, moon and the five planets that were known at the time. The fact that al-Khwarizmi performed original calculations of these positions marked a turning point in Islamic astronomy. The original manuscript has been lost, but copies of a Latin translation, thought to be by Adalard of Bath, exist in four European libraries, in Chartres, Paris, Madrid and Oxford.

6.2 Omar Khayyam

Omar's family and education

Omar Khayyam (1048-1131) was born in the city of Nishapur, which is located in the northern part of Persia, or present-day Iran. His father was a wealthy physician, who paid a tutor to give his son Omar an excellent education. The tutor, Bahmanyar bin Marzban, was a Zoroastrian, and had been a student of the great physician, scientist, and philosopher Avicenna. Thus Omar Khayyam received an unusually good education in science, philosophy and mathematics.

In 1066, Omar's father died, and his tutor also died soon afterwards. Two years later, in 1068, Omar joined a caravan for a three-month journey to Samarkand, then a great center of learning in Uzbekistan. He arrived there at the age of 20, and introduced himself to the governor of the city, Abe Tapir, an old friend of his father. Tahir soon recognized Omar's extraordinary mathematical ability and have him a job in his office. Soon afterwards, Omar was promoted to a job in the king's treasury.

Two years later, in 1070, Omar Khayyam published one of his greatest mathematical works, *Treatise on Demonstration of Problems of Algebra and Balancing*. This book contains a discussion of cubic equations, and it shows that they may have more than one root. Like other Islamic mathematicians, Omar did not consider negative roots. The book established Omar's reputation as a mathematician, and his fame spread throughout Persia,

Invited to Isfahan

In 1073, the young but already famous Omar received an invitation to come to Persia's capitol city, Isfahan. The invitation came from the two most powerful men of the Seljuk Empire, Malik Shah, Sultan of the empire, and Nizam al-Mulk, his vizier. Omar's job was to produce a calendar that would be valid over a long period, without the need for adjustment. He was given an enormous salary, and the means to hire many assistants. With these ample means, he recruited many talented scientists and founded an astronomical observatory.

Omar measured the length of the tropical year with extraordinary accuracy. His value, 365.2422 days. is extremely close to the currently-accepted value.

Linking algebra and geometry

The Pythagoreans had abandoned algebra when they discovered irrational numbers, such as $\sqrt{2}$, since their religion was based on the idea rationality both in mathematics and in the social sphere. Ancient Greek mathematics concentrated on geometry.

The union of geometry and algebra was pioneered in the western world by Pierre de Fermat and René Descartes. However, both Fermat and Descartes were preceded in the Islamic world by Omar Khayyam, whose mathematical work united algebra and geometry.

Omar Khayyam anticipates non-Euclidean geometry

Throughout history, many authors have doubted that Euclid's fifth postulate concerning parallel lines was necessary. Many, including Khayyam, have tried to prove the fifth postulate from the first four. Omar's attempt is particularly interesting because in it we can see the first glimmerings on non-Euclidean geometry, later developed in Europe by Gauss and Riemann. One of Omar's diagrams is shown in Figure 5.6.

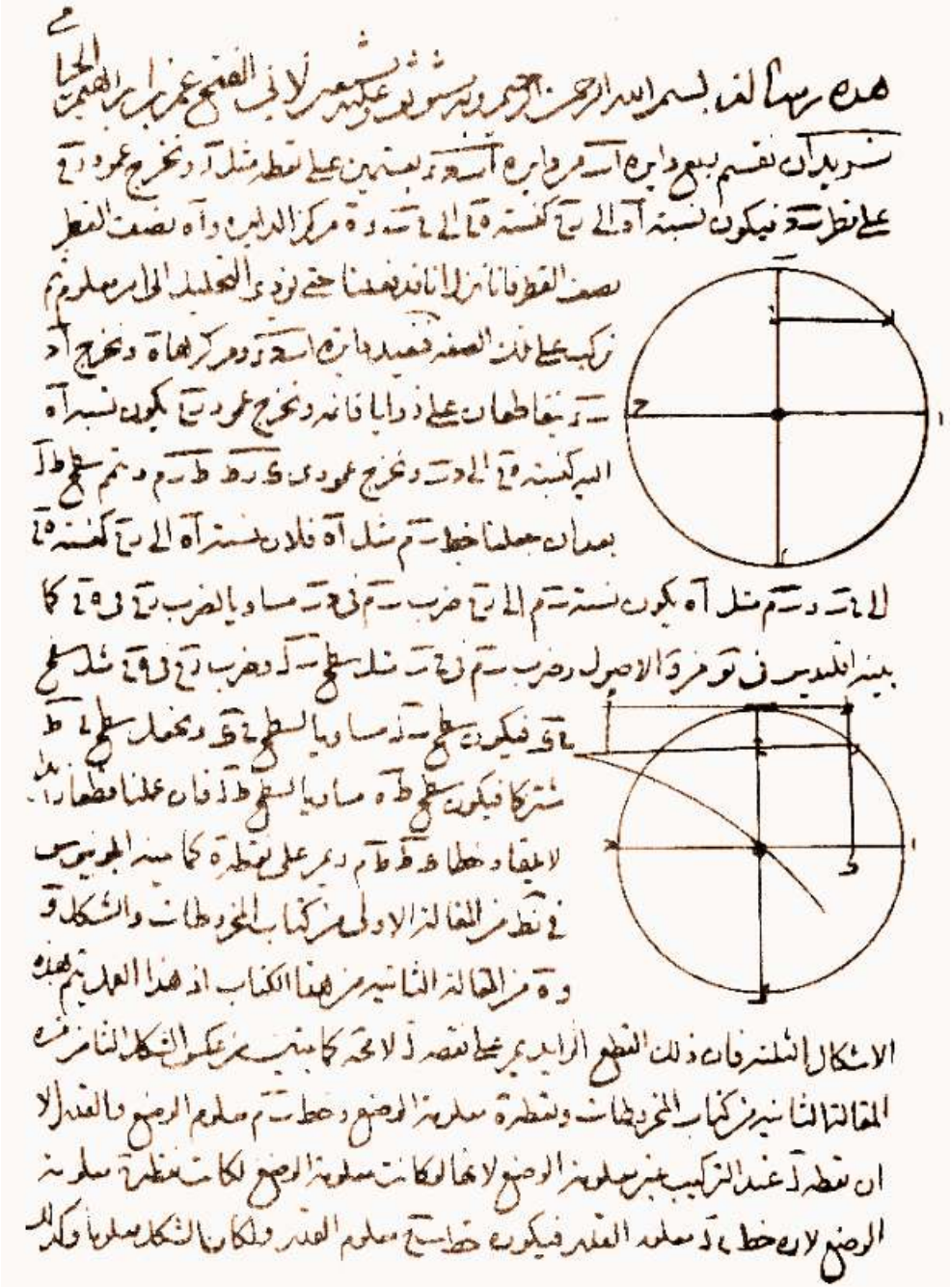

Figure 6.6: **"Cubic equation and intersection of conic sections" the first page of a two-chaptered manuscript kept in Tehran University.**

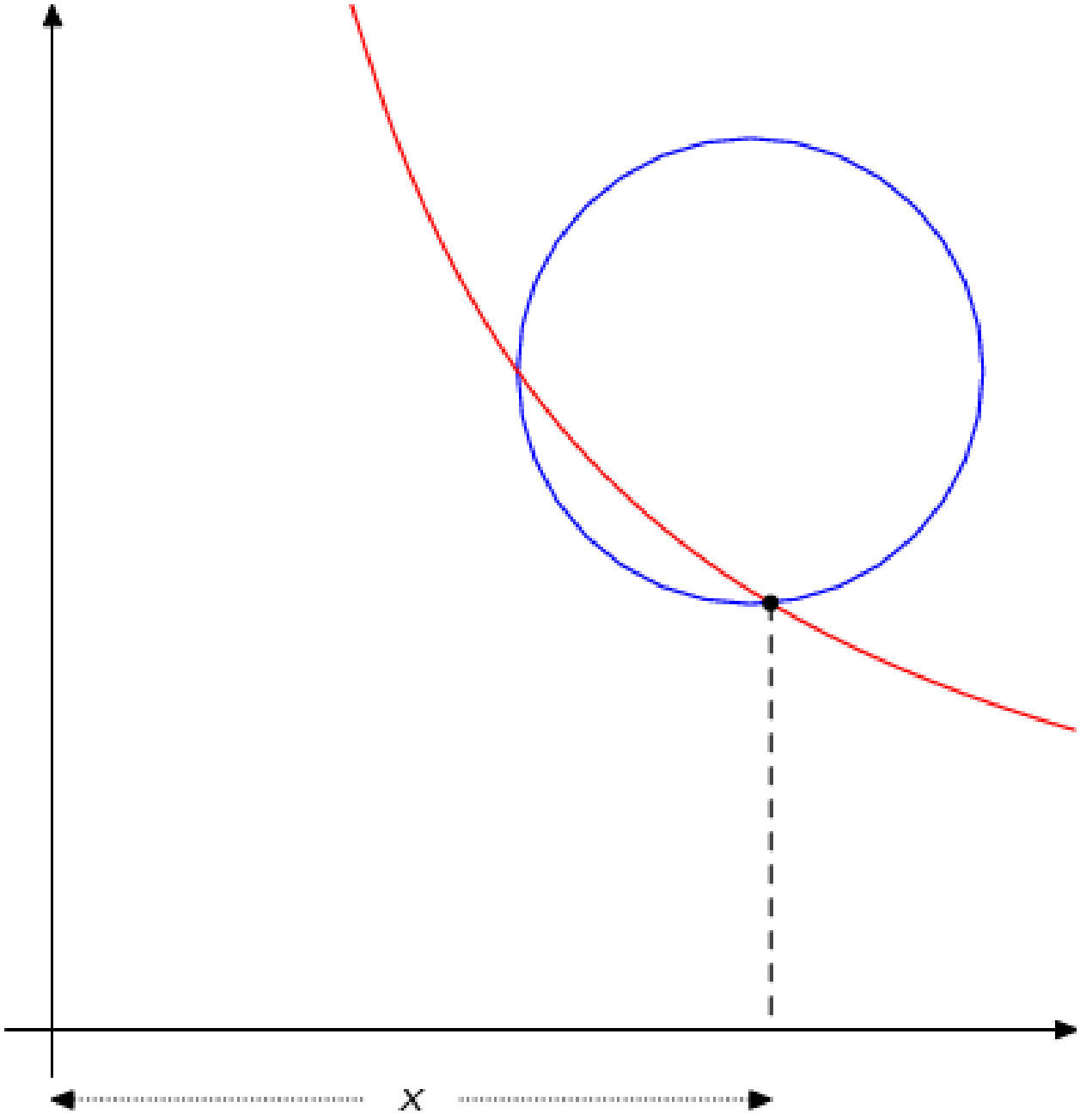

Figure 6.7: **Omar Khayyam's construction of a solution to the cubic equation $x^3+2x = 2x^2+2$. The intersection point produced by the circle and the hyperbola determine the desired segment.**

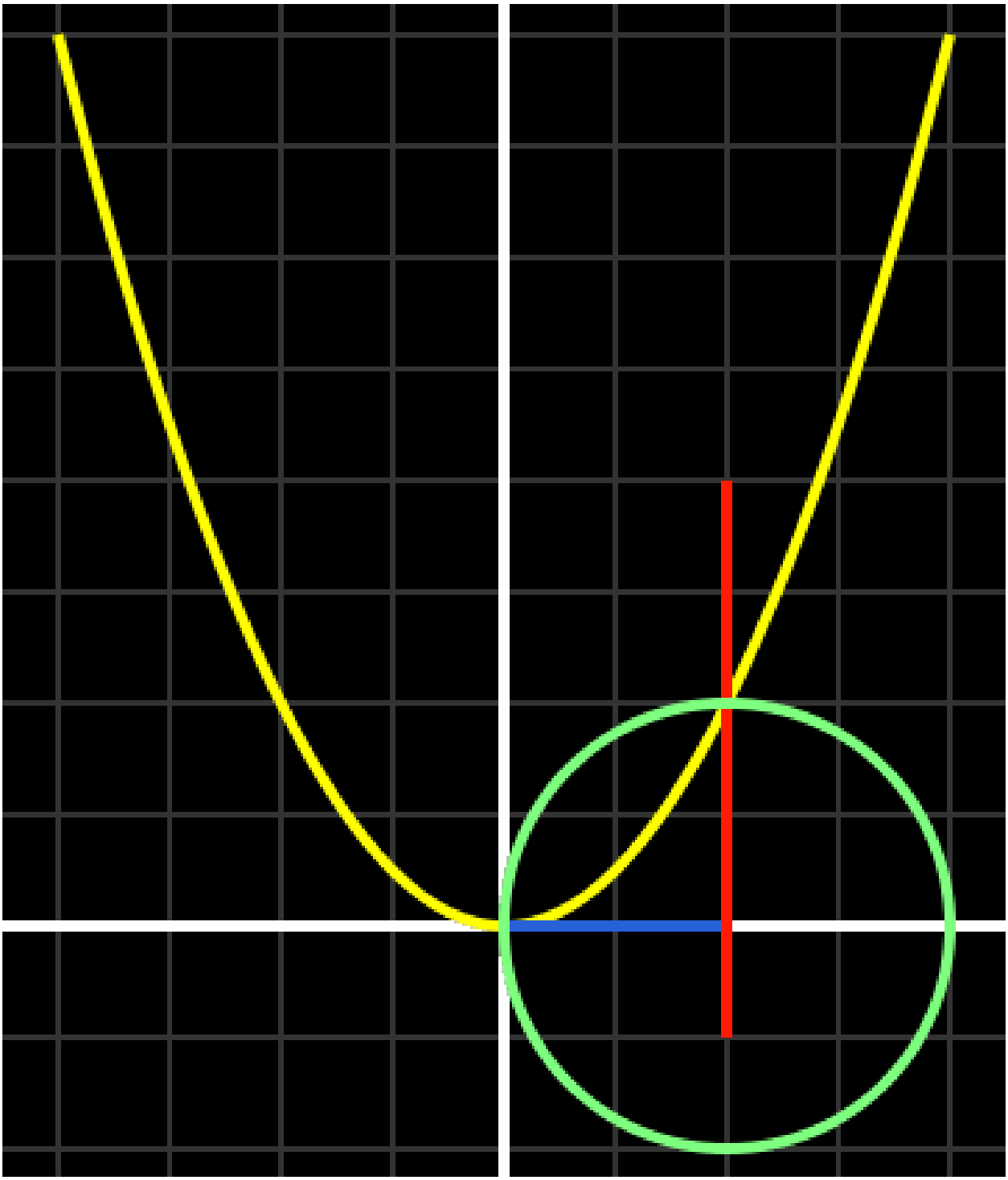

Figure 6.8: **In the language of modern mathematics, Khayyam's solution to the equation $x^3 + a^2x = b$ features a parabola of equation $x^2 = ay$, a circle with diameter b/a^2, and a vertical line through the intersection point. The solution is given by the distance on the x-axis between the origin and the (red) vertical line. Image by Pieter Kuiper.**

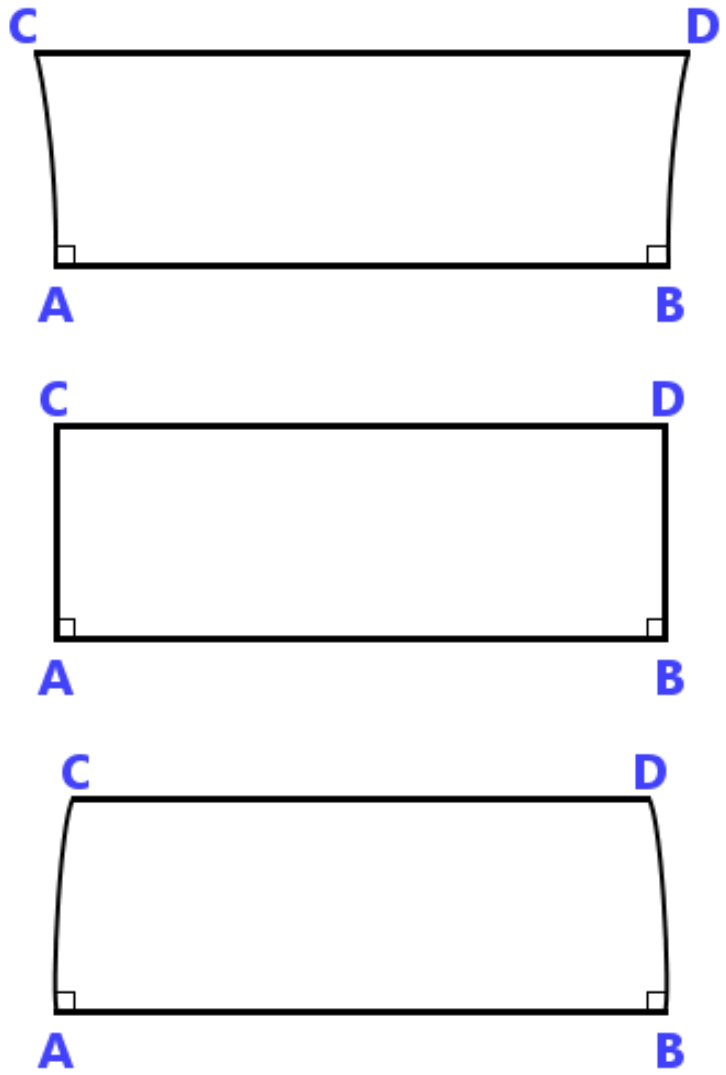

Figure 6.9: **In Omar Khayyam's discussion of Euclid's postulate concerning parallel lines, we see the first glimmering of non-Euclidean geometry. The figure shows one of Khayyam's diagrams. Lines which are locally parallel at one point meet at another point when they are drawn on curved surfaces.**

