

## *Emory Resources on the Middle East*

### Great Books of the Islamic World (II):

#### *The Catalogue of Ibn al-Nadim*

Ibn al-Nadim's work *al-Fihrist* ("The Catalogue") is an invaluable source, for it is something like the card catalogue of the books available in all the libraries of Baghdad in the late tenth century. Written in 987 C.E., it includes the titles of many works which no longer exist, having been lost, burned, eaten by insects, or damaged by floods. It thus throws light on the history of Arabic literature in the broad sense as well as medieval Islamic intellectual history in many fields. It is also one of the most valuable sources regarding the translation movement that took place between 750 and 950 C.E.. In addition, the *Fihrist*, like Dewey's decimal system, is an exercise in mapping out the organization of human knowledge and not just an inventory of book titles. This unit provides a basic background for understanding the *Fihrist*, introduces some of the types of information it provides, and discusses the translation movement and the importance of "the ancient sciences" in medieval Baghdad.

#### **Historical Background:**

- 632 the Prophet Muhammad dies
- 632-61 Medina is the capital of the Islamic Empire under first four Caliphs
  - 636 Battle of Yarmuk
  - 637 Battle of al-Qadisiyyah [al-Madīnat al-Ru'ayn "the Ruins" = Ctesiphon]
  - 712 Muslim armies invade Spain
  - 732 Battle of Poitiers
- 661-750 Umayyad Caliphs, capital at Damascus
- 750-1258 the Abbasid Caliphs, capital at Wasit, then Baghdad
  - al-Saffar 749-54
    - 751 Paper introduced to Iraq
  - al-Manṣūr 754-775
    - 762 Baghdad founded
  - al-Mahdī 775-85
    - 782 Caliph al-Mahdī commissions a translation of Aristotle's *Topics* from the Nestorian Christian Patriarch Timothy I
  - al-Hādī 785-86
  - \*Harūn al-Rashīd 786-809
  - al-Amin 809-813
  - al-Ma'mūn 813-833 ...
    - 833-848 The Inquisition
- 945 Shiite Buwayhids conquer Iraq, reducing the Abbasid Caliphs to figureheads.
- 1055 Seljuk Turks conquer Iraq; conservative Sunni regime established
- 1258 Hulagu takes Baghdad; capital moves to Tabriz
  - Baghdad is ransacked and the Caliphal libraries are destroyed.

### **Baghdad, the Abbasids' Capital of the Islamic Empire:**

In 750 C.E., the Umayyad dynasty, which had ruled from their capital in Damascus since 661 C.E., came to an end. It was overthrown by a revolt that had started in far-off eastern Iran. The victors established a new dynasty of Caliphs, called the Abbasids because they were descendants of the Prophet Muhammad's uncle al-' Abbas. The new dynasty immediately moved the capital of the Islamic empire to Iraq, ruling first from a city called Wasit between the Tigris and Euphrates in southern Iraq. In 762, the Caliph al-Mansur founded the new capital city of Baghdad. It was situated on the Tigris river at a point where the Tigris and Euphrates come close together but do not join—they join far to the south, just north of Basra. This was very close to Ctesiphon, now the ruined site of the capital of the Iranian dynasty, the Sassanians, that had been toppled by the Islamic invasion over a century earlier. The new city was built as a circle with the Caliph's palace at the center. It has been claimed by some that this plan was inspired by Euclid's geometry.

Baghdad grew rapidly. It was the capital of a large empire, stretching from Spain to Pakistan, and received a great deal of revenue from the provinces. In addition, advances in irrigation, central control, and technology, produced an unprecedented agricultural surplus in Iraq itself. In addition, through the port city of Basra at the northern end of the Persian Gulf, Baghdad controlled trade from the Indian Ocean coming into the Middle East. The tremendous income produced by agriculture and trade combined is what allowed Baghdad to prosper. Within a century, Baghdad was the largest city in the world outside China, several times larger than the largest contemporary cities in Europe. It is estimated that Baghdad had roughly one million inhabitants. Reports state that there were ten thousand public baths in the city.

Baghdad became a center not only for wealth, power, and luxury, but also for scholarship. Scholars of all fields flocked to the city because of opportunities to learn, obtain books, get support through stipends provided by wealthy patrons, and find work as copyists, tutors, lecturers, or other gainful employment. In nearly every field, whether grammar, literature, history, Islamic law, mathematics, or astronomy, the scholars of Baghdad were soon producing the most advanced scholarship in the world at the time.

This blossoming of scholarship was helped by the discovery of a way to make paper quickly and cheaply. Before the late eighth century, scholars in the Middle East wrote on parchment, made of animal skins, or papyrus, made of the papyrus reed native to Egypt. Parchment was extremely expensive and time-consuming to produce. Papyrus was less expensive, but was brittle when dry and did not last in humid climates. The Abbasids learned to make paper out of pulp from craftsmen in Khurasan (north-eastern Iran) who had in turn learned to make paper from Chinese craftsmen who had been captured by a military force. By 800 C.E. a number of major paper works had been established around Baghdad. The availability of cheap paper led to an explosion in publishing. Soon, many Baghdadi authors were writing individual works of 3,000, 5,000, even 30,000 pages! It is estimated, for example, that Muhammad ibn Jarir al-Tabari (d.

