

Part I: Introduction

CHAPTER ONE

Arabic Script: Its Role and Principles

WRITING IN ARABIC script became a, if not the, main theme in Islamic visual culture as it spread over one-quarter of the globe during the past fourteen hundred years. This chapter begins by outlining some of the reasons why. Arabic as the language of the revelation played a seminal role in the religion of Islam and in the civilization that flourished under Muslim patronage, and the script developed for writing Arabic was adapted to fit other languages, first New Persian, then Turkish, and eventually a host of others, both Semitic and non-Semitic, including several Berber languages of North Africa; the Iranian languages of Pashto, Kurdish, and Baluchi; the Indo-Aryan Urdu, Sindhi, and Kashmiri; the Dravidian Moplah; and the Austroneasian Sulu, Malagasy, and Malay. The result is that Arabic, after Roman script, is the segmental script most frequently used in the world today. Still other languages commonly used to be written in Arabic, ranging from Swahili, Kanuri, Hausa, and Fulani in central Africa and Harari in Ethiopia to Slavic Serbo-Croatian in Bosnia, Polish, Belarussian, and even Japanese. Muslims in medieval Spain wrote their native Romance tongue in Arabic characters in the script known as *aljamiado*.¹

In virtually all times and places Arabic was esteemed not only for its content but also for its form. This chapter therefore turns next to a discussion of the basic principles of Arabic script that determined the parameters within which calligraphers could develop their art. It is not intended as a primer in Arabic; rather the section highlights features that affected formal performance, so that even those who do not read Arabic script can appreciate some of the calligraphic *tours de force* illustrated in the subsequent chapters.

For many people, Muslims and non-Muslims alike, copies of the Koran, God's revelations to the Prophet Muhammad in the early seventh century, epitomize Islamic calligraphy. Indeed pages, from magnificent codices of the Koran – whether on parchment or paper, penned in brown or black ink in a variety of scripts, and often decorated with gold – form the text most frequently illustrated in this book, comprising some one-third of its illustrations. The third and longest section of this chapter therefore discusses the contents and form of this scripture and its fundamental role in the development of Islamic calligraphy.

The importance of writing in Islamic culture

The extensive use of writing is one of the hallmarks of Islamic civilization. Writing decorates buildings and objects made in all media throughout the course of Islamic civilization from the seventh century to the present in almost all regions from the far Maghrib, or Islamic West, to India, south-east Asia, and beyond. Calligraphy, the art of writing beautifully, became one of the main methods of artistic expression. It was, moreover, the only one of the visual arts produced in the Islamic lands that was widely appreciated within its own culture, with treatises devoted to its history and artistic merits written from medieval times onward.

In part, the Islamic tradition developed out of local precedents, for in both the ancient Near East and the classical world, inscriptions had long been used to decorate the walls and façades of buildings as well as other monuments like triumphal arches. The Assyrians and the Achaemenids had used the wedged-shaped script known since the early nineteenth century as cuneiform (literally, wedge-shaped), inscribing it on official objects ranging from small seals to large-scale reliefs. Neo-Assyrian palaces built between the ninth and seventh centuries BCE at sites like Nimrud, Nineveh, and Khorsabad were decorated with marble and limestone orthostats, or tall upright slabs, each inscribed in the middle register with a dozen lines of text. The standard inscription detailed the king's name, titles, and epithets; summarized his military achievements; and described the appearance of the palace. On the long walls, the inscription was sandwiched between upper and lower registers with a continuous series of images (usually termed narratives) depicting royal hunts and military conquests. On the slabs framing doorways, the text traversed larger-than-life-size representations of the king, his attendants, and winged deities. Reiteration drove home the message, which was superimposed over and unified the images into a coherent program of royal ideology.²