Figure 6.10: **Statue of Omar Khayyam in Bucharest.**

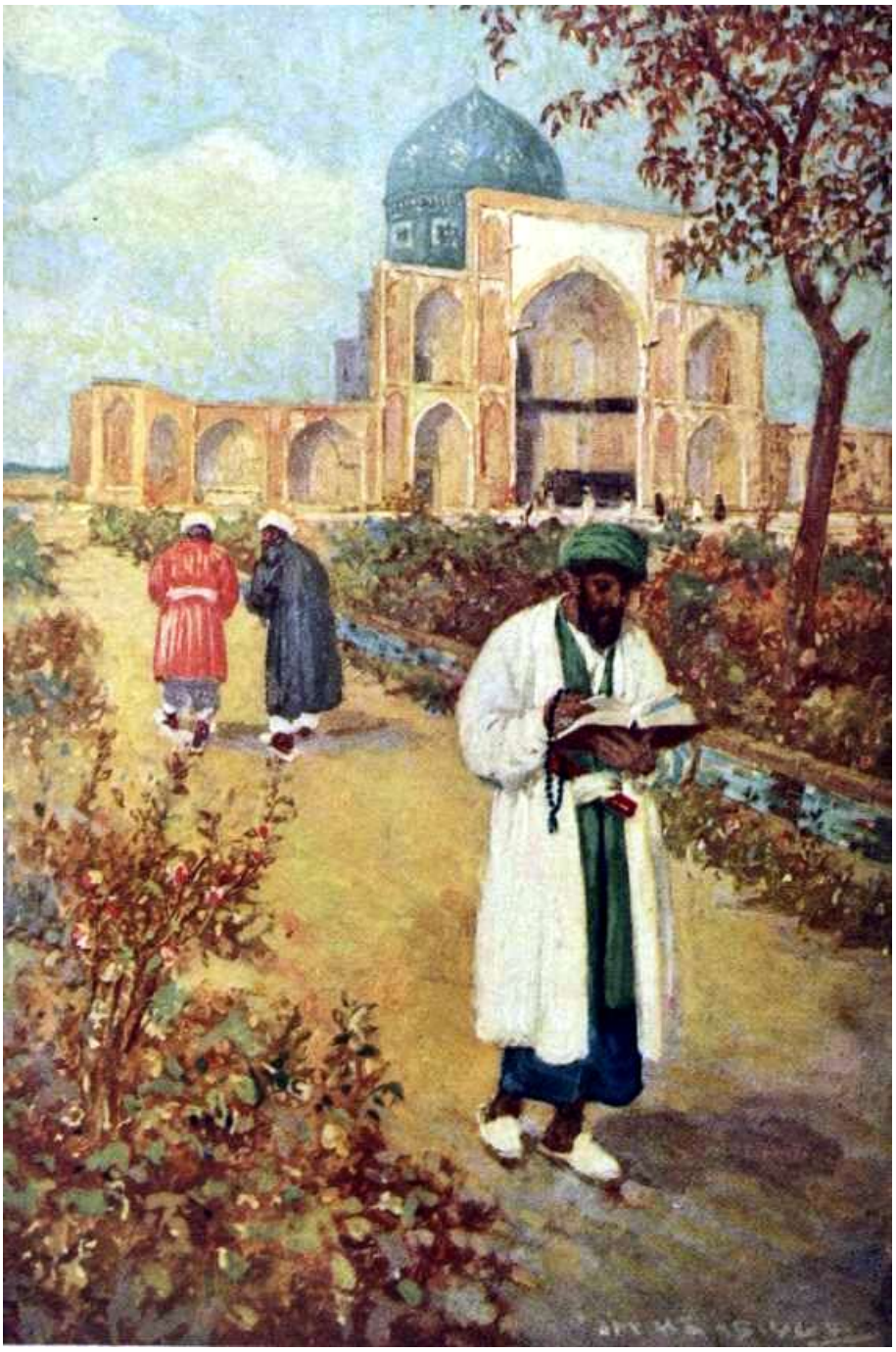

Figure 6.11: **"At the Tomb of Omar Khayyam" by Jay Hambidge (1911).**

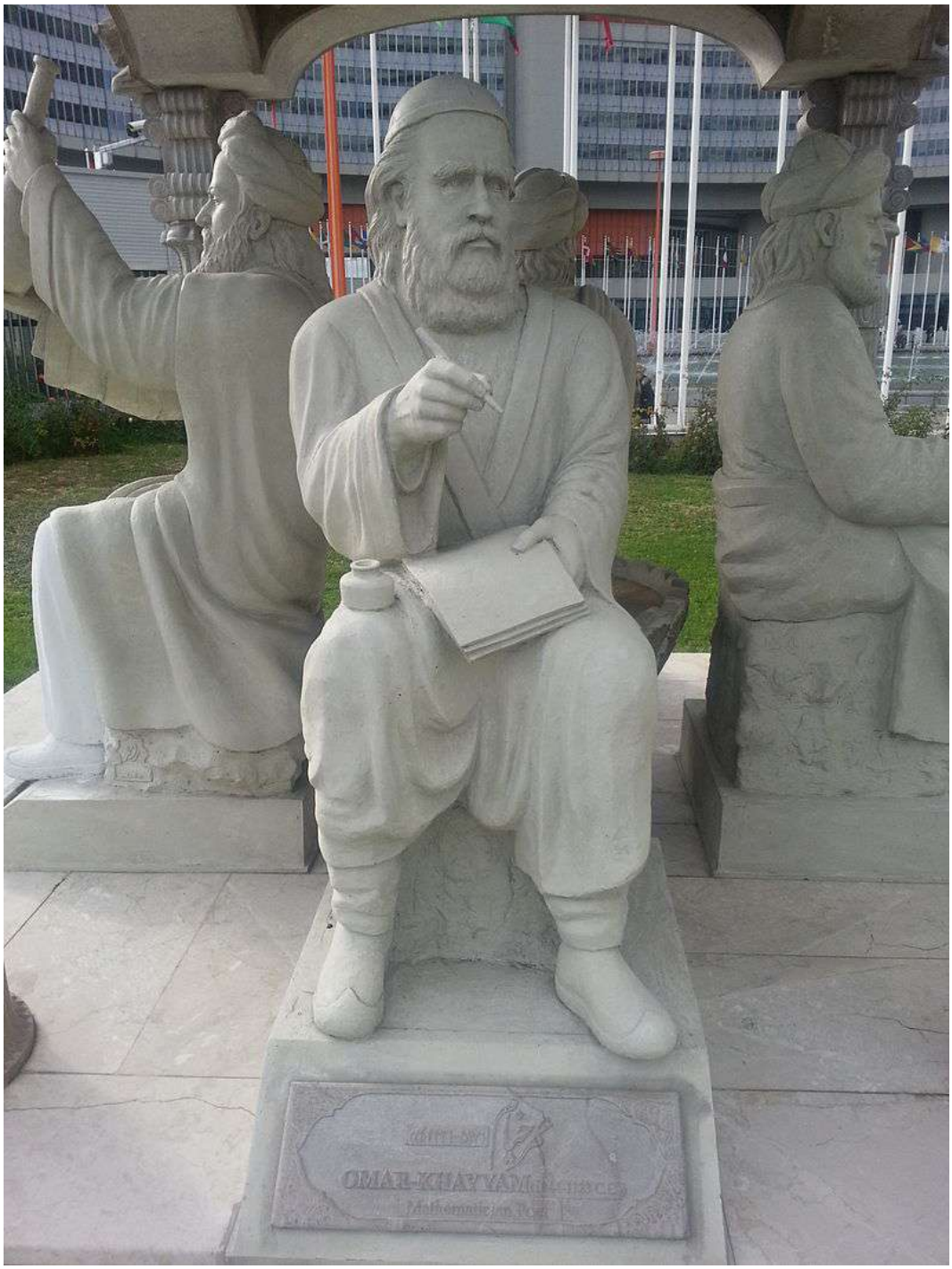

Figure 6.12: **The statue of Khayyam in United Nations Office in Vienna as a part of Persian Scholars Pavilion donated by Iran.**

6.3 al-Razi

The man from Ray

An important alchemical writer was al-Razi (sometimes called Rahzes c. 860 - c. 950). He was born in the ancient city of Ray, near Teheran, and his name means "the man from Ray". al-Razi studied medicine in Baghdad, and he became chief physician at the hospital there. He wrote the first accurate descriptions of smallpox and measles, and his medical writings include methods for setting broken bones with casts made from plaster of Paris. al-Razi was the first person to classify substances into vegetable, animal and mineral. The word "alkali", which appears in his writings, means "the calcined" in Arabic. It is the source of our word "alkali", as well as of the symbol K for potassium.

Al-Razi was said to be a compassionate physician, who cared deeply for the welfare of his patients, whether rich or poor.

al-Razi's wide range of interests

According to Wikipedia, al-Razi was **"the first to write up limited or extensive notes on diseases such as smallpox and chickenpox, a pioneer in ophthalmology, author of the first book on pediatrics, making leading contributions in inorganic and organic chemistry, also the author of several philosophical works."** He wrote down his ideas in over 200 manuscripts.

al-Razi's influence on European medicine

Al-Razi's medical works were translated into Latin, and they had an enormous influence on medical education in medievil Europe.

Figure 6.13: **Depiction of al-Razi in a 13th-century manuscript of a work by Gerard of Cremona.**

Figure 6.14: **Doctor performing uroscopy (from a Latin translation of a work by al-Razi, 1466.**

Figure 6.15: **al-Razi in his laboratory (orientalist painting by Ernest Board).**

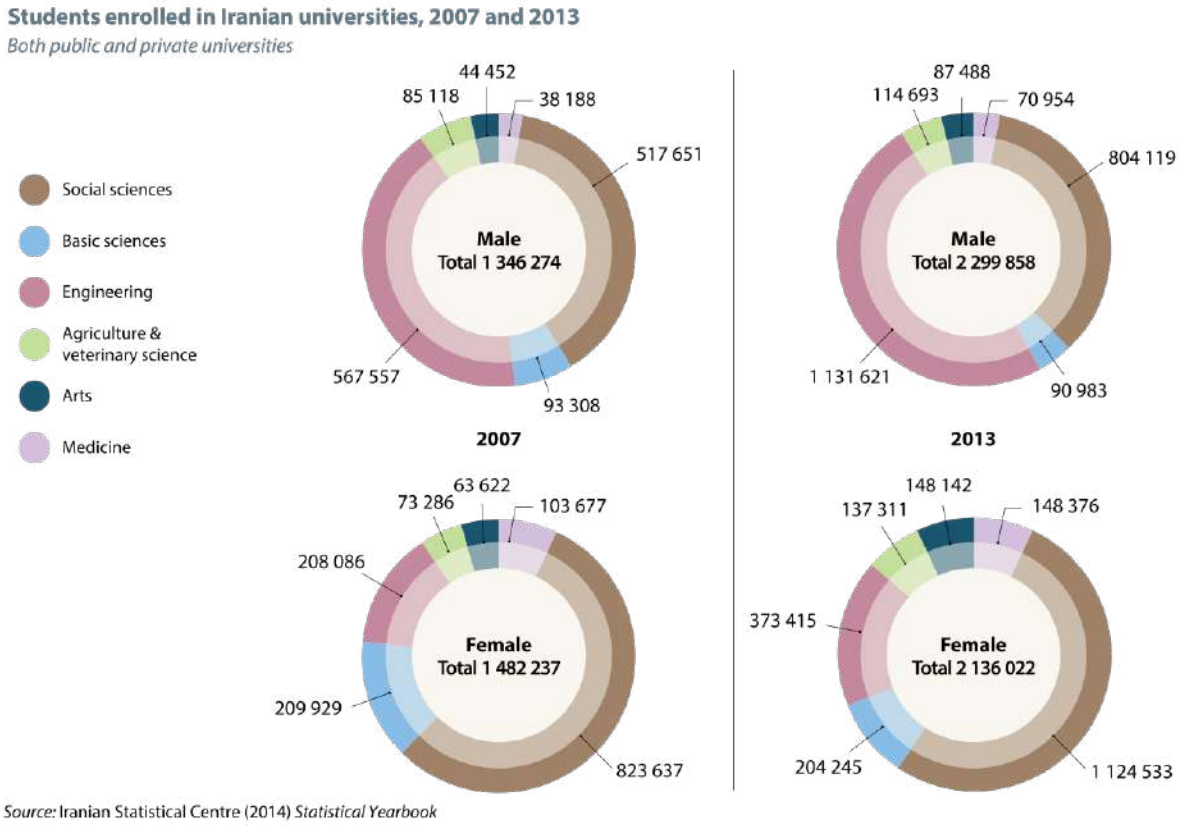

Figure 6.16: **Students enrolled in Iranian universities, 2007 and 2013. Source: UNESCO Science Report: towards 2030 (2015).**

6.4 Iranian science today

Today, Iran is a modern nation with a population of 87 million well-educated people. The number of research papers produced by Iranian authors is the fastest incresing in the world. Iran also has a nuclear reactor program, which has awakened fears that Iran will produce nuclear weapons, although Iran's government strenuously denies that it intends to do so.

Suggestions for further reading

1. Toomer, Gerald (1990). *Al-Khwarizmi, Abu Ja'far Muhammad ibn Musa.* In Gillispie, Charles Coulston (ed.). Dictionary of Scientific Biography. 7. New York: Charles Scribner's Sons.
2. Arndt, A. B. (1983). *Al-Khwarizmi* (PDF). 76 (9). National Council of Teachers of Mathematics: 668-670.
3. Berggren, J. Lennart (1986). *Episodes in the Mathematics of Medieval Islam.* New York: Springer Science+Business Media.
4. Boyer, Carl B. (1991). *The Arabic Hegemony.* A History of Mathematics (Second ed.). John Wiley &- Sons, Inc.
5. Daffa, Ali Abdullah al- (1977). *The Muslim contribution to mathematics.* London: Croom Helm.
6. Dallal, Ahmad (1999). *Science, Medicine and Technology.* In Esposito, John (ed.). The Oxford History of Islam. Oxford University Press, New York.
7. Kennedy, E.S. (1956). *A Survey of Islamic Astronomical Tables; Transactions of the American Philosophical Society.* 46 (2). Philadelphia: American Philosophical Society.
8. Brentjes, Sonja (2007). *Khwarizmi: Muhammad ibn Musa al-Khwarizmi* in Thomas Hockey et al.(eds.). The Biographical Encyclopedia of Astronomers, Springer Reference. New York: Springer, 2007, pp. 631-633. (PDF version)
9. Dunlop, Douglas Morton (1943). *Muhammad b. Musa al-Khwarizmi.* The Journal of the Royal Asiatic Society of Great Britain and Ireland (2): 248-250.
10. Hogendijk, Jan P., *Muhammad ibn Musa (Al-)Khwarizmi (c. 780-850 CE) - bibliography of his works, manuscripts, editions and translations.*
11. O'Connor, John J.; Robertson, Edmund F., *Abu Ja'far Muhammad ibn Musa Al-Khwarizmi*, MacTutor History of Mathematics archive, University of St Andrews.
12. Fuat Sezgin. Geschichte des arabischen Schrifttums. 1974, E.J. Brill, Leiden, the Netherlands.
13. Sezgin, F., ed., *Islamic Mathematics and Astronomy*, Frankfurt: Institut für Geschichte der arabisch-islamischen Wissenschaften, 1997-99.
14. King, David A. (1999a). *Islamic Astronomy.* In Walker, Christopher (ed.). Astronomy before the telescope. British Museum Press. pp. 143-174.