923 C.E.), a famous historian, hadith scholar, jurist, and commentator on the Qur'an, wrote 40 pages a day for 40 years! A new profession was created, that of *warraq*, or "paper man". The *warraq* was a combination copyist, bookseller, and publishing agent. In the ninth century, there were over 100 bookshops in the "Market of the Papermen."

### **The Life of Ibn al-Nadim:**

We know very little about Ibn al-Nadim except what we can figure out from the *Fihrist* itself. As far as we can tell, he lived his entire life in Baghdad. We know that he made an extensive trip to Mosul because he mentions seeing books of various kinds in the library of a book collector there. He died in 990 C.E. His birthdate is unknown. He must have been a grown young man already by 952 C.E., because he mentions meeting a certain Barda'i, a Mu'tazili theologian belonging to the Khariji Islamic sect, in that year. Scholars have therefore estimated that he was born in 937 C.E. or earlier. He apparently studied with several famous scholars, including the literary scholar Abu al-Faraj al-Isfahani, famous for his *Book of Songs*, and the prolific literary critic al-Marzubani. He also seems to have belonged to a circle of scholars who were patronized by 'Isa ibn 'Ali ibn 'Isa, a nobleman who belonged to the Jarrah family, several of whom had served the Abbasid Caliphs as Vizier.

The title *al-Nadim* means "boon companion," essentially a professional dinner guest who was meant to entertain and enlighten the Caliph and his companions with amusing anecdotes and instructive tales and information. It is not clear whether the author of the *Fihrist* was a *nadim* himself or whether his father or some earlier ancestor was. It seems clear, though, that Ibn al-Nadim was a *warraq*, literally a "paper man," someone who copied and sold books. During this period, there were over one hundred book shops in the "Papermen's Market" in Baghdad, and the *Fihrist* shows that Ibn al-Nadim was not only extremely knowledgeable about paper, pens, and the construction of books but also had access to rare books, booklists, and anecdotes about ancient and hard-to-find works that would have been rare in someone of any other profession.

Ibn al-Nadim wrote the *Fihrist* written in 987 C.E.; we know this because he mentions the date at least four times in the work. At this date in history, the Buwayhids, Shiite warlords from Daylam, the area just south of the Caspian Sea in northern Iran, were ruling most of Iraq and Iran. They had captured Baghdad in 945 C.E., reducing the Abbasid Caliphs to ceremonial or de jure heads of the empire. They established capitals in the Iranian cities of Rayy, Isfahan, and Shiraz, as well as Baghdad itself for a time. The rivalry between the many courts in Iran, Iraq, and Syria produced an intellectual flowering similar to that of the Italian Renaissance. Baghdad was still a major world city, but it had met a new rival in Cairo, founded by the Fatimid dynasty in Egypt in 969 C.E. This time was at the tail end of the translation movement, which had been heavily patronized by the Caliphs and other figures connected with the caliphal court over the last two centuries. He is thus able to give in his Catalogue a fairly comprehensive survey of the accomplishments of the movement.

Ibn al-Nadim belonged to the Imami or Twelver Shiite sect of Islam. While they were a decided minority compared to the Sunni majority in the Islamic world at the time--now, they represent roughly 10% of the world population of Muslims--Shiites played a very important role in the history of this period. Shiite dynasties ruled most of the former

Islamic Empire: the Fatimids ruled over Tunisia, Sicily, Egypt, southern Syria, and western Arabia; the Qarmatis controlled eastern Arabia; the Buwayhids ruled over most of Iraq and Iran; the Hamdanids ruled over northern Syria; and several lesser Shiite dynasties ruled in parts of northern Syria and northern and southern Iraq. Because of this unprecedented level of political control, the period 950 C.E.-1050 C.E. has been called “the Shiite century.” We know that Ibn al-Nadim was a Shiite because of the respect he shows to the line of twelve Imams the Shiites considered to be the rightful rulers of the Muslim Community. He calls the first Imam, `Ali, “the Commander of the Faithful”, a title used by Sunnis to refer to all of the historical Caliphs, including the contemporary Abbasid Caliph. He uses the phrase “peace be upon them” after mention of the Imams’ names, which is a typical Shiite usage. Sunnis usually only use this phrase after the names of prophets such as Abraham, Moses, etc. Ibn al-Nadim expresses amazement at having seen documents written in the hands of `Ali and his sons Hasan and Husayn, the first three Imams. He knew the leading Shiite scholar of his day, al-Shaykh al-Mufid, personally, and had attended his lectures. The terms he uses to refer to Sunnis and Shiites also point to a Shiite identity. He calls Sunnis *fi•mmu* “majority, general, popular” and Shiites *kh•ßßi* “special, elite, minority.” Sunnis tend to use other terms.