The Romans too recognized the artistic possibilities of monumental inscriptions. They developed a system of clear and simple lettering in which both the letters and the spaces between them were made to conform to aesthetic principles. Such an innovation had a major impact on Western art and visual culture, for the Roman system of monumental script is still the basis for modern lettering and book printing in the West.³ Writing dominated public space. Its civic function and its prominent position in the open affected its appearance and graphic style.⁴ The Romans manipulated epigraphic layout; letter size, which was dependent on height and placement; and shading, which was achieved through V-cut carving, as in the inscription at the base of the column erected by the Roman emperor Trajan in 105 CE, generally reckoned the finest masterpiece of Roman monumental lettering.⁵

In these earlier cases, writing usually supplemented and explained the accompanying image. What is different about Islamic art is that

writing became the main – and sometimes the only – element of decoration. This fundamental change was due, in large part, to the pivotal role of the word in the religion of Islam. Its importance is clear from the five verses beginning Chapter 96 (Iqra' or al-'Alaq) of the Koran, generally reckoned to be the first words revealed to the Prophet Muhammad:

In the Name of God, the Merciful, the Compassionate,
Recite: In the name of thy Lord who created,
created Man of a blood-clot.
Recite: And thy lord is the Most Generous,
who taught by the Pen,
Taught man that he knew not.⁶

In other words, the knowledge of writing distinguishes man from God's other creatures.

The importance of writing runs throughout the Koran. Chapter 68 (*Surat al-Qalam*), another early revelation, opens with the words, 'Nun. By the Pen, and what they inscribe.' According to another pair of verses revealed slightly later (Chapter 50, or al-Qaf, verses 17–18), two noble angels sit on man's shoulders recording his every action and thought. The one on the right notes down good deeds, the one on the left evil ones. On Judgment Day, they will tote up man's every deed for the final accounting in the Book of Reckoning (Chapter 69, or *Surat al-Haqqā*, verses 18–19).

Although the Koranic text is never illustrated, artists in later periods incorporated the imagery from it in other works. This painting of the two scribbling angels (Figure 1.1), for example, comes from a lavishly illustrated manuscript of al-Qazvini's cosmography, *Aja'ib al-makhluqat wa ghara'ib al-mawjudat* (The Wonders of Creation and the Oddities of Existence).⁷ The text is an encyclopedic work that summarizes existing literature on astronomy, geography, botany, mineralogy, and zoology by dividing the known universe into the spheres of heavenly bodies, water, and earth. Transcribed at Wasit in 678/1280, this manuscript is the only complete copy of the work known, made three years before the author's death in the city where he served as chief judge, or *cadi*. Interestingly, the angels do not write in codices, the ubiquitous book format in the Islamic lands, but on scrolls, the format used for official documents at this time, as in the contemporary decree issued by the Mongols in 692/1292 (Figure 7.13). The Ilkhanid artist therefore saw these angels as bureaucrats!

The centrality of the Koran led to the promotion of the Arabic language from a regional idiom to the *lingua franca* of an empire. During the Prophet's lifetime, Arabic was spoken by only a relatively small number of people in the region to the east and south-east of the Mediterranean Sea. That situation changed dramatically following the Umayyad conquests westward across North Africa and eastward over the Iranian plateau and the establishment of a centralized