15. King, David A. (2002). *A Vetustissimus Arabic Text on the Quadrans Vetus*. Journal for the History of Astronomy. 33 (112): 237-255.
16. Struik, Dirk Jan (1987). *A Concise History of Mathematics* (4th ed.). Dover Publications.
17. O'Connor, John J.; Robertson, Edmund F., *Abraham bar Hiyya Ha-Nasi*, MacTutor History of Mathematics archive, University of St Andrews.
18. O'Connor, John J.; Robertson, Edmund F., *Arabic mathematics: forgotten brilliance?*, MacTutor History of Mathematics archive, University of St Andrews.
19. Roshdi Rashed, *The development of Arabic mathematics: between arithmetic and algebra*, London, 1994.
20. Vogel, Kurt (1968).*Mohammed ibn Musa Alchwarizmi's Algorismus; das früheste Lehrbuch zum Rechnen mit indischen Ziffern. Nach der einzigen (lateinischen) Handschrift* (Cambridge Un. Lib. Ms. Ii. 6.5) in Faksimile mit Transkription und Kommentar herausgegeben von Kurt Vogel. Aalen, O. Zeller.
21. Goldstein, B.R. (1968). *Commentary on the Astronomical Tables of Al-Khwarizmi: By Ibn Al-Muthanna*. Yale University Press.
22. Hogendijk, Jan P. (1991). *Al-Khwarizmi's Table of the "Sine of the Hours" and the Underlying Sine Table*. Historia Scientiarum. 42: 1-12.
23. King, David A. (1983). *Al-Khwarizmi and New Trends in Mathematical Astronomy in the Ninth Century*. New York University: Hagop Kevorkian Center for Near Eastern Studies: Occasional Papers on the Near East 2.
24. Neugebauer, Otto (1962). *The Astronomical Tables of al-Khwarizmi*.
25. Rosenfeld, Boris A. (1993). Menso Folkerts; J.P. Hogendijk (eds.). *Geometric trigonometry* in treatises of al-Khwarizmi, al-Mahani and Ibn al-Haytham. Vestiga Mathematica: Studies in Medieval and Early Modern Mathematics in Honour of H.L.L. Busard. Amsterdam: Rodopi.
26. Suter, Heinrich. [Ed.]: *Die astronomischen Tafeln des Muhammed ibn Musa al-Khwarizmi in der Bearbeitung des Maslama ibn Ahmed al-Madjriti und der latein. Übersetzung des Athelhard von Bath auf Grund der Vorarbeiten von A. Bjørnbo und R. Besthorn in Kopenhagen. Hrsg. und komm. Kopenhagen 1914*. 288 pp. Repr. 1997 (Islamic Mathematics and Astronomy. 7).
27. Van Dalen, B. *Al-Khwarizmi's Astronomical Tables Revisited: Analysis of the Equation of Time*.
28. Gandz, Solomon (November 1926). *The Origin of the Term "Algebra"*. The American Mathematical Monthly. 33 (9): 437-440.
29. Gandz, Solomon (1936). *The Sources of al-Khowarizmi's Algebra*. Osiris. 1 (1): 263-277.
30. Gandz, Solomon (1938). *The Algebra of Inheritance: A Rehabilitation of Al-Khuwarizmi*. Osiris. 5 (5): 319-391.
31. Hughes, Barnabas (1986). *Gerard of Cremona's Translation of al-Khwarizmi's al-Jabr: A Critical Edition*. Mediaeval Studies. 48: 211-263.
32. Barnabas Hughes. *Robert of Chester's Latin translation of al-Khwarizmi's al-Jabr: A new critical edition*. In Latin. F. Steiner Verlag Wiesbaden (1989).

33. Karpinski, L.C. (1915). *Robert of Chester's Latin Translation of the Algebra of Al-Khowarizmi: With an Introduction, Critical Notes and an English Version.* The Macmillan Company.
34. Rosen, Fredrick (1831). *The Algebra of Mohammed Ben Musa.* Kessinger Publishing.
35. Ruska, Julius (1917). *Zur ältesten arabischen Algebra und Rechenkunst.* Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Philosophisch-historische Klasse. Sitzungsberichte der Heidelberger Akademie der Wissenschaften. Philologisch-historische Klasse. Jahr. 1917,2. Abh: 1-125.
36. Gandz, Solomon (1936). *The Sources of al-Khowarizmi's Algebra.* Osiris. 1 (1): 263-277.
37. Daunicht, Hubert (1968-1970). *Der Osten nach der Erdkarte al-á¸¥uwarizmis : Beiträge zur historischen Geographie und Geschichte Asiens* (in German). Bonner orientalistische Studien. N.S.; Bd. 19.
38. Mzik, Hans von (1915). *Ptolemaeus und die Karten der arabischen Geographen.* Mitteil. D. K. K. Geogr. Ges. In Wien. 58: 152.
39. Nallino, C.A. (1896), *Al-Huwarizmi e il suo rifacimento della Geografia di Tolemo*, Atti della R. Accad. Dei Lincei, Arno 291, Serie V, Memorie, Classe di Sc. Mor., Vol. II, Rome
40. Ruska, Julius (1918). *Neue Bausteine zur Geschichte der arabischen Geographie.* Geographische Zeitschrift. 24: 77-81.
41. Spitta, W. (1879). *HuwarizmI's Auszug aus der Geographie des Ptolomaeus.* Zeitschrift Deutschen Morgenl. Gesell. 33.
42. Burnett, Charles (2017), *Arabic Numerals*, in Thomas F. Glick (ed.), *Routledge Revivals: Medieval Science, Technology and Medicine* (2006): An Encyclopedia, Taylor &- Francis,
43. Folkerts, Menso (1997). *Die älteste lateinische Schrift über das indische Rechnen nach al-Hwarizmi* (in German and Latin). München: Bayerische Akademie der Wissenschaften.
44. Brentjes, Sonja (2007). *Khwarizmi: Muhammad ibn Musa al-Khwarizmi* in Thomas Hockey et al.(eds.). The Biographical Encyclopedia of Astronomers, Springer Reference. New York: Springer, 2007, pp. 631-633. (PDF version)
45. Dunlop, Douglas Morton (1943). *Muhammad b. Musa al-Khwarizmi.* The Journal of the Royal Asiatic Society of Great Britain and Ireland. 2 (3-4): 248-250.
46. Hogendijk, Jan P., *Muhammad ibn Musa (Al-)Khwarizmi (c. 780-850 CE) - bibliography of his works, manuscripts, editions and translations.*
47. O'Connor, John J.; Robertson, Edmund F., *Abu Ja'far Muhammad ibn Musa Al-Khwarizmi*, MacTutor History of Mathematics archive, University of St Andrews
48. Sezgin, Fuat (1974). *Geschichte des arabischen Schrifttums, Band V: Mathematik. Bis ca. 430 H.* Leiden: Brill. pp. 228-241.
49. Sezgin, Fuat (1978). *Geschichte des arabischen Schrifttums, Band VI: Astronomie. Bis ca. 430 H.* Leiden: Brill. pp. 140-143.
50. Sezgin, Fuat (1979). *Geschichte des arabischen Schrifttums, Band VII: Astrologie - Meteorlogie und Verwanndtes Bis ca. 430 H.* Leiden: Brill. pp. 128-129.

51. Sezgin, F., ed., *Islamic Mathematics and Astronomy*, Frankfurt: Institut für Geschichte der arabisch-islamischen Wissenschaften, 1997-99.
52. Edward FitzGerald (translator) *The Rubaiyat of Omar Khayyam* Howard Willford Bell, 1901
53. Victor J. Katz *A History of Mathematics: An Introduction* HarperCollins College Publishers, New York, 1993
54. Roshdi Rashed (Editor) *Encyclopedia of the History of Arabic science* Routledge, 1996
55. *History of Astronomy - Middle East* ephemeris.com, 2003
56. Hazhir Teimourian *Omar Khayyam: Poet, Rebel, Astronomer* The History Press, 2008
57. Mehdi Aminrazavi *The Wine of Wisdom: The Life, Poetry and Philosophy of Omar Khayyam*, Oneworld Publications, 2013
58. Adamson, Peter (2021a). *Abu Bakr al-Razi*. In Zalta, Edward N. (ed.). The Stanford Encyclopedia of Philosophy.
59. Arberry, Arthur John (2008). *Revelation and Reason in Islam*. Routledge.
60. Browne, Edward G. (1921). *Arabian Medicine, Being the Fitzpatrick Lectures Delivered at the College of Physicians in November 1919 and November 1920*. Cambridge: Cambridge University Press. pp. 44-53. OCLC 808169546.
61. Dhanani, Alnoor (2013). *Atomism*. In Fleet, Kate; Krämer, Gudrun; Matringe, Denis; Nawas, John; Rowson, Everett (eds.). Encyclopaedia of Islam, Three.
62. Duffin, Jacalyn (2021). *History of Medicine: A Scandalously Short Introduction (3rd ed.)*. University of Toronto Press. ISBN 978-1-4875-0917-0.
63. Frye, Richard N. (1975). *The Cambridge history of Iran*, Volume 4 (Reprint ed.). London: Cambridge University Press.
64. Goodman, L.E (1960-2007). *al-Razi*. In Bearman, P.; Bianquis, Th.; Bosworth, C.E.; van Donzel, E.; Heinrichs, W.P. (eds.). Encyclopaedia of Islam, Second Edition.
65. Hitti, Philip Khuri (1 January 1969). *Makers of Arab History*. St. Martin's Press.
66. Iskandar, Albert Z. (2008). *Al-Razi*. In Selin, Helaine (ed.). Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures (2nd ed.). Berlin: Springer. pp. 155-156.
67. Kahl, Oliver (2015). *The Sanskrit, Syriac and Persian Sources in the Comprehensive Book of Rhazes*. BRILL.
68. Oxford Reference (2022). *Abu Bakr Muhammad ibn Zakariyya al- Razi*. Oxford Reference. Retrieved 3 March 2022.
69. Kraus, Paul; Pines, Shlomo (1913-1936). *al-Razi*. In Houtsma, M. Th.; Arnold, T.W.; Basset, R.; Hartmann, R. (eds.). Encyclopaedia of Islam, First Edition (1913-1936). i
70. Walzer, Richard (1962). *Greek Into Arabic Essays on Islamic Philosophy (Oriental Studies I ed.)*. Harvard University Press.
71. Sarton, George (1927). *Introduction to the History of Science, Volume 1*.

72. Stroumsa, Sarah Stroumsa (1999). *Freethinkers of Medieval Islam: Ibn al-Rawandi, Abu Bakr al-Razi, and Their Impact on Islamic Thought. Islamic Philosophy, Theology and Science*. Texts and Studies. Vol. 35. Leiden: Brill.
73. Ullmann, Manfred (February 1997). *Islamic Medicine*. Edinburgh University Press.
74. Walker, Paul E. (1998). *al-Razi, Abu Bakr Muhammad ibn Zakariyya' (d. 925)*. In Craig, Edward (ed.). Routledge Encyclopedia of Philosophy.
75. Ziai, Hossein (2005). *Recent trends in Arabic and Persian philosophy*. In Adamson, Peter; Taylor, Richard C. (eds.). The Cambridge Companion to Arabic Philosophy. Cambridge: Cambridge University Press. pp. 405-425.

Chapter 7

ATTACKS ON IRAN

7.1 Reza Shah

Iran has an ancient and beautiful civilization, which dates back to 7,000 BC, when the city of Susa was founded. Some of the earliest writing that we know of, dating from from approximately 3,000 BC, was used by the Elamite civilization near to Susa. Today's Iranians are highly intelligent and cultured, and famous for their hospitality, generosity and kindness to strangers. Over the centuries, Iranians have made many contributions to science, art and literature, and for hundreds of years they have not attacked any of their neighbors. Nevertheless, for the last 90 years, they have been the victims of foreign attacks and interventions, most of which have been closely related to Iran's oil and gas resources.

Reza Shah (1878-1944) started his career as Reza Khan, an army officer. Because of his high intelligence he quickly rose to become commander of the Tabriz Brigade of the Persian Cossacks. In 1921, General Edmond Ironside, who commanded a British force of 6,000 men fighting against the Bolsheviks in northern Persia, masterminded a coup (financed by Britain) in which Reza Khan lead 15,000 Cossacks towards the capital. He overthrew the government, and became minister of war. The British government backed this coup because it believed that a strong leader was needed in Iran to resist the Bolsheviks. In 1923, Reza Khan overthrew the Qajar Dynasty, and in 1925 he was crowned as Reza Shah, adopting the name, Pahlevi.

Reza Shah believed that he had a mission to modernize Iran, in much the same way that Kamil Ata Turk had modernized Turkey. During his 16 years of rule in Iran, many roads were built, the Trans-Iranian Railway was constructed, many Iranians were sent to study in the West, the University of Tehran was opened, and the first steps towards industrialization were taken. However, Reza Shahs methods were sometimes very harsh.

7.2 Invasion of Iran during World War II

In 1941, while Germany invaded Russia, Iran remained neutral, perhaps leaning a little towards the side of Germany. However, Reza Shah was sufficiently critical of Hitler to offer

safety in Iran to refugees from the Nazis. Fearing that the Germans would gain control of the Abadan oil fields, and wishing to use the Trans-Iranian Railway to bring supplies to Russia, Britain invaded Iran from the south on August 25, 1941. Simultaneously, a Russian force invaded the country from the north. Reza Shah appealed to Roosevelt for help, citing Iran's neutrality, but to no avail. On September 17, 1941, he was forced into exile, and replaced by his son, Crown Prince Mohammed Reza Pahlavi. Both Britain and Russia promised to withdraw from Iran as soon as the war was over. During the remainder of World War II, although the new Shah was nominally the ruler of Iran, the country was governed by the allied occupation forces.

Reza Shah, had a strong sense of mission, and felt that it was his duty to modernize Iran. He passed on this sense of mission to his son, the young Shah Mohammed Reza Pahlavi . The painful problem of poverty was everywhere apparent, and both Reza Shah and his son saw modernization of Iran as the only way to end poverty.

7.3 The CIA and M5 overthrow Mosaddegh in 1951

In 1951, Mohammad Mosaddegh became Prime Minister of Iran through democratic elections. He was from a highly-placed family and could trace his ancestry back to the shahs of the Qajar dynasty. Among the many reforms made by Mosaddegh was the nationalization of the Anglo-Iranian Oil Company's possessions in Iran. Because of this, the AIOC (which later became British Petroleum), persuaded the British government to sponsor a secret coup that would overthrow Mosaddegh. The British asked US President Eisenhower and the CIA to join M16 in carrying out the coup, claiming that Mosaddegh represented a communist threat (a ludicrous argument, considering Mosaddegh's aristocratic background). Eisenhower agreed to help Britain in carrying out a coup, and it took place in 1953.

7.4 The Iranian Revolution of 1979

The goal of modernizing Iran and ending poverty was adopted as an almost-sacred mission by the young Shah, Mohammed Reza Pahlavi, and it was the motive behind his White Revolution in 1963, when much of the land belonging to the feudal landowners and the crown was distributed to landless villagers. However, the White Revolution angered both the traditional landowning class and the clergy, and it created fierce opposition. In dealing with this opposition, the Shahs methods were very harsh, just as his fathers had been. Because of alienation produced by his harsh methods, and because of the growing power of his opponents, Shah Mohammed Reza Pahlavi was overthrown in the Iranian Revolution of 1979. The revolution of 1979 was to some extent caused by the British-American coup of 1953.

One can also say that the westernization, at which both Shah Reza and his son aimed, produced an anti-western reaction among the conservative elements of Iranian society. Iran was "falling between two stools", on the one hand western culture and on the other hand

the country's traditional culture. It seemed to be halfway to be halfway between, belonging to neither. Finally in 1979 the Islamic clergy triumphed and Iran chose tradition.

Meanwhile, in 1963, the US had secretly backed a military coup in Iraq that brought Saddam Hussein's Baath Party to power. In 1979, when the western-backed Shah of Iran was overthrown, the United States regarded the fundamentalist Shiite regime that replaced him as a threat to supplies of oil from Saudi Arabia. Washington saw Saddam's Iraq as a bulwark against the Shiite government of Iran that was thought to be threatening oil supplies from pro-American states such Kuwait and Saudi Arabia.

7.5 Saddam Hussein attacks Iran

In 1980, encouraged to do so by the fact that Iran had lost its US backing, Saddam Hussein's government attacked Iran. This was the start of an extremely bloody and destructive war that lasted for eight years, inflicting almost a million casualties on the two nations. Iraq used both mustard gas and the nerve gases Tabun and Sarin against Iran, in violation of the Geneva Protocol. Both the United States and Britain helped Saddam Hussein's government to obtain chemical weapons.

The present attacks on Iran by Israel and the United States, both actual and threatened, have some similarity to the war against Iraq, which was launched by the United States in 2003. In 2003, the attack was nominally motivated by the threat that nuclear weapons would be developed, but the real motive had more to do with a desire to control and exploit the petroleum resources of Iraq, and with Israel's extreme nervousness at having a powerful and somewhat hostile neighbor. Similarly, hegemony over the huge oil and gas reserves of Iran can be seen as one the main reasons why the United States is presently demonizing Iran, and this is combined with Israel's almost paranoid fear of a large and powerful Iran. Looking back on the "successful" 1953 coup against Mosaddegh, Israel and the United States perhaps feel that sanctions, threats, murders and other pressures can cause a regime change that will bring a more compliant government to power in Iran - a government that will accept US hegemony. But aggressive rhetoric, threats and provocations can escalate into full-scale war.

Suggestions for further reading

1. Sir Percy Sykes,A History of Persia - 2nd edition, MacMillaan, (1921).
2. Paula K. Byers, Reza Shah Pahlavi, Encyclopedia of World Biography (1998).
3. Roger Homan, The Origins of the Iranian Revolution, International Affairs 56/4, 673-7, (Autumn 1980).
4. Daniel Yergin, The Prize: The Epic Quest for Oil, Money and Power, Simonon and Schuster, (1991).
5. A. Sampson, The Seven Sisters: The Great Oil Companies of the World and How They Were Made, Hodder and Staughton, London, (1988).

Chapter 8

WOMEN! LIFE! FREEDOM!