We can also tell from the text that Ibn al-Nadim was an adherent Mu`tazili theological school. The Mu`tazilis school of theology arose in the late eighth century, and was characterized by a rational approach to scripture and the understanding of God and God’s characteristics. They had controlled the religious scene in the early ninth century, but had been marginalized after the Abbasid Caliphs failed to impose their doctrines, including the doctrine that the Qur’an was created and not eternal, and then turned against them. They experienced a come-back in Ibn al-Nadim’s time, only to become nearly extinct in the course of the eleventh century. Ibn al-Nadim pays a great deal of attention to their famous authors, such as Abu Hudhayl, al-Nazzam, and al-Jahiz. A give-away, however, is his use of the term *ahl al-tawhid wa’l-`adl* “the Proponents of Divine Unity and Justice” to describe them, for this was the Mu`tazilis’ preferred title for themselves.

We can also tell from the text of the *Fihrist* that Ibn al-Nadim was an aficionado of the Greek sciences, that is, philosophy, arithmetic, geometry, astronomy, and medicine. His chapter on these sciences is extremely detailed and includes long sections of narrative explaining the reasons for the great interest in these sciences within the Islamic Empire. It is because of this interest that his book is so valuable for an understanding of the translation movement.

### **The Translation Movement:**

The translation movement was important from about 750 C.E. until 950 C.E. A few works had been translated before the Abbasids came to power, but translations began to be produced rapidly and in large numbers soon after the establishment of the Abbasids. The Abbasid caliphs who were most active in promoting translation and supporting translators were al-Mansur, al-Ma`mun, and al-Hadi. Many other figures, including viziers, government secretaries, and individual scholars, patronized and supported translation. The Caliph al-Ma`mun built a royal library called the Bayt al-Hikmah (“House of Knowledge”), which served as an important resource for scholars and translators. He and other caliphs paid to have scientific works brought from the

Byzantine empire to Baghdad, including superior manuscript copies of works that were available only in corrupt form.

Works were translated into Arabic from a number of languages. Chief among them were Greek, Syriac, Persian, and Sanskrit (the scholarly language of India). In some cases, the works were translated directly, say, from Greek into Arabic or Persian into Arabic. In other cases, works were translated from Greek into Syriac, and then from Syriac into Arabic, or from Sanskrit into Persian and then from Persian into Arabic.

Numerically, it seems, the most important body of material translated was made up of Greek works. The translators were particularly interested in scientific works. These were held to be the most valuable and important. Some literary works were translated, such as *Kalila and Dimna*, an originally Sanskrit work that had been translated into Persian and was translated into Arabic in the early Abbasid period by Ibn al-Muqaffa'. This work was a collection of advice tales with animal characters, but was understood to be valuable background for rulers and government officials. The scientific works translated focused primarily on astronomy, arithmetic, geometry, medicine, and philosophy, and secondarily on other topics such as music. Many Greek works became standard textbooks in the Islamic world, including Euclid's *Elements*, on geometry, Ptolemy's *Almagest* and *Tetrabiblos*, on astronomy; Aristotle's *Organon*, on logic, dialectic, and philosophy; and Galen's sixteen books, which in many cases constituted the entire curriculum for the study of medicine.

Many of the most famous translators were Middle Eastern Christians who spoke Arabic as a native language but had learned Syriac and Greek in the course of their religious education. Perhaps the most famous is Hunayn ibn Ishaq, who translated hundreds of works, including most of the books of Galen, in addition to supervising a workshop of other translators, including his nephew and others.

The translation movement played an important role in preserving classical heritage. There are still many classical Greek works that have only been preserved in Arabic versions—the original Greek versions have been lost. Greek manuscripts were copied in Byzantine territory specifically for the translation movement—it kick-started a revival of scholarship in Byzantium itself. The Islamic world played a crucial role, in addition, in transmitting knowledge of these works to medieval Europe. Primarily in Spain and Sicily, many were translated into Latin. However, the scholars of the Islamic world were not mere transmitters. They assimilated and built on the achievements of the Greeks in nearly every field. They developed algebra, produced the general solution to the quadratic equation, discovered the lesser circulation of blood in the human body, and made many other similar advances. Examples of works by Muslim scholars that criticized and revised classical scholarship include Abu Bakr al-Razi's *Doubts about Galen*, on medicine, Ibn al-Haytham's *Doubts about Ptolemy*, on astronomy, and Avicenna's *Eastern Philosophy*, which outlines his major areas of disagreement with Aristotle in philosophy. Moreover, the effect of the translation movement reach beyond the scientific fields in which works were actually translated, but also had a profound effect on the theoretical discussion of grammar, theology, law, and the other Islamic sciences. By the end of the ninth century, they were the most advanced scholars in the world in most fields, something that would have been impossible without the translation movement.

The translation movement ended in the late tenth and early eleventh century. Scholars in the Islamic world had in many cases surpassed the translated works. Sources of patronage dwindled. A conservative coalition opposed to the rational approach adopted by most scholars in the sciences grew strong, and was supported by the Caliph al-Qadir (991-1031) and the Turkish ruler of Ghaznah, Mahmud. Mahmud's conquest of the Buwayhid capital of Rayy in Iran in 1020 and the Seljuk conquest of Baghdad in 1055 put an end to much official support. Funds were funneled into other areas where the study of the rational sciences was limited, such as madrasas or colleges of Islamic law, and the religious sciences were favored overall. Moreover, there was less and less tolerance for the strictly rational approach in society at large and among scholars as well.