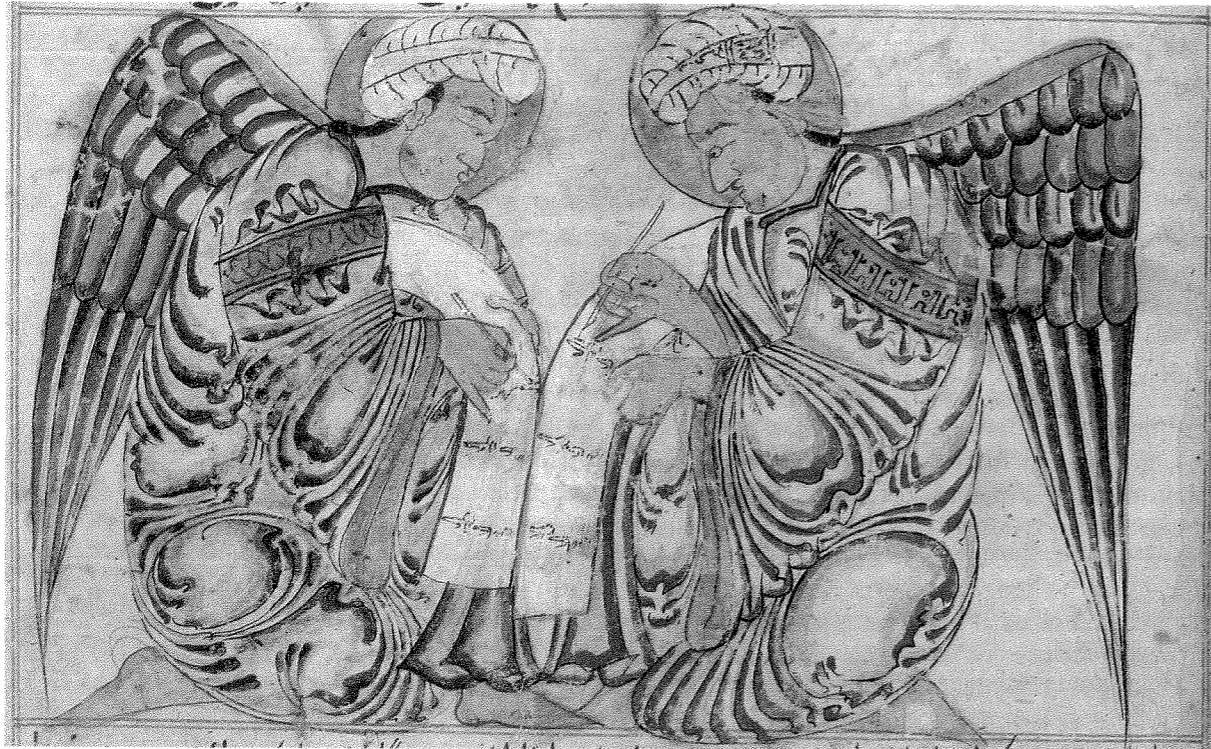


Figure 1.1 *Scribbling angels from a manuscript of al-Qazvini's Aja'ib al-makhluqat (Wonders of Creation) copied at Wasit in 678/1280.*

The text of the Koran, God's revelations to the prophet Muhammad, stresses the importance of writing. Verses 17–18 of Chapter 50 (Surat al-Qaf) mention two recording angels who tote up men's deeds, and such angels were depicted in other kinds of manuscripts made in later periods, such as this copy of a cosmography about the wonders of creation. The angels write with reed pens in widely spaced lines on long scrolls, the format used in this period for bureaucratic decrees.

empire ruled from Damascus in Syria. During the reign of the Umayyad caliph 'Abd al-Malik (685–705), Arabic began to replace local languages in the chancery. Administrative decrees and correspondence, along with coins, milestones, and monuments, show that by this early date the form of the script was already standardized (see Chapter 3). The use of Arabic continued to expand, and within three centuries Arabic had replaced such older languages as Latin, Greek, Syriac, and Middle Persian to become the language of religion, government, commerce, literature, and science from the Iberian peninsula across the southern and eastern shores of the Mediterranean, Iraq, and Iran to western Central Asia. Arabic script became a distinguishing characteristic of Islamic civilization, one of the ways that medieval Muslims distinguished themselves from other cultures, and, like the standardized script developed at the beginning of the first millennium in China, a major tool in fostering cultural coherence.⁸ To change the Arabic script, as Kemal Atatürk did in Turkey on 28 November 1928, signaled a conscious break from this religious and cultural tradition.