8.1 Death of Mahsa Amini

Since 16 September, 2022, there have been nationwide protests triggered by the death of a young Kurdish woman named Mahsa Amini. She died of head injuries after being brutally beaten by the clerical regime's Morality Police for "improperly wearing her hijab". The hijab is a head covering to hide women's hair, and it has been mandatory for women to wear in public ever since the clerical regime came to power in 1979.

Wikipedia lists the following causes for the protests:

- **Death of Mahsa Amini**
- **Mandatory hijab law since 1979**
- **Crackdowns against the Iranian Democracy Movement and Girls of Enghelab protests**
- **Human rights abuses against women and girls perpetrated by the Morality Police**
- **Killing of hundreds of protesters**

and the following goals of the protests

- **Dismantlement of the Islamic Republic of Iran**
- **The protection of civil and political rights, including women's rights**
- **Revoking mandatory religious requirements, such as the mandatory hijab law**
- **Dissolution of the Morality Police**
- **Prosecuting the killers of Mahsa Amini**
- **Police and government reforms**

Figure 8.1: **Mahsa Amini died in a hospital in Tehran, Iran under suspicious circumstance.**

8.2 Religion and politics should not be mixed

When religion and politics are mixed, the smell is really terrible! The idea of a "Morality Police" to enforce religious conformity is an abhorrent violation of basic human rights.

8.3 Will the tyrannical clerical regime be overthrown?

The current protests which have been triggered by the killing of Mahsa Amini by the clerical regime's Morality Police represents a serious threat to Iran's present tyrannical government. Although the government has responded by brutally killing many hundreds of protesters, including children, and imprisoning many thousands, who also may be threatened with the death penalty, the brave protesters continue their struggle. The whole world hopes that the protesters will succeed in the end, and that the clerical regime will be overthrown.

Figure 8.2: **Students of Amir Kabir university protest against Hijab and the Islamic Republic.**

Figure 8.3: **Demonstrations in Berlin in solidarity with the brave Iranian protesters.**

Figure 8.4: **Two Iranian fans with a protest banner at the World Cup.**

Suggestions for further reading

1. Ahmed, Akbar S.; Donnan, Hastings (1994). *Islam, globalization, and postmodernity - Google Books*. Psychology Press.
2. Appleby, R. Scott (1993). *Fundamentalisms and Society: Reclaiming the Sciences, the Family, and Education*. University of Chicago Press.
3. Cooper, William Wager; Yue, Piyu (2008). *Challenges of the Muslim World: Present, Future and Past*. Emerald Group Publishing.
4. Dreyfuss, Robert (2006). *Devil's Game: How the United States Helped Unleash Fundamentalist Islam*. Macmillan.
5. Roy, Olivier (1994). *The Failure of Political Islam*. Harvard University Press.
6. Ariel Francais, *Islam radical et nouvel ordre impérial*, L'Harmattan, 2007.
7. Roy, Olivier (1994). *The Failure of Political Islam*. Harvard University Press.

Chapter 9

SOME PERSONAL MEMORIES OF IRAN

In 1927, my father, Bennett F. Avery, was appointed head of the Department of Anatomy at the American University of Beirut. While there, he had as students many doctors who later became prominant public health workers in the Middle East. He also became very fluent in French.

When World War II began, my mother, my elder brother Gordon, and I traveled back to the United States. A year later, my father joined us while on leave. The situation in Beirut then began to look more dangerous, and the president of the American University of Beirut urged those on his staff who were already abroad to remain there for the duration of the war. After teaching for a year at Yale, my father obtained the post of Dean of Medicine at Boston University. However, in 1943 he was asked by the US State Department to go to Iran to become the Director General of Public Health for the Allied Occupation Government. He was chosen for this post partly because of his medical knowledge, but also because of his knowledge of the Middle East and his fluency in French.

9.1 We sail on the Gripsholm

In 1945, we were allowed to travel to Tehran to rejoin my father. My mother wrote:

The victory over Japan made it possible for us to join Ben in Iran. We sailed on the Swedish liner Gripsholm, which was chartered by the State Department for special use for relocating personnel and families. In Naples and Piraeus, we saw some awful consequences of war. Both harbors were full of sunken ships; docks and warehouses in ruins. Our destination was Haifa, where we took the Nairn bus to Baghdad. Then the boys and I traveled alone in a station wagon through the high mountains of Iran to the high plateau and the city of Tehran.

My father had sent a list of things for my mother to buy and bring along to Tehran. Some of these things were quite difficult for her to find, especially under wartime conditions. Among the especially difficult items were a kerosene-burning refrigerator and a top hat for

Figure 9.1: **Sailing from New York on the Gripsholm in 1945.**

visiting the Shah. However, my mother finally found both the unusual refrigerator and a high silk hat large enough to fit my father, who had an especially large head.

The Swedish ship Gripsholm on which we sailed had been converted to a hospital ship during the war. We were aboard the first crossing on which civilian family members were allowed. There were a few young boys my own age on board, and I played many games of chess with them.

When we reached Piraeus in Greece, the sight was appalling. All bridges and buildings were totally ruined by bombing, and the population was starving. When our ship threw garbage into the harbor, people came out in small boats to pick it up for food. Garbage was better than no food at all.

We finally reached Haifa, and the boxes containing the kerosene-burning refrigerator etc. were unloaded from the Gripsholm. The next step ought to have been to take an air-conditioned bus to Damascus and then across the desert to Baghdad. We had reservations, but when we landed in Haifa we discovered that the reservations were gone. Someone had bribed someone. My mother stood there on the dock at Haifa with two young children, a pile of boxes and no transportation! She did not collapse into tears as many would have done; she somehow arranged transportation for the boxes and reservations for us on an ancient and crowded bus.

There was no road across the desert in those days. Between Damascus and Baghdad the decrepit bus on which we were traveling drove in a convoy with two others, not single file but three abreast so that the passengers of each bus would not have to breath in the plumes of dust produced by the other busses. Nevertheless, choking quantities of dust came up through the floorboards.

The aisles of the bus were filled with baggage, so it was impossible to move from our seats. There was a water container and a single cup, which was passed around from person to person. Everyone drank from it. At one point, in the middle of the day, the bus stopped. Everyone climbed over the baggage and out of the bus. The men walked a short distance into the desert on one side to relieve themselves, and the women did the same on the other side. I was too shy to urinate in such a public way, in plain sight of everyone, so I did not participate. This was a serious mistake, and I suffered horribly for it until we at last reached a village with a urinal.

Night fell, and we continued across the desert through the dark moonless night. At about midnight we stopped at Rutba Wells. There was nothing there at all except the old fort, a huge black shape that stood out against the star-filled sky. As we stood beside the bus, we looked out in every direction, and there was nothing to see except for the fort. The desert was totally flat, and there was no house and no vegetation anywhere in sight; but in the distance we could hear the howling of the Bedouin's dogs. I was 12 years old, an impressionable age, and the strangeness of the scene remains vividly printed on my memory.

9.2 The Levant Express

When we reached Baghdad, we spent the night in a hotel. The next day my mother, Gordon and I were all sick because of something that we had eaten; but it was not possible to delay very much. We had to leave Baghdad on the next leg of our journey. We traveled on "The Levant Express", which was just a station wagon on which we three were the only passengers. Once again we drove across the desert, this time in the direction of the Iranian border.

When we reached the border, the guards welcomed us warmly and offered us tea. They knew that we were coming because of a message sent by my father. After crossing the border into Iran, we began to drive up into the mountains. Finally we reached the place where we were scheduled to stay for the night. We had an anti-insect airosol can with us, and we were spraying the room, preparing to settle down for the night, when there was a knock on the door. It was my father. He had been too impatient to wait for us in Tehran, and he had come to meet us. We had not not seen him in two years. He was amazed by how much Gordon and I had grown. Here is my mother's description of our meeting:

The boys and I arrived at Hamadan (the first city of the high plateau of Iran) at sunset. We were exhausted after the long journey, which we had begun at 2.30 that morning, so we decided to have dinner in our hotel room. It had been brought to us, and we were feeling a bit revived, when there was a knock at the door. We opened the door, and there stood Ben - our darling father whom we had not seen for two years. He was looking brown and fit and handsome - smiling his special smile and hugging us all at once. He could hardly believe that the boys could have grown so much.

I can't remember how we ever got to bed - there was so much to talk about. But the next morning we set off in the big Packard, which Ben had just driven up from the Persian Gulf; our station wagon followed behind.

9.3 A prince of the old dynasty

My mother's narrative continues:

When we arrived at the house which Ben had prepared for us, we found that it was a mansion. All our servants - cook, butler [gardener], house boy, and chauffeur, were lined up to welcome us. Our greetings had to be in pantomime, as we could speak no Persian, and they could speak no English.

We entered the great front door and stood in a beautiful long hallway, with a graceful stairway at the end. On our right was a huge gold-framed French mirror. Doors opened into unbelievable rooms. There were two reception rooms, a library, a big ballroom, [and] a dining room to seat twenty-four guests. All together there were eighteen rooms. Everything was different in concept from the lovely but more modest homes that we had had in Beirut and Boston.

Eventually we got used to seated dinners of twelve to twenty-four guests, served by waiters wearing white gloves, and [we] were able to make friends with people in spite of the

protocol. The American Ambassador became a close personal friend, and his boys shared rides to school with our boys. Ben often conferred with the Shah, and I was on the Red Lion and Sun (Iranian Red Cross) committee of Princess Shams, and went regularly to her palace for meetings.

The Iranians are an ancient and cultured people. High and low, [they] have a native refinement and charm. Many forms of feudalism were still in practice. For instance, a rich man might own several villages, but often the paternalism of these men was humane and kindly.

Were there only eighteen rooms in that house, as my mother states, or were there nineteen, as I seem to remember? No matter! In any case it was a very big house, built for entertaining on a grand scale. The ballroom had a raised platform for an orchestra, and on the wall above the orchestra platform there was a large Rubens-like painting of naked women. The wall of one of the living rooms consisted of mirrors, and these could be slid to one side, revealing a secret stairway down to a bar, with barstools and neon lights. Next to the bar was a zerzamine the same size as the ballroom, with tiled a floor, a pool and a fountain. In Iranian architecture, zerzamines are living rooms below ground level. They are used in the summer because they remain cool when other parts of the house would be too warm. The tiled floor and fountain of our zerzamine aided the cooling.

The house belonged to an important Iranian land owner who was spending some time in Paris. It had been convenient for him to rent his house to my father, and the servants went along with the deal, except for our chauffeur, Mhedi, who was from the Ministry of Health. The gardener was called Abou Gassim - a pleasant man in his forties. He had a bad back, and so a few of his duties had to be performed by my father, Gordon and myself. The water for bathing etc. came from a cistern, and it had to be pumped up to a tank on the roof of the house. This was theoretically Abou Gassim's duty, but because of his bad back, the pumping was done by us. The cistern was filled with water that came from a ditch beside the road, but hopefully the dirt settled out from the water after a long period in the cistern. Our drinking water we obtained from a well at the American Embassy.

To continue with the servants, the houseboy was called Sway. He had learned his English from the American Army, and in the mornings he often greeted my mother by saying cheerfully, "Good morning Mrs. Avery! It's cold like hell outside!"

There was also a fierce German Shepard dog who went with the house. He was called Farkash. If we walked quietly from the front steps to the gate, Farkash would permit it, but he would not permit us to throw a ball back and forth in the garden.

My mother says "Eventually we got used to seated dinners of twelve to twenty-four guests, served by waiters wearing white gloves..." We not only got used to it; we began to feel that this way of life was entirely natural. With gas-like dynamics, our vision of ourselves expanded into the available space. As a symptom of this expanded vision, my mother one day brought home a prince to play with with Gordon and me. He belonged to the old Qajar dynasty, which had been overthrown by Reza Shah, but nevertheless, a prince is a prince. He was a pleasant boy, about ten years old. His first smiling words were "Do you know jazz?" We had a good time playing ping-pong with him, and on another occasion he went with our family on a tour to the Ancient City of Ray.

9.4 Wealth and poverty

Our house was surrounded by a high wall, with gates at the front and rear. When one looked out of the window of the pink-marble-floored upstairs bath- room, it was possible to look down to the street outside the wall and to see a family of beggars who lived there both summer and winter. The wall was their only protection from the elements. They drank water directly from the ditch (in farsi called "jube"), into which filth from the street and sidewalk was swept. They made their own contribution to the filth, since they had no bathroom other than the wall.

It seemed incredible to me that they did not all die quickly from such a life. It was also painful to contrast their poverty with our wealth, and I strongly wished to help them. However, poverty was everywhere in Iran at that time. The scale of the problem was huge. If you helped one tiny group of people, others would come from all sides, and there would be a danger of drowning in the widespread misery. What was the solution?

My mother, after learning farsi, worked on a few projects designed to help. There was a day care center for the children of beggars on which she worked with some Iranian girls. She also worked together with the Shah's sister, Princess Shams, on the committee of the Red Lion and Sun, the Iranian branch of the Red Cross. Finally she tried to start industries to give employment to beggars. She went to the Tehran museum and found ancient motifs that appeared in Iranian art. These, she hoped, could be printed onto items such as place mats for dinner tables, and the output could be exported for sale in the west. My mother's efforts with handcrafts were partially successful, and she continued to work with these projects even after we had returned to the United States.

In 1945 the population of Tehran was about 600,000. (Today it has grown into a modern mega-metropolis of more than 12 million!) The city was built on a sloping plane that led up to the base of the Elburz mountains. The altitude of Tehran was about 3,000 feet, but the northern part was of course higher than the southern part because of the slope of the plane. Today, Tehran extends right up to the base of the mountains which start at about 6,000 feet.

When we lived there water from the mountains flowed through Tehran in the jubes or ditches beside the streets, becoming progressively dirtier as it flowed southward. Therefore the nice part of the city was the north part, because the water was cleaner. Those who could afford it drank water that came to the city from mountain springs in an ancient system of underground tunnels called "qnats". Water from the qnats was carried around the Tehran in horse-drawn tank carts. The driver of such a cart had with him a stack of buckets, and as he drove he called out (for example) "Ab Ali! Ab Ali!" The word "Ab" is farsi for water, and "Ali" the name of a particular qnat.

Before being distributed, the water from the qnats was very pure and safe. However, the distribution system had its faults: When he found a customer, the water cart driver would place his buckets in a row on the sidewalk and fill them with water. When the transaction was complete, he would stack the buckets, one inside the other, and then drive on. Thus, because of the stacking, the contamination from the sidewalk would find its way from the bottom of one bucket into the bucket below it.

Besides not having a modern water system or sewage system, Tehran in 1945 also had some problems with electricity. There was electricity, but not enough to go around. It was decided that the best thing to do, until a new power station was built, was to share the electricity that was available among all those who wanted it. The system of sharing meant that we had electricity only four days each week. On the other days we used candles and lamps.

Our house was on a street called Hjiaban Jalleh, just across from the Swiss Embassy, in the north-east corner of the city (as it was at that time). It was on an old caravan route to China, part of the famous Silk Road. Camels passed our house, just as they must have done in very early times when the Silk Road was an important commercial artery. There were many buses and a few automobiles in Tehran when we lived there, but there were also many horse-drawn carts and donkeys, and instead of taxis we often used horse-drawn carriages called "droshkis", just as in Russia. Gordon and I knew enough farsi to tell the droshki driver which way to go, and not to drive too fast.

As my mother mentioned, the Iranians are cultured, hospitable and charm- ing, not only the aristocrats whom we were privileged to meet, but also the larger population. When we first arrived in 1945 to join my father, my parents were invited to a party at a house which had a large garden. In the garden there was a pool, and in the middle of the pool there was an island, on which roses grew. Not knowing the details of Iranian etiquette, my mother exclaimed "What beautiful roses!" Immediately her host called to his gardener and said a few words. The gardener rolled up his trousers, waded into the pool to the island, picked the roses and presented them to my mother.

The lesson of the roses had not completely sunk in when my parents were invited to another party, this time by the director of the Bank Melli (the Iranian National Bank). During the evening my mother noticed a silver ash tray whose bottom was an old ten Toman coin. "What an interesting ashtray!" she exclaimed. The next day a messenger form the Bank Melli came to our door and presented my mother with a box containing a set of the silver ash trays that she has admired. This time she understood: If a guest admires something, Persian hospitality requires the host to give it to the guest!

The traditional Persian dinner party occurs late in the evening. Often in the summer, the guests are seated in the garden near to a pool. The weather in the summer is always clear, and late in the evening the temperature in a garden is also very comfortable. Hopefully for such a party, the moon will be shining, and its light will be reflected on the water of the pool. After the main course, as fruits are served, a guest will recite the first verse of a poem by one of the great poets, for example Ferdosi of Hafez. It is a game - a challenge to the next person along the table. Will he or she be able to recite the next verse? If so, the challenge passes to the next in line along the table. Another verse is recited and another. Meanwhile the moonlight shines on the pool, and scents from the garden reach the hosts and guests.

9.5 The Ministry of Health

Before telling you about my father's work in the Ministry of Health, I need to say a few words about the historical background of the situation: When World War II began, Iran was ruled by Reza Shah (the same Shah who ordered the automobiles which my parents helped to deliver to him in 1927).