### **Exercise I: Quiz**

1. When did the Abbasid Caliphs come to power?
  - a. 632 C.E.
  - b. 651 C.E.
  - c. 661 C.E.
  - d. 750 C.E.
  
2. Ibn al-Nadim was which of the following?
  - a. a Shiite
  - b. a Mu'tazili
  - c. a bookseller
  - d. all of the above
  
3. When did Ibn al-Nadim write the *Fihrist*?
  - a. 987 C.E.
  - b. 377 C.E.
  - c. 750 C.E.
  - d. 895 C.E.
  
4. The most popular writing material during Ibn al-Nadim's time was
  - a. papyrus
  - b. stone
  - c. pulp paper
  - d. parchment
  
5. Which of the following was a famous translator?
  - a. Ibn al-Nadim
  - b. al-Mansur
  - c. Hunayn ibn Ishaq
  - d. Aristotle
  
6. Scholars of the medieval Islamic empire

- a. Ignored Greek, Persian, and Sanskrit works.
- b. Transmitted Western European knowledge to the Middle East and India.
- c. Made significant advances in mathematics and medicine.
- d. Specialized exclusively in the Islamic religious sciences.

7. Who of the following patronized translators?

- a. The Caliph `Ali ibn Abi Talib.
- b. The Caliph al-Mansur.
- c. The Caliph Abu Bakr.
- d. The Caliph al-Qadir.

8. When did the Buwayhids conquer Baghdad?

- a. 750 C.E.
- b. 800 C.E.
- c. 900 C.E.
- d. 945 C.E.

9. What is a *warrāq*?

- a. a government official
- b. a caliph's companion
- c. a bookseller
- d. a writing instrument

10. The works of Galen focus on:

- a. astronomy
- b. medicine
- c. logic
- d. geometry

### **The Organization of Knowledge:**

By the tenth century, the following division of the sciences into two main groups had become standard:

I. The Religious Sciences (*al-fulūm al-sharfiyah*)

= The Traditional, or Transmitted, Sciences (*al-fulūm al-naqliyah*)

Qur'anic sciences; Arabic grammar, lexicography, and rhetoric; poetry, prosody; Islamic law; Islamic theology; hadith (oral reports about the Prophet which constitute scripture)

II. The Sciences of the Ancients (*fulūm al-awli*)

= The Rational Sciences (*al-fulūm al-fiahiyah*)

arithmetic, geometry, astronomy, medicine, logic, philosophy, music

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**Ibn `azm (Cordoba, d. 1064), *Mar`tib al-fulūm* "The Divisions of the Sciences"**

"The prevailing sciences today are divided into seven, and they are the same for all people in all places and at all times. They are:

1. the religious law of every nation
2. the science of history of a nation
3. the science of language of a nation

Nations differ from one another by virtue of these three sciences.

The remaining four sciences are common to all nations and consist of:

4. philosophy, which is the knowledge of things as they are and according to their definitions from the highest generalities to particulars; it also includes the knowledge of metaphysics
5. astronomy
6. arithmetic
7. medicine, which deals with the body

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### **The Organization of *al-Fihrist* "The Catalogue" 377A.H. = 987 C.E.**

#### I. Scripture.

1. Scripts of the world.
2. Sacred Texts of the world: Sabian, Jewish, and Christian.
3. Qur√•nic scholarship.

#### II. Grammar and lexicography.

1. The beginnings of Arabic grammar; the Basran school of Arabic grammar and lexicography.
2. The Kufan school of Arabic grammar and lexicography.
3. Grammarians and lexicographers who mixed the methods of the two schools.

#### III. History and genealogy.

1. Historians and genealogists.
2. Abbasid historians.
3. Other historians.

#### IV. Poets and poetry

1. Pre-Abbasid poets and transmitters of poetry.
2. "Modern poets"

#### V. Theology.

1. Mufitazilah and Murji√ah.
2. Shiite theologians.
3. Theologians of the Mujabbirah and ~ashwiyah.
4. Theologians of the Khariijis.
5. Ascetics and Sufis.

Ismafilis

#### VI. Law.

1. Malik and the Malikis.
2. Ab,u Hanifah and the Hanafis.
3. Shafifiis.
4. Da'ud and the Zahiris.
5. Jurists of the Shiites.
6. Sufyan al-Thawri and others (Hadith specialists).
7. al-Tabari and his followers.
8. Khariji jurists.

#### VII. Sciences.

1. Philosophy and Logic.
2. Mathematics and Geometry.
3. Medicine.

#### VIII. Anecdotal and Miscellaneous literature.

1. Fables and tales.
2. Magic and the occult.
3. Anecdotal and miscellaneous literature.

#### IX.

1. Non-monotheist religions.
2. Heresiography.

#### X. Alchemy.

### **Exercise II: Answer the following questions:**

1. How is the organization of the Fihrist related to the distinction between the traditional sciences and the rational sciences?
2. Which sections are devoted to distinctly Arabic and/or Islamic topics?
3. Which sections are devoted to non-arabic and/or non-Islamic topics?
4. What is alchemy?
5. Is there some logic to the order of the topics presented, either within a single chapter or in terms of the order of the chapters themselves?
6. Compare and contrast Ibn al-Nadim's classification of knowledge with that of Ibn Hazm above.