The importance of calligraphy in the Islamic lands is often compared to that of east Asian, specifically Chinese or Japanese, calligraphy.⁹ In both traditions, calligraphy was considered the supreme art, the one valued most highly in its home culture. Both traditions also maintained a similar dichotomy and play between the form of the

script and the meaning of the words. Nevertheless there are significant differences between the east Asian and the Islamic traditions. Some are material: Chinese and Japanese calligraphers worked with a brush, Muslims with a pen. The flexibility and multiple fibers of the standard writing implement affected the fluidity and uniformity of the strokes. Cultural values played a role as well. Both Chinese and Japanese calligraphers imbued their art with their personal style. East Asian calligraphers generally sat motionless, contemplating the moment of artistic creation, and then with a burst of creativity, applied brush to support. As a result, the reader is meant to sense the personality of the artist through the calligraphy.¹⁰ In following the brushstrokes, the reader experiences a visual sequence of movement and rest and thus participates in the physical process of creation.¹¹

This scenario does not hold true in the Islamic lands, where the individual artist is thought to have applied pen to support in regular, steady strokes. Illustrations of Muslim calligraphers at work date only from later times (see Figure 12.1 for an example from the early seventeenth century), but textual descriptions lead us to assume that they had worked this way in earlier times as well. The reader is not meant to glean the calligrapher's personality from the script, but rather to appreciate the unwavering line and modulated forms that reflect the transcendence of the Almighty. Palpability and movement are replaced by ineffability and control, complex characters by simple strokes.¹² In east Asian work, furthermore, calligraphy is often appended to a mimetic representation, whether other ornament on a cast bronze or painted landscape on a scroll.¹³ By contrast, in the Islamic realm, calligraphy typically stands alone, as pictorial art is discouraged in most religious or official settings. Writing thus became one of the main vehicles to signify power, belief, legitimacy, and many other ideas and ideologies for which images are used elsewhere. Islamic culture is, in the words of Erica Dodd, 'the image of the word.'¹⁴

Principles of Arabic script

Calligraphy conveys information through both its semantic content and its formal appearance (and also through its aural resonances for the reader, who recites or internalizes the sounds).¹⁵ Even without reading or understanding the first, it is possible to appreciate the second if one is aware of some fundamental principles of the Arabic writing system. Arabic script, like Hebrew and Syriac but unlike Greek and Roman, is written from right to left, although, curiously, the numbers reflect an ancestral system and read in the opposite direction, from left to right. This right-to-left orientation dramatically affects layout,¹⁶ for the reader always begins at the right side of the page. Codices – the ubiquitous book form adopted in the Islamic lands – therefore, open in the opposite way that they do in the West.

Arabic script, like Greek and Roman scripts but unlike Egyptian or

Mayan hieroglyphics and Chinese characters, is written with individual symbols for letters.¹⁷ In an alphabetic language, these characters denote both consonants and vowels, but the system used for Arabic is what linguists call an *abjad*, meaning that these characters denote consonants (Figure 1.2).¹⁸ Many scripts have at least two distinct forms of writing: a monumental or printed form, in which the letters are written separately, and a cursive or handwritten one, in which they are connected. Compare, for example, a printed book or a carved gravestone with a handwritten letter. Arabic script, however, has only the cursive form of writing, although it has many *styles*. Because the individual letters in a word can be connected together, they change their shape depending on their position within the word. The same letter can have one form when it stands alone (independent), another at the beginning of a word (initial), a third in the middle of a word (medial), and yet a fourth at the end of a word (final). These forms are interrelated, and their position in relation to the baseline (a hypothetical ruling on which the letters 'sit') can vary, depending on the preceding or following letter. Unlike most other modern languages, there are no upper- and lower-case forms in Arabic script. Instead, particular words or phrases are used to indicate the beginning of a declarative sentence, a new thought, or a question. Despite sporadic attempts to introduce it in the nineteenth century (see Chapters 11 and 13), modern Western-style punctuation – commas, periods (full stops), parentheses, question marks, and so forth – was not used until recent times.