Reza Shah (1878-1944) started his career as Reza Khan, an army officer. Because of his high intelligence he quickly rose to become commander of the Tabriz Brigade of the Persian Cossacks. In 1921, General Edmond Ironside2 masterminded a coup (financed by Britain) in which Reza Khan lead 15,000 Cossacks towards the capital, overthrew the government, and became minister of war. In 1923, Reza Khan overthrew the Qajar Dynasty, and in 1925 he was crowned as Reza Shah, adopting the name Pahlavi.

Reza Shah believed that he had a mission to modernize Iran, in much the same way that Kamil Ata Turk had modernized Turkey. During his 16 years of rule in Iran, many roads were built, the Trans-Iranian Railway was constructed, many Iranians were sent to study in the West, the University of Tehran was opened, and the first steps towards industrialization were taken. However, Reza Shah's methods were sometimes very harsh.

In 1941, while Germany invaded Russia, Iran remained neutral, perhaps leaning a little towards the side of Germany. However, Reza Shah was suf- ficiently critical of Hitler to offer safety in Iran to refugees from the Nazis. Fearing that the Germans would gain control of the Abadan oil fields, and wishing to use the Trans-Iranian Railway to bring supplies to Russia, Britain invaded Iran from the south on August 25, 1941. Simultaneously, a Russian force invaded the country from the north. On September 17, 1941, Reza Shah was forced into exile, and replaced by his son, Crown Prince Mohammed Reza Pahlavi. Both Britain and Russia promised to withdraw from Iran as soon as the war was over.

During the remainder of World War II, although the new Shah was nominally the ruler of Iran, the country was governed by the allied occupation forces. From February, 1944 until the end of the war, my father was Director General of Public Health for the occupation government. After the war, inde- pendent government was restored to Iran, but the Shah's government invited my father to remain as Advisor to the Ministry of Health. He was working in this capacity when we joined him in 1945.

Here is what my mother wrote about my father's work:

Ben's work with the Ministry is best described in the letters which he wrote, and which are included in the pocket folders with these notes. He succeeded in getting typhus under control, and began a nation-wide attack on malaria. This was a debilitating disease which affected a large percentage of the population. In some places 98% of the people were infected, and the crops could not be harvested because so many were sick. In re-reading his letters, I am struck by the positive approach to all the problems, and by his great energy. All colleagues seem to be his friends, and there is not a single complaint in any one of [the letters]. Gradually he shifted public health policy away from treatment to prevention by means of sanitation, mosquito control [and] public baths for the poor to get rid of lice and fleas - all vectors of disease.

Here is a speech which my father made on **The Role of Public Health in Relation**

to the Seven Year Program. The Seven Year Program to which he refers was a program for the overall economic development of Iran.

Iran, the scene of ancient glories and achievements, is today on the thresh- old of tremendous economic and social advances. Following years of planning and preparation, she is about to take enormous strides forward toward health and prosperity for all her citizens. The Seven Year Program, which was recently approved by the Majles to be put into operation this year, envisages notable developments, not only in agriculture, industries, mines, roads, rail- roads and communication, but also in education and public health, which are basic essentials for the security and strength of any country.

Without intelligent, vigorous and energetic workmen, new factories, even the best-planned and most suited to the economy, cannot succeed. Great agri- cultural developments through irrigation of rich and previously unused lands require, first of all, sufficient capable farmers, if they are to increase the food supply and wealth of the people. A group of villagers, all of whom are physically below par and with a large proportion intermittently ill and unable to work, will not show energy and ambition to better their lot. In some areas the ravages of malaria and other diseases are so serious that whole villages can be found without a living child under two years of age, and with such a tendency to decreasing population one sees, instead of prosperity and progress, abandoned ruins and desolation...

I have seen whole villages in the rich valleys near Shiraz where the crops could not be harvested before much was wasted and lost, because just at harvest time most of the able-bodied men and women in the villages were flat in bed with the chills and fever of malaria. Such disease-riddled farmers cannot benefit much by new irrigation. It is a vicious circle; the sick become poorer, and because they are too poor to buy food, they become more undernourished and sicker.

The answer has been realized from the beginning by those responsible for drawing up the Seven Year Program. Even the most completely [uneducated] and undernourished villager can be protected from many diseases which sap his strength and prevent his working and improving his condition. In spite of himself, and even without his active cooperation, desirable as that is, he can be guarded from malaria by DDTing his village, kept from having diphtheria, smallpox or typhoid by proper vaccination and provided with pure drinking water to decrease dysentery and allow his babies to grow up and become productive citizens. The vicious circle can and will be broken...

Just over three years ago I talked to the Iran-American Relations Society on "A Realizable Public Health Program for Iran", reporting concrete achieve- ments of the Ministry of Health in combatting typhus-exanthematicus and re- lapsing fever, improving vaccination and beginning a program of malaria con- trol. I pointed out nine major fields in which, even with our limited resources, we could make important advances. Now, every one of those projects is either in actual operation or embodied in the new Program.

The original Seven Year Health Program was planned to provide all the minimum needs of Iran in relation to health. It included not only the training of necessary technical personnel and the public health measures necessary for the prevention of disease, but also an extensive program of hospital and clinic development. Since its cost was conservatively estimated at over 17,000 million rials and only 1,500 million rials could for the present be

counted on, a Revised Seven Year Health Program was drawn up, omitting the treatment phase, and reducing the training and "prophylaxis" to the most urgent and essential items. It had to be assumed that treatment, which of course must be provided, would be directed by an independent agency such as a National Hospital Commission and supported by special taxes or health insurance. Since the cost of treating a disease, once contracted, is many times the expense of preventing its spread, it was felt that our limited funds should be devoted to measures of preventive medicine, which are, after all, the real function of a health department. Even these had to be strictly curtailed to meet the limited budget tentatively assigned to the Revised Progra

The most lamentable aspect of the present health situation in Iran is the lack of public health care for the 13 million villagers and tribesmen scattered through the rural communities of the ostens. What few doctors and other medical per- sonnel we have are concentrated mainly in the cities and larger villages, leaving most of the 43 thousand villages completely uncared for. Even the 300-odd clin- ics operated by the Ministry of Health are on the whole poorly run because, in the face of excessively poor communications and great distances, they are pri- marily directed from Tehran instead of being under local supervision. Finally, even the most public-spirited doctor is, with good reason, completely unwilling to live in the usual quarters available in a provincial village, where he and his family cannot find even the most rudimentary housing facilities normally demanded by an educated person. Successive health ministers of great wisdom and vision, such as H.E. Dr. Said Malek, H.E. Dr. Manoutcher Eghbal, H.E. Dr. Abbas Adham and H.E. Dr. Abbas Nafici, have continuously stressed the necessity of getting our doctors out to the provinces, but have been prevented from accomplishing their purpose by lack of living accommodations and the abysmally low living allowances provided by present government regulations.

To meet this situation, the first and most essential section of the health program is the adoption of a procedure already proved highly successful in nu- merous countries throughout the world. In every osten, from 20 to 30 local Health Areas will be set up, each one to care for a population group of about 50 thousand people. To provide a base of operations with storage facilities, preven- tative medicine clinic and living quarters for the staff, Health Centers must be constructed in many places where suitable buildings do not exist. These will be located in strategically situated villages, one as the principal Center and from one to four as subsidiary Centers. Construction will be of local materials and of simple type, to provide suitable facilities at minimum cost.

Operating from the Centers, the staff will provide complete public health care for the villagers in their section of the Area... Their first step will be to organize a local Health Council, composed of the leading citizens and govern- ment officials, to cooperate in the various activities, which in many cases will be made community projects with local participation. This was very successfully carried out as a trial measure in Khorramabad, where the Health Council gave important assistance to the malaria control project, and in fact celebrated the first Now Rooz after their organization by telegraphing and writing to Tehran to demand that the control work should be continued and expanded. At Isfahan, Shiraz and elsewhere such local participation through a Council has also proved of the greatest value.

Under the close supervision of the directors of each Center, especially trained Vaccinator

Malaria Field Workers will spend most of the year giving complete vaccination coverage to the villagers under their care. Infants and young chil- dren will be protected against , and both children and adults against smallpox and typhoid fever. During the proper season, the same personnel will carry on complete malaria control by DDT residual spraying or by prevention of anopholene breeding, as found effective under conditions existing in the locality concerned. At the same time, all clinical cases will be treated by the medical staff with one of the new, cheap and effective antimalarial drugs. One of the greatest values of the Centers will be the opportunity they offer to permanently subdue and even eliminate the sources of malaria from Iran.

The fact that such a large proportion of the babies born in Iran never live to grow up as useful citizens and that so many mothers lose their lives in connection with childbirth, presents a challenge which the Health Area organization can go far in meeting. The staffs of the various Centers will conduct Pre-Natal and Well-Baby Clinics and will carry on widespread education of the mothers in the villages on how to look after their babies. Because of ignorance and poverty, the problem is difficult, but the most effective approach is the direct one, on the local level, through personal advice and demonstration classes held in the villages.

The same holds true for the control of trachoma, the venereal diseases, tuberculosis, etc. Preventive clinics plus personal education of the villagers is the method which will bring results. The control of trachoma requires teaching the individuals that it is spread by contact, either by dirty fingers or by infected materials or water or by insects, and that to prevent it, cleanly habits and sanitary measures to prevent fly breeding are required. Treating infected eyes is important and, provided the villages are cleaned up to prevent fly breeding, it is a help to use DDT and other insecticides to kill off the few flies remaining.

Because of the importance of sanitation and pure supply of drinking water in decreasing not only trachoma but dysentery, infestation with intestinal par- asites and infant mortality, the staff of the Centers will instruct their villagers in this regard and actively promote community projects for improved water supply and sanitation. So far as possible, these will be carried out either by the landlord or by the villagers themselves.

By virtue of being on hand in the Health Area, the medical staff will be able to recognize cases of contagious diseases and prevent their spread by caus- ing them to be isolated by home quarantine or otherwise. In case a serious epidemic breaks out in the Area, such as those of typhus exanthematicus and spirochaetosis which were recently experienced by Iran, the entire staff of the Area may be called upon to control it, if necessary with the aid of staffs form neighboring Areas.

A special need of quarantine which will be met by the Seven Year Program is the establishment of adequate quarantine stations at Tayebat and Pahlavi where they are lacking at present, to guard against the introduction of diseases from abroad such as louse-borne spirochaetosis which came over the Russian border three years ago to cause an epidemic involving 27,000 people in the one year of 1325.

To meet a very serious lack which now exists, a National Health Institute will be established possibly by taking over and expanding the present Pasteur Institute. This will serve the entire country as a food-and-drug testing, diag- nostic and research laboratory and will

provide facilities for training advanced personnel in specialized fields of public health. It will then be possible to exam- ine drugs and foods for toxicity and the presence of infection or adulteration, to furnish expert diagnostic reports on material too difficult to be handled in provincial diagnostic laboratories and to do extensive research on problems of disease transmission which are of special interest to Iran. Without the ex- pense of a trip abroad, doctors and other medical and technical personnel can be trained in the Institute in various public health procedures and techniques, such as entomology, malariology, biostatistics and diagnostic laboratory methods.

To staff the Health Centers, a large number of trained personnel will be required. The Ministry of Health now has technical personnel numbering 2020, 1544 of whom are working in the provinces. Some of these can be utilized, provided that they are first given an intensive and rapid course in public health techniques, as contrasted with the primary treatment functions to which they now devote most of their time. These will be used to staff those Centers which are complweeted and ready for use before additional personnel have time to be trained. The additional hebdars, pezeshkiars, midwives, laboratory technicians, home-visiting nurses and vaccinator-malaria field workers who are required will be trained in two large and three small schools which will immediately be established in the provincial capitals. Students will be recruited from the ostens, in order that they will be willing to return to the region of their homes and work in a rural Health Area upon completion of their training courses. The Program also includes the training in public health fields of graduate doctors, both in the Institute in Tehran and in schools of public health in other countries...

In conclusion, it appears that not only is progress in public health and pre- ventive medical care essential for the wellbeing and economic advance of Iran, but great developments are already occurring and will be enormously acceler- ated and expanded under the Seven Year Program, when that begins to function.

Although this speech is in English, most of my father's work at the Ministry of Health was conducted in French, which was at that time a language spoken by almost all educated people in the Middle East. My father's French was not perfect, but he understood everything that was said to him, and he could express himself in French with great fluency, although perhaps not with perfect grammar.

As my mother mentions, my father succeeded in shifting public health policy away from treatment of diseases and towards preventive medicine and sanitation, these being far more cost-effective. When he began his work, there were hospitals for the rich in the large cities, but beyond that little else. One of my father's great achievements was the initiation of malarial control programs which finally virtually eliminated malaria from Iran, thereby perhaps saving the lives of as many as a million children. The ecological consequences of using DDT were at that time not known, but even if they had been known, the goal was so important that the use of DDT for malarial mosquito control might still have been justified.

My father frequently met with the young Shah, and was very much im- pressed by his sincere wish to to do all that was possible for the benefit of his country. My father told us of an occasion when he was walking in the palace garden with the Shah, who said to him,

"What would you advise me to do to help my country?"[1]

There was once an outbreak of plague in Afghanistan, and my father traveled there to discuss with Afghan authorities the measures that were needed to prevent the plague from spreading to Iran. My father also traveled to Rome as one of the two Iranian delegates to a conference drafting the charter of the World Health Organization.

My father's secretary at the Ministry of Health was a pleasant, youngish man called Mr. Davidian. He and my father frequently played tennis together. One day when they were at the tennis club, the Iranian champion, Aftandilian, together with his partner, challenged them to a game of doubles. Mr. David- ian and my father won. I don't know how they managed to do that, unless Aftandilian's partner was a really bad player.

[1]Perhaps it is appropriate at this point to say something about say something about Shah Mohammed Reza Pahlavi and what happened to him. His father, Reza Shah, had a strong sense of mission, and felt that it was his duty to modernize Iran. He passed on this sense of mission to his son, the young Shah who was in power when we were there. The painful problem of poverty was everywhere apparent, and both Reza Shah and his son saw modernization of Iran as the only way to end poverty. The goal of modernizing Iran and ending poverty was adopted as an almost-sacred mission by the young Shah, and it was the motive behind his White Revolution in 1963, when much of the land belonging to the feudal landowners and the crown was distributed to landless villagers. However, the White Revolution angered both the traditional landowning class and the clergy, and it created fierce opposition. In dealing with this opposition, the Shah's methods were very harsh, just as his father's had been. Because of alienation produced by his harsh methods, and because of the growing power of his opponents, the Shah was overthrown in the Iranian Revolution of 1979. One can also say that the westernization, at which both Shah Reza and his son aimed, produced an anti-western reaction among the conservative elements of Iranian society. Iran was "falling between two stools", on the one hand western culture and on the other hand the country's traditional culture. It seemed to be halfway between, belonging to neither. Finally in 1979 the Islamic clergy triumphed and Iran chose tradition. After the deposition of the Shah, Princess Shams (with whom my mother had worked on the committee of the Red Lion and Sun) came to New York with her sister, Princess Ashraf. My mother went to New York to meet them and to arrange the practical details concerning their arrival. My mother spoke to the Shah's sisters in farsi, which she had kept fresh by talking with Iranian diplomats in Washington.