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**Emory University Departments (modified)**

**Humanities:**

- Art History
- Classics
- Comparative Literature
- Education
- English
- Film Studies
- History
- French and Italian
- German
- History
- Middle Eastern and South Asian Studies
- Music
- Philosophy
- Religion
- Russian and East Asian Languages and Cultures
- Spanish
- Theater
- Women's Studies

**Social Sciences:**

- Anthropology
- Economics
- Political Science
- Psychology
- Sociology

**Sciences:**

- Biology
- Chemistry
- Environmental Studies
- Mathematics and Computer Science
- Physics

**Graduate Schools:**

- Business School
- Law School
- Medical School
- Nursing
- [Dental School]
- Public Health

**Exercise III:**

How does this example of the modern organization of knowledge compare with that of Ibn al-Nadim? Compare and contrast.

### **Statements about Influence:**

Alvarus, Bishop of Cordoba (854)

Our Christian young men, with their elegant airs and fluent speech, are showy in their dress and carriage, and are famed for the learning of the gentiles; intoxicated with Arab eloquence they greedily handle, eagerly devour and zealously discuss the books of the Chaldeans [Arabs] and make them known by praising them with every flourish of rhetoric, knowing nothing of the beauty of the Church's literature, and looking with contempt on the streams of the Church that flow forth from Paradise; alas! the Christians are so ignorant of their own law, the Latins pay so little attention to their own language, that in the whole of the Christian flock there is hardly one man in a thousand who can write a letter to inquire after a friend's health intelligibly, while you may find countless rabble of all kinds of them who can learnedly roll out the gradiloquent periods of the Chaldean tongue [Arabic]. They can even make poems, every line ending with the same letter, which display high flights of beauty and more skill in handling meter than the gentiles themselves possess.

al-Kindi (d. 873)

Yūn•n and Qa,†•n are brothers.

We ought not to be ashamed of appreciating the truth and of acquiring it wherever it comes from, even if it comes from races distant and nations different from us. For the seeker of truth, nothing takes precedence over the truth, and there is no disparagement of the truth, nor belittling either of him who speaks it or of him who conveys it. [The status of] no one is diminished by the truth; rather does the truth enoble all.

fiAbd All•h b. Abi Zayd al-Qayraw•ni (d. 386/998)

God have mercy on the Umayyad dynasty! There was never a caliph among them who instituted a heretical innovation in Islam. Most of their governors and administrators of their provinces were Arabs. But when the caliphate passed from them and devolved upon the Abbasid dynasty, their state was based upon the Persians, who held positions of leadership while the hearts of most of the leaders among them were filled with unbelief and hate for the Arabs and for the Islamic state. They introduced within Islam currents that would permit the destruction of Islam. Had it not been for the fact that God Almighty had promised His Prophet that his religion and its adherents would be victorious on the Day of Judgment, they would have abolished Islam. They did, however, make breaches in its walls and damage its pillars, but God will fulfill His promise, God willing!

The first current which they introduced was to export in Islamic lands the books of the Greeks which were then translated into Arabic and circulated widely among the Muslims. The reason of their being exported from the land of the Byzantines to the Islamic territories was Ya,y• b. Kh•lid b. Barmak.

Abū Saḥīd b. Dūst (d. 431/1040)

You who seek religion, avoid the paths of error,  
Lest your religion be snatched from you unawares.  
Shifism is destruction, Mufitazilism is innovation,  
Polytheism is infidelity, and philosophy is a lie.

**Exercise IV: Answer the following in writing, or discuss.**

Evaluate any of the statements above, considering the following questions. Does the author approve or disapprove of borrowing from other cultures? If the answer is somewhere in between these two poles, how does he differentiate between acceptable borrowing and unacceptable borrowing? Why is borrowing acceptable or unacceptable? how do the statements compare? What else do they tell us?

**On Books and Writing:**

Nattahah, whose name is Ahmad ibn Isma`il, whose patronymic is Abu `Ali, a complete account of whom will be given later, wrote the following passage describing books:

"A book is a companion who does not interrupt you in the middle of your work, nor call you away when you are busy, nor demand that you treat him with courtesy. A book is a comrade who does not praise you excessively, a friend who does not tempt you, a companion who does not find you boring, and an advisor who does not make excessive demands." (F 13)

**Exercise V. Write your own description of books.**

**The Script of the Chinese.**

Chinese writing resembles engraving. Even a clever and skilfull scribe tires in writing it. It is said that only someone with a light hand can write more than two or three pages of it in a single day. In it, they write the books of their religions and sciences on fans, and I have seen a number of them. Most of them are dualists and Samniyah, and I will present a complete account of them later. The Chinese have a type of writing called aggregate script. It is that for every word composed of three letters or more there is a single character, and for every extensive speech is a combination of letters that expresses many meanings. When they want to write what is normally written in one hundred pages, they write it in one page in this script.