The traditional *abjad* used for writing Arabic has twenty-eight distinctive phonemes, or sounds, but only eighteen graphemes or forms, so the same form has to be used for as many as five different sounds. For example, the letters *ba'*, *ta'*, *tha'*, *nun*, and *ya'* (transcribed in English as b, t, th, n, and y) are all represented by the same shape. Although they assume different shapes in final position, these five letters are all written in initial and medial positions in the same shape of a short upright stroke, often called a tooth. These letters can be distinguished only by the dots accompanying them: one below the letter for *ba'*, two and three above the letter for *ta'* and *tha'* respectively, one above the letter for *nun*, and two below the letter for *ya'*. In other cases, identical forms are used to represent two or three letters in all positions. The letter *ghayn*, for example, is exactly the same as *'ayn* except for the dot written above it. The same is true of *sad* and *dad*. *Jim*, *ha'*, and *kha'* have the same shape, but one dot below, no dot, and one dot above, respectively.

Like all other Semitic languages, the Arabic language is based on a system of roots, where three (or sometimes four) consonants, or radicals, connote a semantic concept. A vocabulary is generated by grammatically transforming these roots according to regular patterns. Thus, the combination *k-t-b* is a root that conveys the idea of writing; from it are generated cognates including *katib* a writer or scribe, *kitab* a book, *kutubi* a bookseller, *kuttab* a school, and *maktab* a place of

Name	Transcription	Final	Medial	Initial	Independent
alif	ā	ا	ا	ا	ا
ba'	b	ب	ب	ب	ب
ta'	t	ت	ت	ت	ت
tha'	th	ث	ث	ث	ث
jim	j	ج	ج	ج	ج
ha'	h	ح	ح	ح	ح
khā'	kh	خ	خ	خ	خ
dāl	d	د	د	د	د
dhāl	dh	ذ	ذ	ذ	ذ
rā'	r	ر	ر	ر	ر
zā'	z	ز	ز	ز	ز
sīn	s	س	س	س	س
shīn	sh	ش	ش	ش	ش
ṣād	ṣ	ص	ص	ص	ص
ḍād	ḍ	ض	ض	ض	ض
ṭā'	ṭ	ط	ط	ط	ط
zā'	z	ظ	ظ	ظ	ظ
'ayn	'	ع	ع	ع	ع
ghayn	gh	غ	غ	غ	غ
fā'	f	ف	ف	ف	ف
qāf	q	ق	ق	ق	ق
kāf	k	ك	ك	ك	ك
lām	l	ل	ل	ل	ل
mīm	m	م	م	م	م
nūn	n	ن	ن	ن	ن
hā'	h	ه	ه	ه	ه
wāw	w/ū	و	و	و	و
yā'	y/ī	ي	ي	ي	ي
lām-alif	lā	ال	ال	ال	ال
tā' marbūta	-alā	ة	ة	ة	ة

Figure 1.2 Chart of the twenty-eight letters in the Arabic abjad.

The *abjad*, or consonantal script, used to write Arabic has twenty-eight phonemes, which change their shape depending on their position in a word. Derived from Aramaic, this system uses only eighteen different forms, so to render the twenty-eight individual consonants, a system was developed to add dots to some of the letters. Thus, *ba'* and *ta'* are the same form, but have one dot below and two dots above, respectively. When Arabic script was adapted to write Persian and Turkish, which have sounds like *p* and *g* that are not used in Arabic, the *abjad* was expanded to thirty-two letters by adding extra dots or bars. For example, *p* is written like *b* but with three dots below instead of one.

writing or office (Figure 1.3). Similar transmutations produce words from other roots.

Also like other Semitic languages, Arabic (and from it other languages written in Arabic script) requires that only the consonants and long vowels be written. As the root and grammatical form of the Arabic language define virtually every word in the lexicon, the reader can supply the unwritten short vowels from the context. Thus *k-t-b*

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Figure 1.3 Chart showing various forms of the root k-t-b.

Arabic, like other Semitic languages, is based on a system of roots, sets of three or sometimes four letters that denote a concept and are combined in regular ways to form words. The root *k-t-b*, for example, conveys the idea of writing. Transforming it in regular ways by the addition of vowels, prefixes, infixes, and suffixes produces cognates like *katib* (scribe), *maktab* (office), *muktatib* (subscriber), and *maktaba* (bookstore).