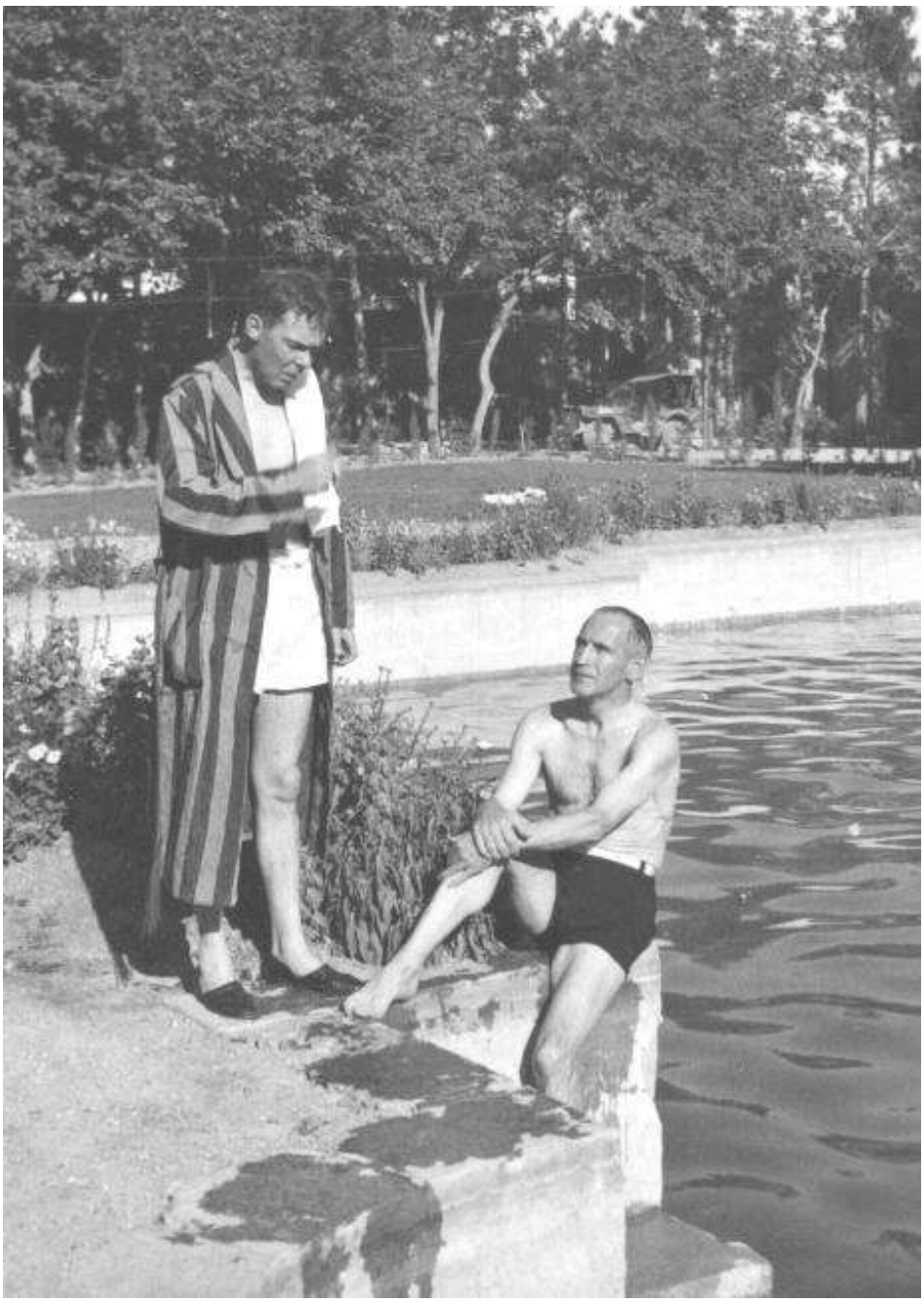

Figure 9.2: **My father with H.E. Ambassador George V. Allen at the US Emassy swimming pool.**

Figure 9.3: **From left to right, Prime Minister Gavam, my father and the Shah. They are at the Goulistan Palace in a room whose walls are decorated with a mosaic of tiny mirrors.**

Figure 9.4: **My father with his high silk hat, ready to visit the Shah.**

Figure 9.5: **My father and H.E. Habib Nafici at the Majlis (Parliament) .**

Figure 9.6: **My mother with Princess Shams at the American Embassy.**

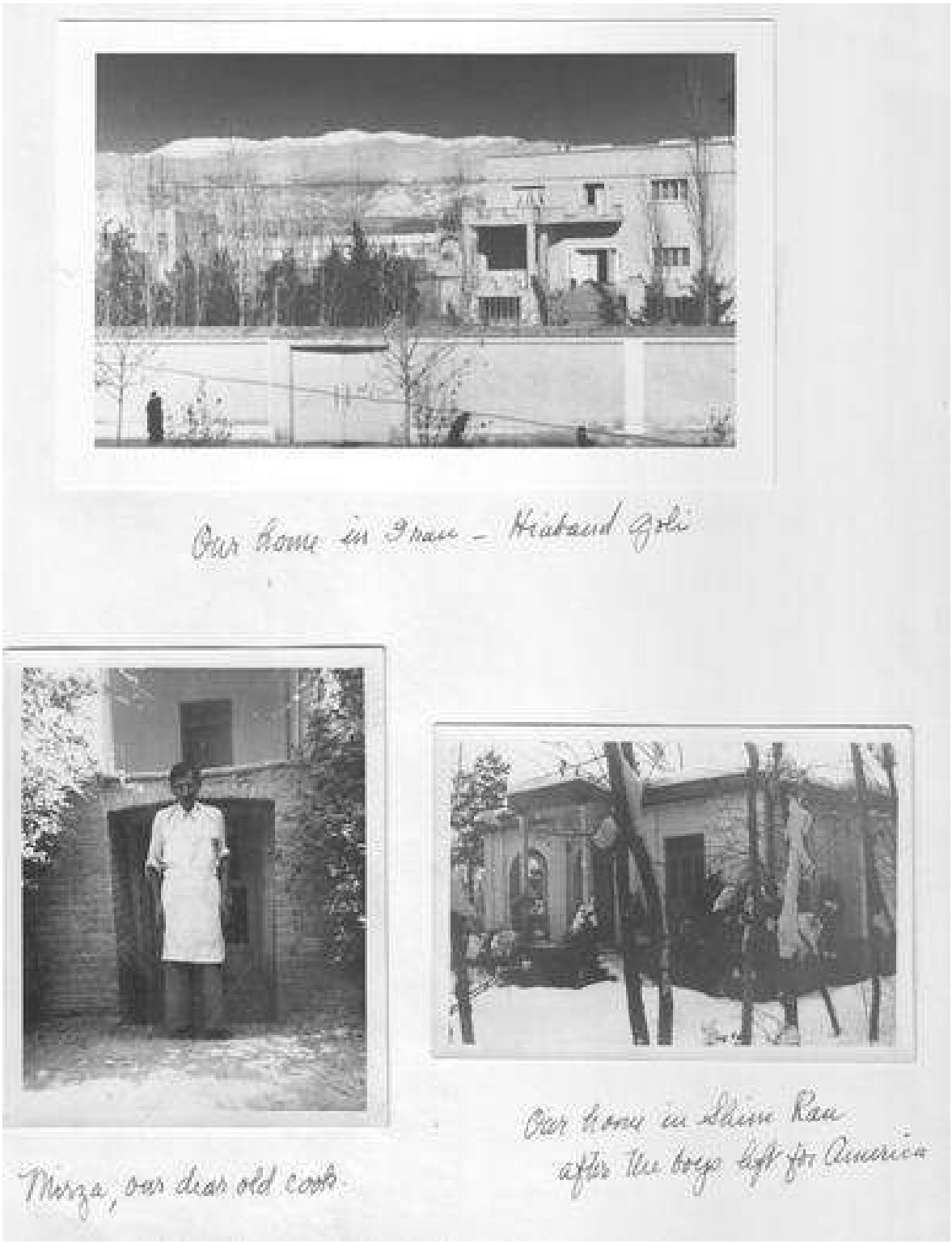

Figure 9.7: **Some photos from Tehran. In the lower left-hand corner is our wonderful old cook Mirza, who joined our family during the last years that we were there. .**

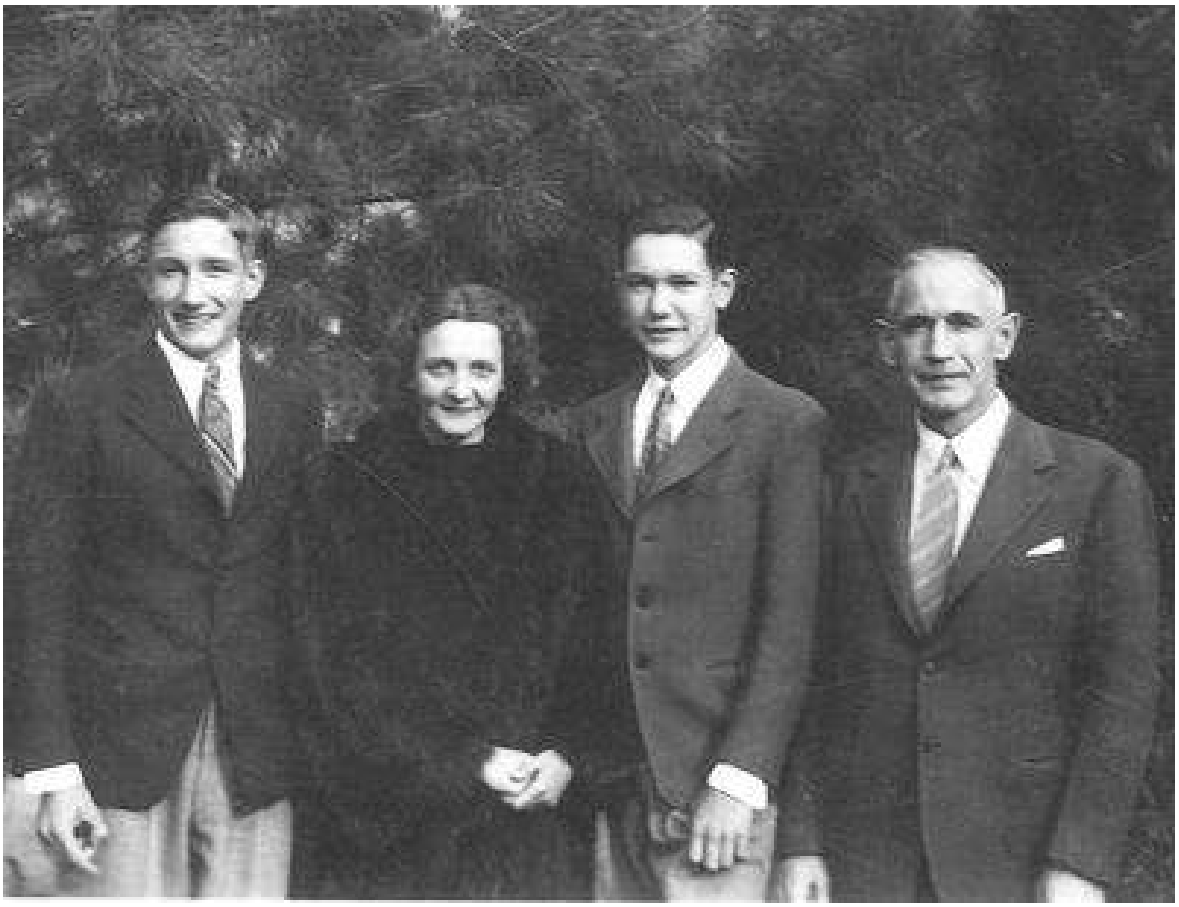

Figure 9.8: **The four of us in Tehran. . .**

9.6 Community School

During our time in Tehran, Gordon and I had the privilege of attending a won- derful school, run by the Presbyterian missionaries. Here is what my mother says about it:

The American Presbyterian Mission had been at work in Iran for many decades, and [had] sponsored many kinds of work: hospitals, health clinics, schools, printing press and church. They also ran a school for [English speak- ing] children, grades 1 to 11. Our boys spent three outstandingly happy years there. Mr. Fisher, the principle, drove with a loose rein, and allowed the joy to overflow. Singing, plays, athletics [and] Boy Scouts all flourished. Gordon and John climbed the high Elburz mountain [Tochal] (13,000 ft.) many times, and explored the Haft Hose (Seven Pools) Valley on donkeys. Still the instruc- tion was good enough so that when they came back for last years at Andover Academy, they stood in the top 10% of their class.

The English-speaking Community School, which we attended, was one of two foreign-language schools in Tehran. The other, Jean d'Arc, taught in French. Sometimes the children of Iranian and Iraqi families who could afford it attended both schools, one after the other, in order to learn both languages. For the most part, the children of the diplomatic corps in Tehran attended Community School, just as we did. Among our classmates, there were also a number of refugees, mainly from Russia. The result was a school with students of 28 different nationalities and 8 religions. Nevertheless, the harmony at the school was perfect.

The atmosphere was one of love and kindness. Of course the students came from privileged homes, so their was no reason for them not to be kind, but still, even taking this into account, the degree of harmony and warmth in the school was remarkable. The students at Community School realized that it was something very special, and they have continued to hold reunions in far-flung places like New York and San Francisco, even today, long after the school was closed down forever.

Gordon and I were in a car pool with two young sons of the American Ambassador, H.E. George V. Allen. When it was their turn to drive, we were called for by a Rolls Royce limousine belonging to the embassy, so on those days we really arrived in style.

Americans were very popular in Tehran at that time, and so, immediately after we arrived, I was elected to the school government, together with Sally Schwarzkopf[2] who had also recently arrived in Tehran. No one knew us because we had just come. The only reason that we were elected was that we were the "new Americans".

Soon after our arrival, Gordon was given the staring role in a play called "Brewster's Millions". I was given two subsidiary parts, the Steward and the Quartermaster on a ship on which the millionaire Brewster was sailing. At one point in the play, Gordon was supposed to shout "Quartermaster! Quartermaster! Give me the keys!" When the play

[2]Sally was the sister of Norman Schwarzkopf who later became well known during the first Gulf War. The Schwarzkopf family lived not far away from our house at Hjiaban Jalleh, and we sometimes went there to see films. General Schwarzkopf, Norman and Sally's father, had once been the head of the New Jersey State Police, and in those days he used to introduce a radio program called Gang Busters - "true stories of the fight against organized crime". In Tehran, he was Advisor to the Iranian National Gendarmerie.

was performed, Gordon mixed things up a little because of the two roles that I was playing, and he shouted "Stewmaster! Stewmaster! Give me the keys!", a line that brought down the house.

Gordon and I were usually invited to parties once or twice a week. We would arrive at the house to which we had been invited at about 6 o'clock in the evening. There was always a hand-wound phonograph playing tangos, waltzes and fox-trots, and in winter there was usually a kerosine-burning stove to warm the room. We spent the time until 11 o'clock dancing, and then a buffet dinner was served. There was always much more food offered than we could possibly eat, this being required by the rules of Iranian hospitality. After dinner, we thanked our host and hostess and went home. Whenever it was our turn, we gave a similar party.

When I arrived in Tehran, I did not really know how to dance, although I had attended a few dancing classes in California. This was not a problem because some of the older girls taught me how to dance. They had no reason at all to do this, except the desire to be kind, and this illustrates the wonderful atmosphere of the school. When the older girls taught me to waltz, I whirled around the floor so violently that my partner and I ran into a potted plant and broke the pot, but this embarrassing crime was immediately forgiven with many smiles by the host and hostess.

During World War II, Reza Shah had offered refuge in Iran to many people fleeing from Hitler's Europe, and among them were some of our teachers at Community School. For example, Latin and French were taught by a wonderful lady called Dr. Anna Farjean, who had a Ph.D. in philosophy. She was unmarried, and lived together with her mother. We sometimes called her "Aunt Anna" behind her back. Whenever we were tired of Latin, we could always distract her by asking her to tell us about her experiences climbing in the Alps.

The more advanced Latin class, which Gordon attended, consisted of him and five girls. Since there were so few in the class, Miss Farjean sometimes held it on an upstairs balcony of the school. All of the girls were allowed to sit in a row on the balcony and knit during the class, which Gordon thought was somewhat unfair. Miss Farjean told him that if he could learn to knit, he would be allowed to do it too. In order to receive equal treatment, Gordon learned how to knit (but with very thick pins), and he made me a sweater during Latin class.

When Miss Farjean wanted to rebuke us, she said severely, "Boy! You have not to do this! Tomorrow you will be a man!" This method of rebuke was different from that of Dr. Rebon, who also had a Ph.D. and also was a Jewish refugee from the Nazis. Dr. Rebon taught mathematics, and his method of keeping discipline was to throw a small piece of chalk, with great accuracy and speed, at an offending student.

In general, the Presbyterian missionaries who ran Community School made no attempt to convert the students to Christianity. However, a Bible Studies course was a part of the curriculum. I have always been grateful for having had this opportunity to study both the Old and New Testaments in detail. Our Bible Studies class was taught by one of the missionaries, a lady called Mrs. Paine. Because of her somewhat dour view of life, I thought that she ought to have spelled her name "Pain".

Mrs. Paine was anxious to show that she was open minded, and she main- tained that all of the miracles described in the Bible could alternatively be explained without invoking anything besides natural laws. As an example, she told us about the death of Harrod, who is described in the Bible as vomiting up his insides. This could have been a miraculous punishment for his sins, Mrs. Paine told us, or alternatively it could have been due to an infestation of worms. This example gave Mrs. Paine an opportunity to describe how common such infestations are throughout the world, with two thirds of the global population seriously infected. She then told us about a little girl, the daughter of a missionary whom she knew, who was sitting in church when a tiny worm inside her eye began to crawl across the interior of the lens. I remember this story vividly many years later.

We also had a class in which the students from various religions were en- couraged to tell about their beliefs, and a class on Persian mythology, predating Islam. For example, we learned the story of the White-Headed Zal, and the story of Rostam and Sohrab[3]

Community School was the home of a branch of the Boy Scouts of America, Troop 1 of Tehran. There was only one Boy Scout troop in the country, so of course ours was Troop 1. Under Reza Shah, there had been a Boy Scout organization, but it was a quasi-military organization, much too similar to the Hitler Jugend, and so it had been abolished by the Allied occupation government.

Troop 1 was quite special because many of the students at Community School had already been through the French school, Jean d'Arc. Having learned French thoroughly, they were now attending Community to learn English. Thus many of "boys" in our Scout troop were actually young men in their twenties. This did not seem to matter, though, and we had a lot of fun.

If you know about the Boy Scouts of America, you will know that every boy starts as a Tenderfoot. By passing a series of tests it is possible to become a Second Class Scout, and then go on to the higher ranks, First Class, Life, Star and Eagle. One of the tests that we had to pass to proceed up the ranks was to earn a certain amount of money by our own efforts, I've forgotten how much it was. The authors of the Handbook of the Boy Scouts of America probably visualized boys earning money by mowing lawns and other small jobs of that kind. However, in Tehran, there was absolutely no possibility for earning money by doing menial work. Jobs in that category were completely occupied by very poor people with whom it was impossible to compete.