Muhammad ibn Zakariyya al-Razi said: A man from China sought me out, and resided with me for about a year, during which he learned Arabic, both to speak it and write it, in the time of five months, so that he became eloquent, skilled, and quick of hand. When he determined to leave to return to his land, he told me, a month before his departure, "I am planning to leave. I would like for you to dictate to me the sixteen books of Galen, so that I might write them." I told him, "You have too little time. Your remaining stay will not be enough to copy even a small part of them." The young man said, "I ask you to devote yourself to me for the entire time of my stay and to dictate to me as fast as you can, for I will stay ahead of you in writing." I approached some of my students, asking them to join us in this endeavor. We would dictate to him as fast as we could, and he would stay ahead of us. We only believed him when the time came for comparison, and

he read out all that he had written. I asked him about this, and he answered, "We have a form of writing known as Aggregate Script, and this is what you have seen. When we want to write a great deal in a short time, we write it in this script. Then, if we wish, we transcribe it in the ordinary and full script. He claimed that someone who is intelligent and a quick study cannot learn that script in less than twenty years. ... (F 18-19)

### **Exercise VI.**

What do we learn from this passage about:

1) Chinese writing?

2) How works were copied in this period?

3) The history of relations between China and the Islamic world?

### **Remarks on Types of Paper**

It is said that the first one to write was Adam, on clay. Then for a period of time, the subsequent peoples wrote on copper and stone so that it would last. This was before the Flood. They also would write on wood and the leaves of trees for immediate needs, and they would also write for longevity on the *tuz* bark which is used to cover archers' bows. We have discussed this matter exhaustively in the chapter on philosophy.

Laten on, hides were tanned, and people wrote on them. The Egyptians wrote on Egyptian paper, made from the papyrus reed. It is said that the first one to make [this type of paper] was Joseph the prophet, peace be upon him. The Greeks write on white silk, parchment, and other materials, and on Egyptian scrolls and on *fuljan*, which is the skin of wild asses. The Persians used to write on the hides of water buffaloes, cows, and sheep. The Arabs used to write on the shoulder blades of camels, on *likhaf*, which are thin white stones, and on usb or the stems of palm leaves. The Chinese write on Chinese paper, which is made of hemp, and it is the dominant crop of that country. The Indians write on copper, stone, and white silk.

Khurasani paper is made of flax. Some say that it was invented during the reign of the Umayyads, others say in the Abbasid era. Some say that its manufacture is ancient, and others say that it is a recent invention. Others say that Chinese craftsmen first made it in Khurasan after the fashion of Chinese paper. Its types are Sulaymani, Talhi, Nuhi, Fir`awni, Ja`fari, and Tahiri. The people in Baghdad spent years writing only on washed-off parchment, because the government registers were plundered at the time of Muhammad ibn Zubaydah, and they were written on hides. The people would erase them and write on them. (F 18-19)

## **What Caused the Books of Philosophy and the Other Ancient Sciences Became Numerous in This Land.**

### **One of the Causes of This Phenomenon:**

Al-Ma'mun saw in a dream a man of fair complexion, white tinged with red, with a wide forehead and joined eyebrows, bald pate, sparkling ashhal eyes, and agreeable features, sitting by the side of his bed. Al-Ma'mun said: "It was as if I, in front of him, were filled with awe of him. I asked, 'Who are you?' He said, 'I am Aristotle.' I was glad at this, and said, 'Oh wise one, may I ask you something.' He replied, 'Ask away.' I asked, 'What is Good.?' He answered, 'What is good according to reason.' I asked, 'And then what?' He replied, 'What is good according to revelation.' I asked, 'And then what?' He replied, 'What is good in the view of the overwhelming majority.' I asked, 'And then what?' He replied, 'There isn't any then after that.'"

...

This dream was one of the most certain causes of the importation of books.

Al-Ma'mun had kept up a correspondence with the Byzantine Emperor. When al-Ma'mun become more powerful than the Byzantine Emperor, he wrote to him asking that he permit be sent to him whatever al-Ma'mun wished of the books on the ancient sciences stored and preserved in the land of the Greeks. He granted this request of his, after at first refusing. Al-Ma'mun sent out a group of scholars on that mission, including al-Hajjaj ibn Matar, Ibn al-Bitriq, Salma, the director of the House of Knowledge, and others, and they took what they found and chose. When they had delivered them to al-Ma'mun, he ordered that they be translated, so they were translated. It has also been said that Yuhanna ibn Masawayh was among those scholars who were sent to the land of the Greeks.

... Among those who exerted efforts to obtain books from the Land of the Greeks were Muhammad, Ahmad, and al-Hasan, the three sons of Shakir the Astronomer. ... They paid enticing fees. Hunayn ibn Ishaq and others were sent by them to the Land of the Greeks, and they brought them wonderful books and rare works on philosophy, geometry, music, arithmetic, and medicine. Qusta ibn Luqa al-Ba`labakki had also brought some books with him. He translated some, and some were translated for him.

Abu Sulayman al-Sijistani, the Logician said: "The Sons of the Astronomer used to pay a group of translators, including Hunayn ibn Ishaq, Hubaysh ibn al-Hasan, Thabit ibn Qurrah, and others a monthly salary of five hundred dinars (about \$24,000) for translating and continual study. (F 303-4)

**Exercise VII. Answer the following:**

1. Explain how al-Ma'mun's dream is related to the translation movement.
2. Where and how did translators get books to translate?