Definition	Transcription	Arabic Form	Arabic Form (Vocalized)
to write	kataba	كتب	كَتَبَ
piece of writing	kitāba	كتابة	كِتَابَةٌ
bookseller	kutubī	كتبي	كُتُبِي
Koran school	kuttāb	كتاب	كُتَابٍ
office	maktab	مكتب	مَكْتَبٍ
offices	makātib	مكاتب	مَكَاتِبٍ
bookstore	maktaba	مكتبة	مَكْتَبَةٌ
typewriter	miktāb	مكتاب	مِكْتَابٍ
correspondence	mukātaba	مكاتبة	مُكَاتَبَةٌ
enrollment	iktitāb	اكتتاب	اِكْتِتَابٍ
dictation	istiktāb	استكتاب	اِسْتِكْتَابٍ
writer, scribe	kātib	كاتب	كَاتِبٍ
written	maktūb	مكتوب	مَكْتُوبٍ
correspondent	mukātib	مكاتب	مُكَاتِبٍ
subscriber	muktatib	مكتتب	مُكْتَتِبٍ

can be read either as *kataba* (he wrote) or *kutiba* (it was written), and the reader depends upon the context to decide which reading is correct. The short vowels and other marks for such features as doubling (gemination), nunation (adding a final n), and the like can be added above or below the letters, especially if there is chance of confusion. Such markings became common when transcribing Koran manuscripts to reduce the risk of misreading scripture.

In order to adapt Arabic script for writing other languages, notably Persian and Turkish, some modifications had to be made, as these two languages have a few sounds that do not exist in Arabic. Certain letter forms were adapted by adding dots to letters that represented similar phonemes in Arabic. For example, the letter *pa'* (pronounced p), the unvoiced form of *ba'* (pronounced b), is written with three dots below, rather than the one used for *ba'*. The same kind of transformation holds for *cha'* (ch) and *jim* (j) as well as *zha'* (zh) and *za'* (z). The letter *gaf* (g) is written by adding another bar to the *kaf* (k). In this way the eighteen letter shapes used for writing the twenty-eight phonemes of the Arabic *abjad* were expanded to cover the thirty-two phonemes used in Persian and Turkish, the first two languages to adopt Arabic script. Using the same kinds of transformations, this versatile system was adapted to transcribe scores of other languages.¹⁹

Although these three languages use the same *abjad*, they belong to different branches of the linguistic tree: Arabic to the Semitic group, Persian to the Indo-European group, and Turkish to the Turkic group. In each of these three, different sounds and different letters predominate, resulting in different patterns of the written script.²⁰ In Arabic, sounds tend to be arranged by groups (nasals, labials, etc.), and the most common vowel is a. Turkish, by contrast, is marked by a predominance of palatals (k, g, q, sh, and j). Persian has a regular alternation between different categories of sounds and in this sense might be termed the most harmonious of the three.

In Arabic, the most common letter is *alif*, the first letter of the *abjad*, written as a tall vertical stroke and often compared metaphorically, particularly by mystics, to a standing person who refused to prostrate.²¹ It indicates the most frequent of the three long vowels, long a, and is the graphic support or seat (*kursi*) for the glottal stop (*hamza*). It occurs in seven of the ten regular conjugations or morphographic forms of any given root.²² It also appears in many common words and phrases. *Alif* is written, for example, as part of seven of the twelve personal pronouns and the feminine plural ending *-at*. Most importantly, it opens the definite prefix *al-* (the), in which it is paired with *lam*, another tall upright stroke that connects to the left. *Alif's* frequency on the page gives written Arabic a pronounced verticality, and the common combination *alif-lam* produces a sense of rhythm, like upright soldiers marching across a parade ground.

The other two languages commonly written in Arabic script are different. Persian is marked by the repetition of the determinative suffix *-ra*, the indefinite suffix *-i*, and the regular verbal endings *-ast* ([he/she/it] is) and *-and* ([they] are). Many of these letters are written with curved forms. Turkish is an agglutinative language that uses not only prefixes and suffixes, but also infixes. The result is many long words.