Mr. Fisher, the Principle of Community School, realized that this was a problem, and he allowed us to set up all kinds of enterprises on the school grounds. My own method for passing the money-earning test was to bake cakes at home and sell them during recess. My cakes were very popular because they had thick fudge icing, which my parents helped me to make.

Another scouting test was cooking over an open campfire. One of the older boys was

[3]Besides learning farsi thoroughly, my mother read Sir Percy Sykes massive history of Persia. Today I very much regret not having used the opportunity offered by living in Iran to study the country's ancient culture.

especially good at this - in fact he had made it his hobby - but the troop leaders kept failing him. After they finally passed him, they confessed that the many failures were because the food that he made was so delicious that they wanted more and more of it.

I buy a dead duck

As an experiment, Mr. Fisher, decided to start a painting class. The artist whom he hired to teach it spoke only French - he had absolutely no English at all. Therefore he asked me to translate what he said to the class. My French was extremely weak, but I guess that I must have been better at it than the other students, most of whom were younger than I was.

I soon decided that since our teacher spoke no English, I could just invent something to tell the others if I did not understand him, and that is what I did. But one day he said to me, "Jean, pour le prochain fois, voulez-vous acheter un canard?" Had I understood him? Did he really want me to buy a duck? There was no way of telling, but I went to the market and bought a dead duck, feathers and all, and brought it to the next class. It turned out that this was really what he wanted. He arranged a still-life theme with a vase, some fruit and the duck, and we painted it.

Three sisters, three cousins

There were three attractive sisters from Switzerland living in Tehran. Each had married a husband of a different nationality. One married an Iranian, another married an extremely rich Iraqi merchant named Hakim, and the third married a man from Czechoslovakia who was called Proteva. The three sisters had three daughters, Aida, Giselle and Wilma. The cousins did not look alike except that all three were beautiful. Aida, the Iranian-Swiss cousin, had black hair. Giselle Hakim, the Iraqi-Swiss cousin has masses of reddish curls, and Wilma Proteva, the Czech-Swiss cousin, had blond hair and blue eyes.

Gordon and I did not know Aida very well because she did not go to our school. We only saw her when she joined us for skiing. However, we were often invited to parties at the huge mansion where Giselle Hakim lived. Giselle took piano lessons from a Polish pianist, Kapuchinski, who was a student of a student of Paderewski. When we went to parties at the Hakims, Kapuchinski was always there, playing Chopin on their grand piano. Because of this, there was a rumor that Giselle's relationship with him was something more than the usual student-teacher relationship. Finally Giselle confirmed the rumors by marrying Kapuchinski. "Anyway", her friends said, "She certainly did not marry him in order to get free piano lessons."

The third cousin, Wilma Proteva, was enormously popular in Community School. There were several reasons for this. First of all she was beautiful, but perhaps more importantly, both Wilma and her mother had great kindness, natural tact and skill in human relationships. Another point was that Wilma's mother, besides being extremely hospitable, was a marvelous cook. Because of all these factors, whenever a group of us went skiing, we always met at Wilma's house. One or two chartered busses called for us there and took

us out to some mountains at Lashkarak, where we spent the day skiing. In the evening, tired from the day's exertions, we returned to the Proteva's house, where Wilma's mother appeased our ravenous appetites with wonderful Swiss cooking.

Most of the boys in Community School who were more or less Wilma's age were at least a little bit in love with her, but one of the older boys, Elimere Briss, was very much in love with her. Like Wilma's father, Elimere was from Czechoslovakia, and he was one of Gordon's best friends. Sadly for Elimere, he did not have the inside track in the race for Wilma's affections. This belonged to a young man called Gian Ludovico Antonio Maria Penacio, who was the son of the Italian Ambassador. "John Lu", as we called him, had the use of a flashy car from the Italian Embassy, and Elimere grumbled that the car gave him an unfair advantage. In 1949, a year after Gordon and I had returned to the United States, Wilma married John Lu.

Like his father, John Lu became a diplomat. Finally he became the Italian Ambassador to Kenya, where he and Wilma had a very large house. The very last that I heard about them, many years later, was that John Lu had died, and that Wilma was debating with herself whether to continue living in the big house in Kenya.

Delerium

Often the students from Community School went on picnics together. One picnic that I especially remember was to a village east of Tehran, not far from the Shah's hunting palace. Near to the village was a small open area sur- rounded by trees, and this is where we had our picnic. After we had eaten, we put gramophone records on a hand-cranked phonograph that we had brought with us on the bus, and we spent the afternoon dancing tangos, waltzes and foxtrots in the open air. So far as the villagers were concerned, this open-air dancing was a completely revolutionary concept, and crowds of them gathered to watch us.

Late in the afternoon, when Gordon and I returned to our home, I was so tired that I lay down in my bed for a nap. As I lay there, half awake and half dreaming, the events of the day whirled in my mind, raised to a higher level of poetry and beauty - the trees, the dancing, the shocked villagers - all blended into a wonderful dream.

After a while, I got up and went to the window. When I looked down into the back garden, I saw that the houseboy Sway was picking some of our roses. He then went to the back gate and opened it. His girlfriend was there, and he gave the roses to her. I returned to my bed and the beautiful half-dream continued. This time, Sway's small romantic crime blended in with the other events, all whirling around together. Finally I realized that I was delirious. I tried to get up from my bed to tell my parents but I was too weak to move, and I lay there until the morning. In the morning my father took my temperature and found that it was extremely high. He diagnosed my illness as sandfly fever. Sand flies are so small that they can crawl through the openings of screens, such as the ones on our bedroom windows.

There was a blond girl whom I liked at that time, and I had persuaded her to go to a school dance with me, but I was too ill to go. Gordon took her to the dance instead.

Incidentally, in the matter of girlfriends, Gordon was much more advanced and liberated than I was. I stuck to the Americans, but Gordon had at least one Russian girlfriend, or perhaps two - my memory fails me on that point.

Gordik Averian

Like Giselle Hakim, Gordon took piano lessons from the Polish pianist Ka- puchinski. Being extremely musical, Gordon learned to play very well, and one of my pleasant memories of Tehran is the memory of listening to him playing Bach's toccatas and two-part inventions. By that time, the owner of the house at Hjiaban Jalleh had returned from France, and we had moved to a smaller place near to Hjiaban Pahlavi, where there was a piano in the living room.

Gordon also played the cello with a string quartet. The other members of the quartet were three Armenian boys, whose nicknames were Vivik, Bibik and Rondik. (Armenian nicknames always end with "ik".) In order that Gordon should be able to go with them to the Armenian Club, these three young men made him an honorary Armenian and re-christened him "Gordik Averian", a proper Armenian name. Gordon also learned to count in Armenian because when starting a piece, the members of the quartet would count a measure. Thus he learned the numbers, "Mek, yerku, yerek, chors, hing, vets2. Some years later, my parents helped all three of Gordon's Armenian friends to study music at conservatories in the United States.

Other memories

I have several other pleasant memories of our new home near Hjiaban Pahlavi. It was within walking distance of Community School, and on the way home from school I often used to stop at a baker's shop and buy some Iranian bread. There were two kinds - lavash and sangak. Lavash was only a few millimeters thick, but was broad and circular, the size of a large pizza. The baker tossed the dough back and forth between his hands to make it very broad and thin. Then he threw it onto a large paddle and slapped it on top of his dome-like oven, within which a roaring fire was burning. In a minute or so, the lavash was cooked, and one could buy the disc-like bread for one or two rials. When the lavash was fresh from the baker's oven, it was hot, crisp and fantastically delicious. If you kept it for a day or so, it became soft and pliable. It was then possible to spread it with jam and roll it up. Sangak was heavier, thick, and less interesting.

On one occasion, I had great difficulty in walking home from school because the streets were so crowded with people that it was almost impossible to find a way through them. What had happened was this: Both the British and the Russians had promised that at the end of World War II they would withdraw from Iran. The British did so, but the Russians remained, occupying the northern province of Iran, near to Azerbaijan. Not only did the Russians forces stay in the north, they also sponsored a revolution there, and Soviet tanks rolled down towards Tehran. The young Shah went up to the north to organize resistance.

Suddenly the Soviet tanks stopped, and the Russians withdrew. What actually happened was never made public, but apparently there was some diplomatic work behind the scenes in the United Nations. Probably oil con- cessions were made, as well as some threats. However, so far as the public in Tehran was concerned, the whole credit for resolution of the crisis belonged to the Shah. When he returned to Tehran, triumphal arches were built over the roads along which he would pass. These triumphal arches were made from frameworks of poles onto which carpets were attached. The whole population of the city, it seemed, turned out to cheer as he arrived. His great popularity reached new heights.

Other memories from our new home near to Hjiaban Pahlavi are associated with our wonderful cook, Mirza, who joined the family at about the time when we moved. Mirza was a very old man at that time, at the end of an illustrious career during the course of which he had served as cook at three embassies. He knew an amazing number of different recipes, and during his first year with us he never repeated himself. Gordon and I called him "Mirza Khan", the suffix "Khan" being added as a sign of respect. Mirza was illiterate, but at the same time, he was highly intelligent. He had invented his own system of writing, understood by no one except himself, and he used this system for writing recipes and accounts.

Besides showing us his three-country repertoire, Mirza also made many traditional Iranian dishes for the family. One special feature of Iranian rice dishes is that fruit and meat are frequently cooked together to make the sauce. My mother learned from Mirza how to make cherry pileau, and after we had returned to the United States she made it for us, awakening much nostalgia. Gordon makes cherry pileau even today. Mirza also had an amazing pileau that he made using meat and pomegranate juice. In order for the dish to be made correctly, the sauce has to be cooked together with a rusty nail. The rusty nail catalyzes a chemical reaction which makes the sauce turn black, but it tastes delicious.

Mirza always made much more food than we could eat. Perhaps, having cooked for whole embassies, he couldn't quite get used to making smaller amounts, but we realized that there was another factor as well. After we had eaten, Mirza probably took the leftovers back to his family. The amount of food served, in relation to the number of people in our family, became even more pronounced after Gordon and I were sent to boarding school in the United States. Finally my mother also returned to the United States (because Grandma Scales was seriously ill) and only my father remained, but still the amount that Mirza served remained more or less the same. In 1950, when my father returned to America, Mirza wanted to come with him. After all, he was a part of the family. My father realized that because of various regulations, this would be impossible, so he instead arranged for a pension to be paid to Mirza for as long as he lived.

While we were living at the place near Hjiaban Pahlavi, Gail and Linda Williams came to stay with us for a few months while their parents were trav- eling. They were two nice and pretty girls, several years younger than Gordon and myself, daughters of the economist and diplomat Randall Williams. My father had once treated Gail when she was seriously ill, and she gave him credit for saving her life. Over the years, she remained a kind and loyal friend of our family until her recent death from cancer.

Lady Skrine's pantomime

The British Ambassador in Tehran was called Sir Clermont Skrine. One time he came to Community School and gave a talk about his experiences in Kash- mere. I will never forget the beauty of the slides that he showed to us - the rhododendron-covered mountains, the gardens, and the lakes with their or- nate house-boats. It was a wonderful talk, and since that time, I have always wanted to visit Kashmere.

Sir Clermont's wife, Lady Skrine, was a very tall and impressive woman, and she seemed even taller than she was because in the winter she usually wore a high grey sheep-skin hat. Lady Skrine was a strong believer in the rights of animals, and whenever she saw a droshki driver abusing his horse, she would seize the poor man's whip and threaten to hit him with it. The drivers were so astonished that they meekly submitted to this treatment.

One year, Lady Skrine wrote a children's' pantomime based on the story of Cinderella, and she asked some of the students at Community School to perform in it. Peggy Fisher, our Principle's daughter, was chosen to play Cin- derella; I was the prince; Gordon and Norman Schwarzkopf were the two ugly sisters. We performed the pantomime at Tehran's English Speaking Union, and we had a real princess in the audience - one of the Shah's sisters; I cannot remember which one.

At one point in the performance, Peggy and I had to perform a Polka. In our nervous- ness, we forgot the steps and botched the dance completely. Gordon and Norman were the real stars of the show. Afterwards we actors shook hands with the Shah's sister, who was kind enough to say that she had enjoyed our performance. She did not mention the botched Polka.

Expeditions

The plane on which Tehran is built slopes up to the base of a range of mountains, which begin to rise steeply at about 6,000 feet. The nearest peak, called Tochal, is 13,000 feet high, and it is part of the Elburz mountain chain that rises as a barrier between Tehran and the Caspian. To the northeast of the city, fifty miles away, is Mt. Demavand, an 18,600 foot extinct volcano.

Today the city of Tehran extends all the way up to the base of the mountains, but in the 1940's, there was an empty space of about ten miles between the city and the place where they rise steeply. Your grandfather, Gordon and I sometimes drove up to Darband Valley at the base of the mountains, and climbed the remaining 7,000 feet to the top of Tochal. If we started early, there was no problem in reaching the peak and coming down again in a single day.

Because the Elburz mountains form a wall separating Tehran from the Caspian, their southern slopes are very dry, especially in the summers. All the moisture is wrung from the air as it rises and cools on the northern slopes. There is some water, however, because of the winter rains. In general, the slopes are bare and treeless, but in the valleys there are streams, waterfalls, pools and trees. Occasionally, hot from climbing, we swam in a pool at the base of a waterfall. The water was as cold as ice, because the stream was fed by

Figure 9.9: **Our scout camp at Galandouak, 1947.**

melting snow.

Galandouak

In telling you about Community School, I mentioned that we had a Boy Scout troop - Troop 1 of Tehran. We had a great deal of fun, although sometimes the wealthy boys in the troop didn't quite understand the spirit of scouting. For example I remember a hike where one of the boys brought along his family chauffeur to carry a large thermos full of lemonade. We also sometimes rode on donkeys instead of walking; and as I mentioned, some of the "boys" were really young men in their twenties; but in spite of these non-standard features, it was great fun.

During the summer vacations we always spent some time at a summer camp near a village called Galandouak in the mountains north-east of Tehran, not so far away from Mt. Demavand. Our camp was on the borderline between the properties of two big landlords, Mr. Dekhan and Mr. Nafezi. They were quite different in their personalities.

Mr. Nafezi owned the entire village of Galandouak. Perhaps he did not actually own the people of the village, but he owned their houses and the land that they farmed. He might as well have owned the villagers themselves, since they had nowhere else to go.