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**The Names of the Translators from Various Languages into Arabic**

1. Stefan the Ancient, who translated books on alchemy and other topics for Khalid ibn Yazid ibn Mu'awiyah.
2. Al-Bitriq, who was active during the reign of al-Mansur, and whom he commanded to translate some ancient books.
3. His son, Abu Zakariyya Yahya ibn al-Bitriq, who belonged to the group of al-Hasan ibn Sahl.
4. al-Hajjaj ibn Matar, who wrote commentaries [on scientific works] to al-Ma'mun. He is the one who translated the *Almagest* [Ptolemy's work on astronomy] and Euclid [i.e., Euclid's *Elements*, on geometry].
5. Ibn Na'imah, whose name is `Abd al-Masih ibn `Abd Allah al-Himsi al-Na`imi.
- 6-7. Sallam and al-Abrash, among the early translators in the days of the Barmakids [a Persian family of viziers under the early Abbasid rulers. [Aristotle's] *Physics* has been preserved in their translation. This has been reported by our Master, Abu al-Qasim Isa ibn Ali ibn Isa, may God support him.
8. Habib ibn Bahriz, the prelate of Mosul, who wrote commentaries on several books for al-Ma'mun.
9. Zaruba ibn Majuh al-Na`imi al-Himsi.
10. Hilal ibn Abi Hilal al-Himsi.
11. Tudhari (?)
12. Fithun, Abu Nasr ibn Bari ibn Ayyub.
13. Basil the Prelate.
14. Abu Nuh ibn al-Salt.
15. Astath (?)
16. Jirun
17. Stefan son of Basil.
18. Ibn Rabitah.
19. Theophilus.
20. Shamla (?)
21. `Isa ibn Nuh.
22. Quwayri, whose name is Ibrahim, and whose patronym is Abu Ishaq.
23. Tadhru al-sunqul. (?)
24. Dari` the Monk.
25. Hayabithun.
26. Saliba
27. Ayyub al-Ruhawi.

28. Thabit ibn Qumma`.
- 29-30. Ayyub and Sam`an, who wrote a commentary on the astronomical tables of Ptolemy for Muhammad ibn Khalid ibn Yahya ibn Barmak, and other ancient books besides.
31. Basil, who used to serve Dhu 'l-Yaminayn.
32. Ibn Sahdi al-Karkhi, who translated poorly from Syriac to Arabic. Among that which he translated is the Book of Fetuses by Hippocrates.
33. Abu `Amr Yuhanna ibn Yusuf the Scribe, one of the translators. He translated Plato's book on the education of children.
34. Ayyub ibn al-Qasim al-Raqqi, who translated from Syriac into Arabic. Among the works he translated is the Eisagoge [the Introduction, on logic].
35. Mar Lahi, in our time. He has an excellent knowledge of Syriac but is clumsy of expression in Arabic. Working with Ali ibn Ibrahim al-Dahaki, he translates from Syriac into Arabic, and Ibn al-Dahaki revises his translation.
36. Dad Yasu`, who used to translate for Ishaq ibn Sulayman ibn `Ali al-Hashimi from Syriac into Arabic.
37. Qusta ibn Luqa al-Ba`labakki ... excelled in translation. He was eloquent in Greek, Syriac, and Arabic. He translated some works and corrected many translations. ...
38. Hunayn.
39. Ishaq.
40. Hubaysh.
41. `Isa ibn Yahya al-Dimashqi.
42. Ibrahim ibn al-Salt.
43. Ibrahim ibn Abd Allah
44. Yahya ibn `Adi al-Nafisi.
- We will provide an exhaustive account of these later on, God willing, because they authored their own works as well.

### **The Names of Translators from Persian into Arabic:**

1. Ibn al-Muqaffa`, who has been mentioned in his place.
2. Most of the members of the Nawbakht family, who have been mentioned or who will be mentioned later on, God willing.
3. Musa and Yusuf, the sons of Khalid. They used to serve Dawud ibn Abd Allah ibn Humayd ibn Qahtabah, and translate for him from Persian into Arabic.
4. al-Tamimi, whose name is `Ali ibn Ziyad, and whose patronymic is Abu al-Hasan. He translated from Persian into Arabic. Among what he translated is the astronomical table of Shahriyar.
5. Al-Hasan ibn Sahl, who will be mentioned in the section on astronomers.
6. al-Baladhuri, Ahmad ibn Yahya ibn Jabir, who has been mentioned above, who used to translate from Persian into Arabic.
7. Jabalah ibn Salim, the secretary of Hisham, who has been mentioned. He used to translate to Arabic from Persian.
8. Ishaq ibn Yazid translated from Persian into Arabic. Among what he translated was the book of the history of the Persians known as Khuday-nameh. Among the Iranian translators are [the following]:
9. Muhammad ibn al-Jahm al-Barmaki.

10. Hisham ibn al-Qasim.
11. Musa ibn `Isa al-Karawi.
12. Zadayayh ibn Shahawayh al-Isfahani.
13. Muhammad ibn Bahram ibn Mityar al-Isfahani.
14. Bahram ibn Mardan, the Zoroastrian priest of the city of Sabur in the Fars province.
15. `Umar ibn al-Farkhan, a complete account of whom will follow in the section on authors.