Calligraphers exploited the tendencies latent in the regular forms of these three languages written in Arabic script. For example, when writing Arabic, they often exaggerated the verticality engendered by the repeated use of *alif*. For balance, they elongated other letters horizontally according to the principle known variously as *mashq*, *madd*, or *kashida* (see Chapter 3 and Figure 3.7, 3.8, etc.). Sometimes they intertwined the double uprights of *alif* and *lam* or inserted supplementary U-shapes to fill spaces left blank because there were no upright letters (Figure 6.3). Calligraphers writing Persian emphasized curves, superposing words above an imaginary baseline and eventually creating hanging scripts that descended diagonally from upper right to lower left (see Chapter 7). Calligraphers writing Turkish learned to adjust for the length of words, often using the same hanging styles and emphasizing the repeated cross-strokes of *kaf* and *gaf* (e.g., Figure 2.6).

Writing Arabic script – whether for Arabic, Persian, Turkish, or other languages – differs in several significant ways from writing the cursive form of Roman script.²³ Most letters in the Arabic *abjad* are

Figure 1.4 Theoretical model showing the transformation of the letters in the Arabic alphabet.

Lisa Volov (Golombek) put forward a theoretical model to explain the development of letter shapes in Arabic script. She grouped the letters in five categories based on shape (vertical, rectangular, round, low, and oblique) and posited three degrees of transformation to each category: natural transformations that do not change the basic forms of the letters, internal modifications that alter the relationship between parts, and superimposed ornaments that are added to the basic shapes of the letters.

	Column A— BASIC FORMS*		
I VERTICAL	A, L, 3 ا, ل, ل	B-T-Th-Ni-a-Yi.a ب, ت, ث, ن, ا, ي, ا	S-Sh س, ش
II RECTANGULAR	D-Dh د, ذ	K ك	S-D, T-Z س, د, ت, ز
III ROUND	Q-F ق, ف	M م	H, W ه, و
IV LOW	R-Z ر, ز	N ن	W و
V OBLIQUE	A-Gh ا, ع, غ	J-H-Kh ج, ح, خ	

simpler in form than those in the Roman script (and much simpler than Chinese characters). This simplicity of form facilitates streamlining and encourages shortcuts and other modifications. Thus, in many later styles of Arabic script, calligraphers often flattened the three little bars or teeth of *sin/shin* into one long, swooping stroke. Similarly, they extended the descending tails of final *nun*, *ya'*, and similar letters into large curving bowls. The internal shapes of letters could also be stretched. This is particularly dramatic in the case of rectangular graphemes such as *dal*, *sad*, *ta'za'*, and *kaf*, whose medial forms comprise parallel lines.

In the theoretical model for the transformation of Arabic letters posited by Lisa Volov,²⁴ such types of modifications are natural transformations because they require no radical change in the basic forms of the letters (Figure 1.4). They mark a first degree of transformation. Calligraphers writing Arabic script could further transform the letter shapes by incorporating motifs or devices from the non-epigraphic vocabulary, such as interlacing or foliation. For example, they could twist or knot the upright stroke of an *alif* or the parallel bars of a rectangular letter. These internal modifications comprise a second degree of transformation as they still occur within the confines of the basic letter forms, but alter the relationship between parts. In a third

Column B— NATURAL TRANSFORMATION	Column C— INTERNAL MODIFICATION	Column D— SUPERIMPOSED ORNAMENT
	7, 8, 9	10
7	8	9
5	6, 7	8, 9
7	8	9

degree of transformation, calligraphers could add superimposed ornaments, appendages that do not affect the basic forms of the letters. In contrast to the first and second degrees of transformation, the third degree consists solely of additive elements and properly belongs to the realm of decoration rather than writing.