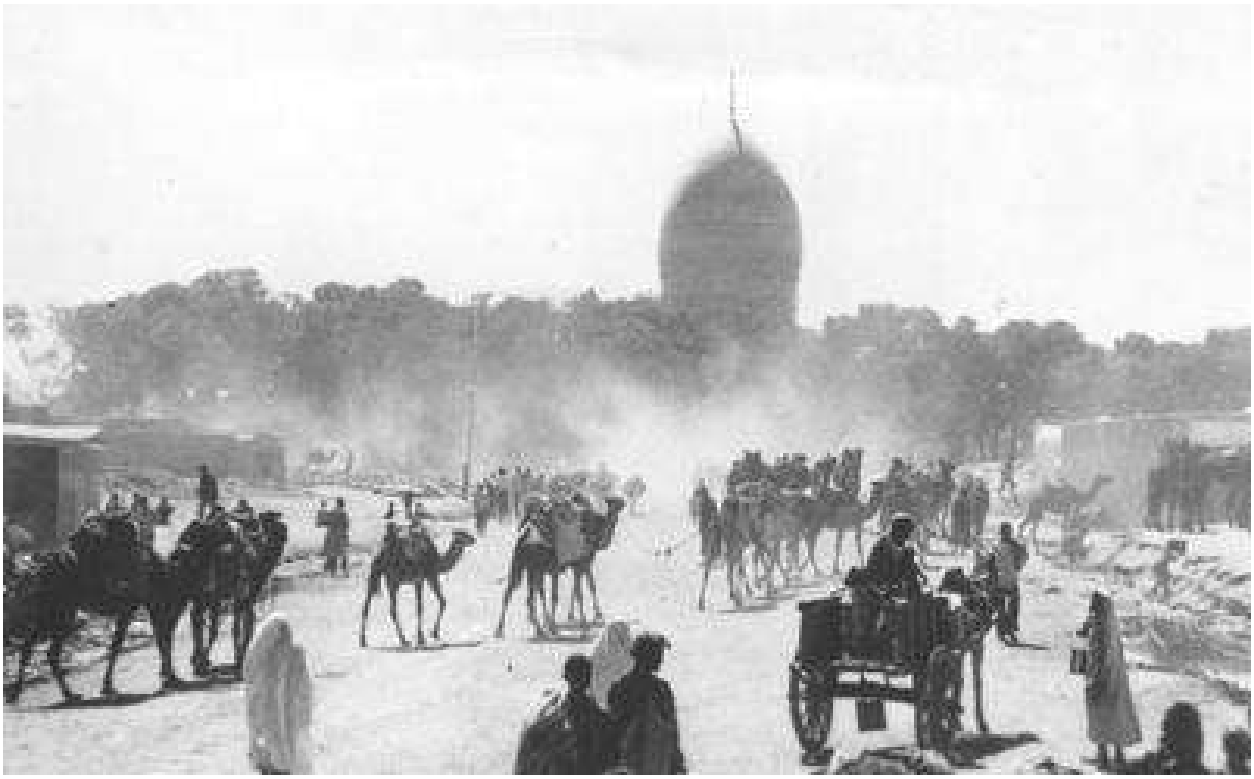

Figure 9.10: **The road to Qom.**

Figure 9.11: **Demavand, seen from the top of Darband Valley.**

Figure 9.12: **Some photos from our expedition to Isfahan.**

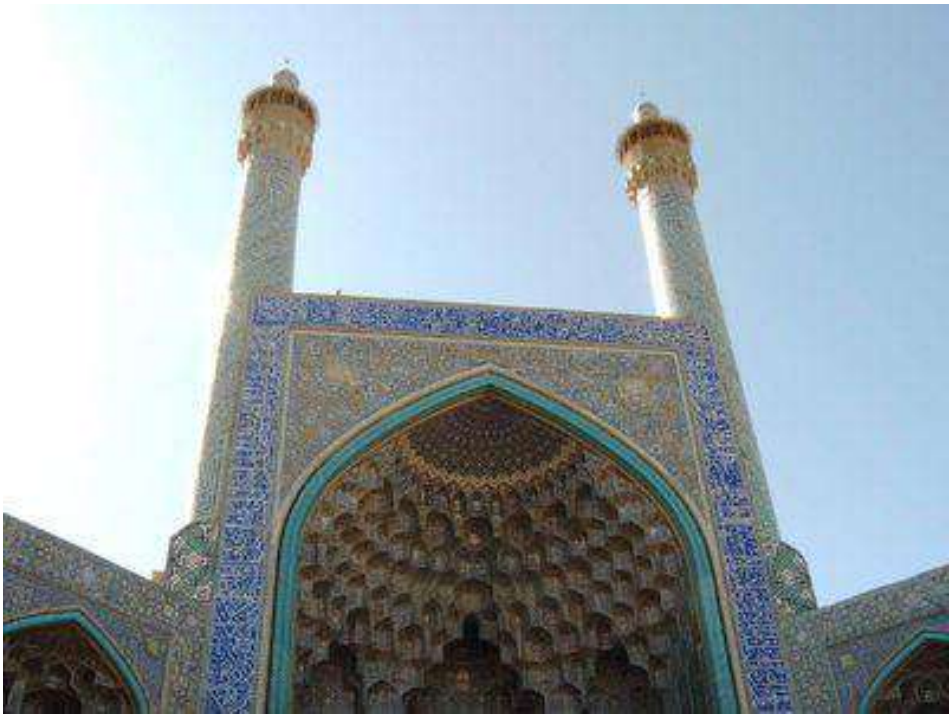

Figure 9.13: **Abbasi Mosque in Isfahan.**

Figure 9.14: **The Ali Qapu palace.**

Figure 9.15: **Naqsh-e Jahan Square in Isfahan, where polo once was played.**

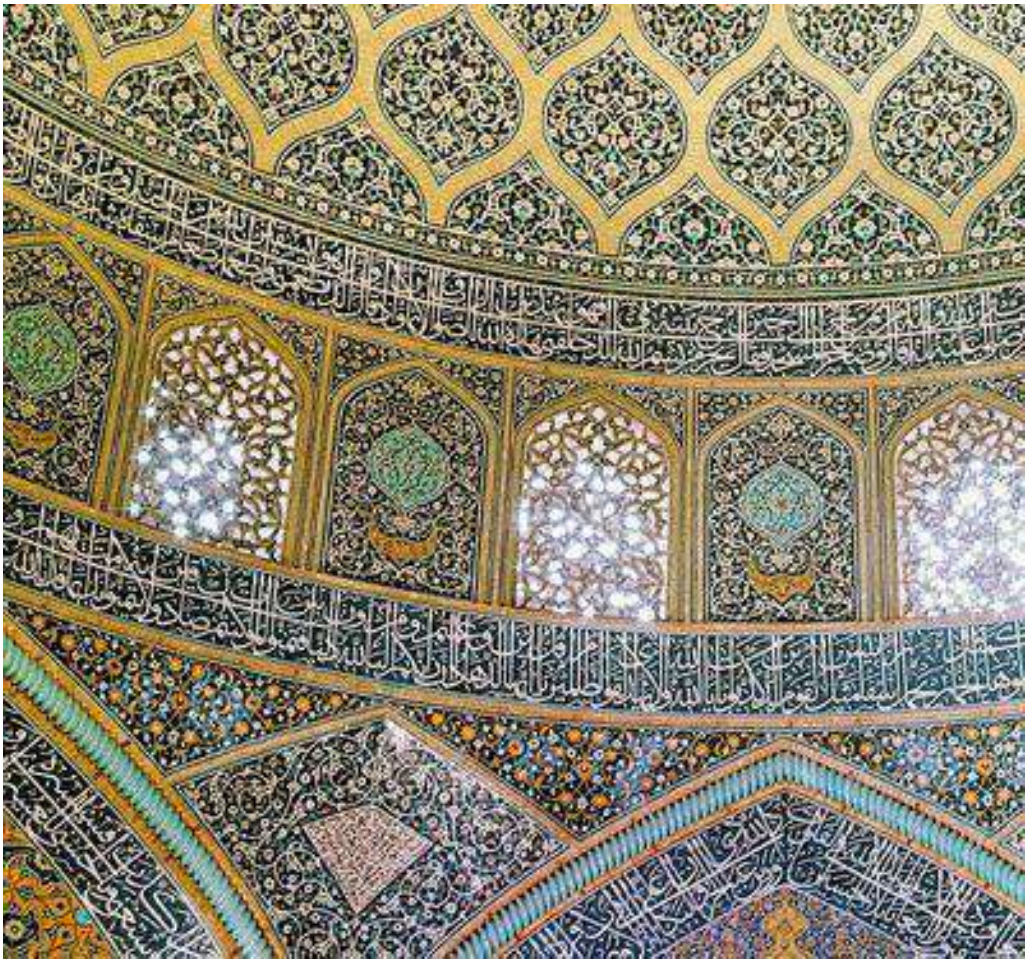

Figure 9.16: **The interior of the Abbasi Mosque.**

Nevertheless, Mr. Nafezi was very kind to the people who lived in his village. He built a school for them, and provided them with medical care.

When Mr. Nafezi's gardener was married, he gave a large party to celebrate the occasion, and invited all of us from our nearby scouting camp. Everyone sat outside in the garden beside the pool at Mr. Nafezi's house, cross-legged on carpets. The music at the party was very interesting: Some of the tunes were western pop songs played in the Iranian style on traditional instruments. Finally as we sat in the garden, the moon came up. Then Mr. Nafezi rose and did a solo dance in the moonlight, in honor of his gardener's wedding.

Mr. Dekhan was unusual for an Iranian landlord because he liked to go out and work in the fields, right beside his villagers. He was very much interested in improved agricultural methods. On his property there were several orchards, and Mr. Dekhan had decided that it would be better for the irrigation of the orchards if the stream beside our scout camp could be diverted to another course.

Mr. Dekhan came to us and suggested that the scouts should help him to build a dam to divert the stream. "It will be a memorial", he told us. We laughed a little at this pronouncement, and repeated it to each other as we worked on the dam (when Mr. Dekhan was not there), mimicking his accent; but perhaps there was something in it. Perhaps the dam is still there today, and perhaps the villagers still remember how it was built.

Mr. Dekhan and his men worked with us on the dam. They brought with them long iron levers for moving large boulders. When the large boulders were in place across the stream, we brought smaller boulders, then large stones, then smaller stones, and finally gravel and clay. The finished dam was something all of us looked on with pride - Mr. Dekhan, his men and the scouts; and we all cheered as the stream began to flow in its new course.

Sometimes we went on hikes, and on one occasion, when all of us were away hiking except a few boys who were too sick to go, the Shah's younger brother and the Colonel of the army regiment in which the prince was a private soldier, rode past the camp on their horses. The prince had studied in the United States, and when he saw the American flag flying over our camp, he stopped to ask about it. The few boys remaining in the camp, pajama-clad and sick, informed the prince that we were members of the Boy Scouts of America - Troop 1 of Tehran. They apologized for the fact that they were not in any condition to welcome him properly, and they invited the prince to visit our camp for lunch another day. The Shah's brother graciously accepted the invitation, and a date was agreed on.

To prepare for the prince's visit, we learned to sing the Iranian national anthem, and our cook made a special lunch. Our plan was to stand in a line in our scout uniforms. The prince would arrive and walk in front of the line. We would then salute him and sing the national anthem. However, the best-laid plans of mice and men do not always work out. The prince arrived from a direction that we had not anticipated, and he walked behind the line instead of in front of it. Disconcerted, we began to sing the Iranian national anthem on too high a pitch, and we could not finish it. However the lunch was delicious and we had a good time talking with the prince as we ate.

To return our hospitality, the prince invited us to have tea with him at the garden of

Mr. Nafezi's house in Galandouak. After tea, he sat at a table in the garden, and we stood in a circle around him, answering his questions about scouting. He was interested in our uniforms, with their merit badges, and we explained to him what they meant. Then he asked about our hats. Everyone turned towards me, because I was the only one who had a hat with me. I was in a back row, and all that I could think of was that I should let him see my hat as quickly as possible; so I threw it down onto the table. Everyone gasped! I was afraid that I had caused an international incident, but the Shah's brother just examined the hat and continued to talk pleasantly. "Come and visit me at my palace some time", he said to us later as we went out through the gate.

One of the older boys at our camp, Parviz Nabavi, had chronic malaria, and it sometimes flared up into a high fever. This happened while we were at the Galandouak camp, and his mother in Tehran somehow heard of it, perhaps through Mr. Nafezi. She immediately set out for our camp to take care of Parviz. She hired some donkeys at the village, and arrived at our camp in the middle of the night. Mrs. Nabavi was actually in worse shape than Parviz when she arrived. She had fallen from her donkey while it was crossing the stream, and she was soaked to the skin, shivering and coughing. So we had two people to take care of instead of one.

The Silk Road

Near to our camp was a range of steep mountains, with sheer rock faces similar to the difficult peaks of the alps. We had a telescope at our camp, and I spent hours using it to examine these mountains, looking for routes to the peaks. I longed to try to climb them, but there was no chance to do so. However, we did make an expedition to a beautiful valley near to the mountain range to which the 18,600 foot peak of Demavand belonged.

A river flowed through this valley, and beside the river, huge old chestnut trees grew. Torrents of water from springs gushed from the mountainside, feeding the river. Beside the river was a road, not made for automobiles but for camel caravans. In fact it was a branch of the ancient Silk Road that had once been an important trade route connecting China with the west. If we had only had time for it, we could have followed the Silk Road through the valley, and we could have reached the Caspian Sea in this way without crossing any mountain range. We had to turn back, but sometimes in my dreams I still see the Silk Road stretching out smoothly towards the Caspian, flanked by steeply-rising mountain walls. In my dreams I see the huge chestnut trees and the gushing springs, and I long to continue on the road.

On the expedition along the Silk Road, we were accompanied by Mr. Fisher, the Principal of Community School. He had lived in Iran for many decades, and he spoke fluent Farsee (but with a strong American accent). On the way home, still in the valley, we stopped at a chai-khane (tea house). While

we were drinking our tea, Mr. Fisher began to talk with the villagers who were also there. They were pointing at a man who sat smoking an opium pipe, and they were laughing at him. Mr. Fisher later told Gordon and me the details of the conversation. Our Farsee had only been good enough to understand the general gist of it.

"This poor man!", the villagers said, "Some years ago he mixed the opium with tobacco, and smoked it in the normal way, but now he is so far gone that he takes a lump of pure opium, touches it with a live coal from the fire, and he breaths in the fumes." Then Mr. Fisher talked to the opium addict himself and asked him why he did it. The man told Mr. Fisher that he was a poor wood-cutter who lived on the Caspian side of the mountain range. Every day he had to carry a huge load of wood over a high pass. That was the way he earned his living. He took us outside and showed us his load of wood. It was inhumanly large. "Can you lift this?" he asked. None of us could. "I can't lift it myself", he told us, "but I smoke the opium, and then somehow, I am over the pass with the load. I don't know how it happens because I don't remember anything." The woodcutter was abusing his body, and he would certainly die young, but he lifted his daily burden.

The road to Isfahan

In Farsee there is a saying: "Isfahan nesf-e-jahan" (Isfahan is half the world). From the 11th century A.D. to the 14th century, it was one of the largest cities in the world, and in the 16th century it became the capital of Iran. Isfahan had a period of special greatness under Shah Abbas (1587-1629), who invited craftsmen from many parts of the Middle East to come to Isfahan. The Armenian community of Isfahan came at that time, and they still live there today, occupying a district of the city known as Jalfa.

While we were living in Tehran, we drove down to visit Isfahan. This was during the winter, following the rainy season. An extremely large and heavy Dutch diplomat traveled with us, sitting in the back seat of the car. These factors together were a formula for disaster: The heavy winter rains has washed away portions of the road.[4] My father drove as best he could over the washed-out portions of the road, but it was so rough (and the Dutch diploma

in the back seat was so heavy) that the springs of the car broke. This accident happened before we had reached the city of Qom. For the remainder of the way to Qom, we were forced drive at about 5 miles an hour. Donkeys passed us on the road as we inched along. Finally, after many frustrating hours, we reached Qom and were able to have the car springs repaired.

The remainder of the journey to Isfahan was not so difficult, and when when we reached it the reward was great. The city was full of buildings of great beauty and architectural interest, many of them built during the reign of Shah Abbas. There was a huge bazaar, which we explored, enjoying the scent of exotic spices and the sight of craftsmen in their shops making furniture using centuries-old techniques, or hand-engraving copper and silver trays and vases.

Mr. Davidian, my father's secretary, had told us that while we were in Isfahan, we should visit Jalfa, the Armenian part of the city. In fact, Mr. Davidian's father was the

[4]At that time the road was not very good, even at its best. There was a joke about the road: One person says "How was your journey to Isfahan?" The other answers, "I don't know, I slept all the way." It was a joke because everyone knew that the road to Isfahan was so incredibly rough that it would be impossible to sleep.

Patriarch of the Orthodox Church in Jalfa. We went to Sunday service at the church, and we were welcomed by the Patriarch. The Orthodox service was extremely beautiful. There were no seats, and the congregation stood during the entire ceremony. The music was especially interesting and impressive. Just as in Russian Orthodox churches, there was a chorus, heavy with bass voices, and the chants which they sang sounded very ancient - completely unlike the familiar musical idiom of the west. Meanwhile, as the chorus of bass voices sang, accolites swinging incense censors walked slowly to the front of the church. Many years later, Mr. Davidian's father was invited by the Soviet Union to move to Soviet Armenia. "Bring your congregation and your money with you", they told him. After much soul- searching the Patriarch and many of his congregation accepted this invitation. Whether they were happy in Soviet Armenia I do not know.

Jungles of the Caspian

The Elburz Mountains form a wall between the Caspian Sea and the remainder of Iran. Humid air from the Caspian rises and cools as the wind blows over the northern slopes of the mountains and all the moisture falls as rain. When the wind reaches the southern slopes of the Elburz range, it has been wrung dry. Except for a few months during the winter, there is no rain on the southern side of the mountains. The southern slopes are treeless, but in the north, on the shores of the Caspian there are dense forests. The Iranians call the forest the "Djungal", and in fact tigers live there.

One of the expeditions that we made while we were living in Tehran took us to the jungles of the Caspian. The northern provence of Iran is called Mazenderan, and at the time when we visited it, malaria was endemic in most parts of the provence. Later, the programs initiated by my father virtually eliminated malaria, but when we went there, it was necessary to take Atabrin tablets to keep from being infected. We began taking these tablets a week or so before we we started, and they made our skins yellow.

An American economist from the World Bank went with us on the trip. He was called Henry Wiens, and as my father drove the car upward through the Elburz Mountains on the road leading to the Mazenderan, Henry Wiens taught us a really good song, "The man who hath plenty of good peanuts". Finally, when we reached the the highest point on the road, we entered a tunnel. When we emerged on the Mazenderan side of the tunnel, the landscape was totally transformed. On the Tehran side, the mountains had been bare and treeless. When we emerged from the tunnel, we were driving through a thick forests, and the air was blue with smoke. The smoke was due to the burning of wood to make charcoal, one of the big industries in the Mazenderan.

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We visited the towns of Babolsar, Noor, Chalus and Ramsar, all of them just beside

the Caspian. It was interesting to see the Caspian beaches, because the sand was black, perhaps because it came from volcanic rock. There were other signs of volcanic activity, especially many hot springs, and the hotels in the Mazenderan had facilities so that their patrons could bathe in the hot, mineral-rich water from the springs, which was supposed to be good for their health.

The Russian influence was strong in the Mazenderan. For example, on the beaches, people bathed Russian style, that is, completely naked. There was one beach for men, another for women, and a third beach between them for mixed bathing in case people preferred it that way.

We also saw a factory that had been built following the orders of Reza Shah, who was trying to industrialize Iran. Undoubtedly industrialization was a good idea, but at the time when the factory was built, the country did not have enough infrastructure to support it. When we saw the factory, it had been made over into a hotel.

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