**Indian and Nabatean Translators:**

1. Manka the Indian, who belonged to the group of Ishaq ibn Sulayman ibn `Ali al-Hashimi, and translated from Indian [presumably Sanskrit] into Arabic.
2. Ibn Dahan the Indian, who was in charge of the Hospital of the Barmakids. He translated into Arabic from Indian.
3. Ibn Wahshiyyah, who translated from Nabatean [this means Aramaic, the native language in Iraq and Syria at the time of the Islamic conquests]. He translated many books, according to what has been said, and an account of him will be given below, God willing.

**Exercise VIII. Answer the following questions, based on the text above:**

1. What languages were translated?
  
  
  
  
  
  
  
  
  
  
2. What types of works were translated?
  
  
  
  
  
  
  
  
  
  
3. How did the translators work?
  
  
  
  
  
  
  
  
  
  
4. What kind of people worked as translators?
  
  
  
  
  
  
  
  
  
  
5. Of the languages mentioned, besides Arabic, which appear to have been most important? What is your evidence?

**Exercise IX: Questions for discussion:**

1. Is translation still important? Why? What purposes does it serve?

2. What are some of the difficulties translators face?

3. How would you go about translating a biography, a chemistry textbook, a computer manual, an email message, a private letter, a children's book?

4. Do you know of any works that have been translated recently, either to or from English?

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### **Euclid**

The author of *geomatria*, which means geometry. ... He is the inventor of geometry and the outstanding scholar in that field. He was earlier than Archimedes and others, and was one of the philosophers and mathematicians.

### **His Book on the Principles of Geometry**

Its title is *Stoikheia*, which means the “elements” of geometry. Al-Hajjaj ibn Yusuf ibn Matar translated it in two versions, one known as the Haruni [from the name of the Caliph Harun al-Rashid], which was first, and a second, the Ma'muni [that is, for the Caliph al-Ma'mun], which is known as al-Ma'muni. People rely on the latter version.

Ishaq ibn Husayn also translated it, and Thabit ibn Qurrah al-Harrani corrected it.

Abu `Uthman al-Dimashqi translated several chapters, and I saw the tenth of them in Mosul in the library of `Ali ibn Ahmad al-`Imrani, and in the possession of one of his servants, Abu al-Saqr al-Qabisi, with whom people study the *Almagest* [Ptolemy's book on astronomy].

Eiran (?) translated this book and solved its ambiguous points.

Al-Nayrizi wrote a commentary on it.

A man named al-Karabisi, who will be mentioned below, has a commentary on it.

Al-Jawhari has a commentary on this book from the beginning to the end, and an account of al-Jawhari will follow.

Al-Mahani authored a commentary on the fifth chapter of the book.

Nazif the doctor, may God give him strength, related to me that he saw the tenth chapter of Euclid in Greek, and that it adds forty diagrams to the text that is in the hands of the people. What is in the hands of the people has 109 diagrams. He had planned to translate this text into Arabic. Yuhanna the priest stated that he saw the diagram which Thabit claimed belonged to the first chapter and claimed to have in the Greek version. Nazif mentioned that he had showed it to him.

Abu Ja'far al-Khurasani the librarian, who will be mentioned later on, authored a commentary on the book of Euclid.

Abu al-Wafa' authored a commentary on this book, but did not complete it.

A man known as Ibn Nahawayh al-Arrajani translated the tenth chapter.

Abu al-Qasim al-Antaki translated the entire book, and it was published.

Sanad ibn `Ali had translated it, and Abu `Ali saw nine chapters of [this translation] and some of the tenth.

Abu Yusuf al-Razi also translated the tenth chapter excellently for Ibn al-`Amid.

Al-Kindi reports in his treatise on the purposes of the Book of Euclid that this book was originally written by someone named Apollonius the Carpenter, who divided it into fifteen discourses. When, however, long eras had passed from the time it was written and it became neglected, one of the Alexandrian kings became enthusiastic about learning the science of geometry. Euclid lived during his reign. He ordered [Euclid] to correct and explain this book. Consequently, he did so, and the book became known as his. Later on, Episcleaus, the student of Euclid, found two chapters, the fourteenth and the fifteenth. He gave them to the king, and they were added to the book. All of this was in Alexandria.

Among the books of Euclid are: *The Book of Apparent Things*; *The Book of Differences of Views [on Optics]*; *The Book of Givens*; *The Book of Melody*, known as *Music*, wrongly attributed to him; *The Book of Division*, corrected by Thabit; *The Book of Benefits*, wrongly attributed to him; *The Book of the Canon*; *The Book of Heaviness and Lightness*; *The Book of Composition*; *The Book of Analysis*, wrongly attributed to him. (F 325-26)

**Exercise X: Answer the following, based on the text above.**

1. How important was Euclid's *Elements* for scholars in the Islamic empire? what is your evidence?
2. Why would more than one translation of a single work be necessary?
3. What were some of the problems that faced mathematicians who were trying to work with Euclid's text?



- Bloom, Jonathan M. *Paper before Print: The History and Impact of Paper in the Islamic World*. New Haven: Yale University Press, 2001.
- Gutas, Dimitri. *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society (2nd-4th/8th-10th centuries)*. London: Routledge, 1998.
- Rosenthal, Franz. *The Classical Heritage in Islam*. Berkeley: University of California Press, 1965.