Two other characteristics of the Arabic writing system affect the relationship between word and penstroke. Unlike the Roman alphabet, in which all letters can be connected to both the previous and the following letter, seven of the thirty-two letters in the expanded Arabic *abjad* (*alif*, *dal*, *dhal*, *ra'*, *za'*, *zha'*, and *waw*) – or more than 20 per cent – do not connect to the following letter. Arabic script also has far more diacritical marks. When writing English, for example, only two letters of the Roman alphabet (i and j) require diacritical marks, whereas twenty-one of the letters (66 per cent) do in Arabic script as printed today. Of these, seventeen letters (*ba'*, *pa'*, *tha'*, *jim*, *cha'*, *ha'*, *kha'*, *dhal*, *za'*, *zha'*, *shin*, *dad*, *za'*, *ghayn*, *fa'*, *qaf*, and *nun*) require a dot or dots; five letters (*alif madda*, *ta'*, *za'*, *kaf*, and *gaf*) require upright or diagonal strokes; and a further letter (*ta' marbuta*) can require dots in certain situations. There are also free-floating diacritical marks, such as the strokes to denote the short vowels *fatha*, *kasra*, and *damma* that can be added in cases of possible ambiguity.

As a result of these two characteristics – the breaks between certain letters within a word and the additional diacritical marks – Arabic script has more penstrokes per word than Roman script. When writing Roman script, the end of the penstroke typically marks the

end of a word, whereas when writing Arabic script, a non-connecting letter requires the end of the penstroke before the end of the word. Some words need two or more penstrokes in addition to diacritical marks. Calligraphers, if they had no space to finish a word at the left end of a line, often broke off at the end of the penstroke. In early Koran manuscripts, they often continued the second part of the word on the following line or even the next page (e.g., Figures 1.5, 4.2, 4.5, 4.6, etc.), a situation akin to the hyphenation used in modern printing, but without any punctuation mark to indicate the break.

In later manuscripts, particularly copies of Persian poetry written in the hanging *nasta'liq* script (e.g., Figures 7.15, 10.7, 12.6, etc.), calligraphers often stacked the last syllable or penstroke above the end of the line at the left. This was especially suitable in Persian, where many words end with the same letters, such as the final *ya'* of the indefinite, the plural ending *-an*, or the third person form of the verb to be, *-ast* or *-and*. Calligraphers could also adjust the location and size of the many diacritical marks. Again this feature is particularly appropriate when writing Persian and Turkish, which have more letters with multiple dots or bars. In addition to the three dots used in Arabic to distinguish *shin* from *sin* and *tha'* from *ta'*, the alphabet for writing Persian also uses three dots for the letters *zha'* and *cha'* and two strokes to distinguish *gaf* from *kaf*. Calligraphers writing Persian in later periods played with these dots, sometimes sprinkling them like seeds on top of a bun and spacing them out to fill the voids left by low letters (e.g., Figure 10.6).

Calligraphers writing Arabic script could also manipulate the spaces between penstrokes. They could, for example, allow the same amount of space between penstrokes within a word as they did between words. That is, they could make the spaces between words the same width as the spaces between syllables or penstrokes. Such even spacing contrasts dramatically with that adopted in modern Western typography, where a wider space is typically left at the end of a sentence to alert the reader visually to a break in thought more significant than the one between words.

The ancient Greeks had done the same thing, rejecting word separation in favor of the so-called *scriptura continua*.²⁵ Ancient languages of the Mediterranean lands, both Semitic and Indo-European, were written with words separated by spaces, points, or a combination of the two. Once the Greeks adapted the Phoenician alphabet by adding symbols for vowels, word separation was no longer necessary to eliminate any unacceptable level of ambiguity that could occur in reading Indo-European languages, which were polysyllabic and inflected. The reader did not need to identify words, only parse syllables. By the second century CE the Romans had adopted the Greek convention as well. They did so deliberately, abandoning the intra-text spaces or punctuation in order to slow down reading and enhance its oral and rhetorical aspects. Such unbroken text also provided mnemonic compensation through enhanced short-term aural recall,

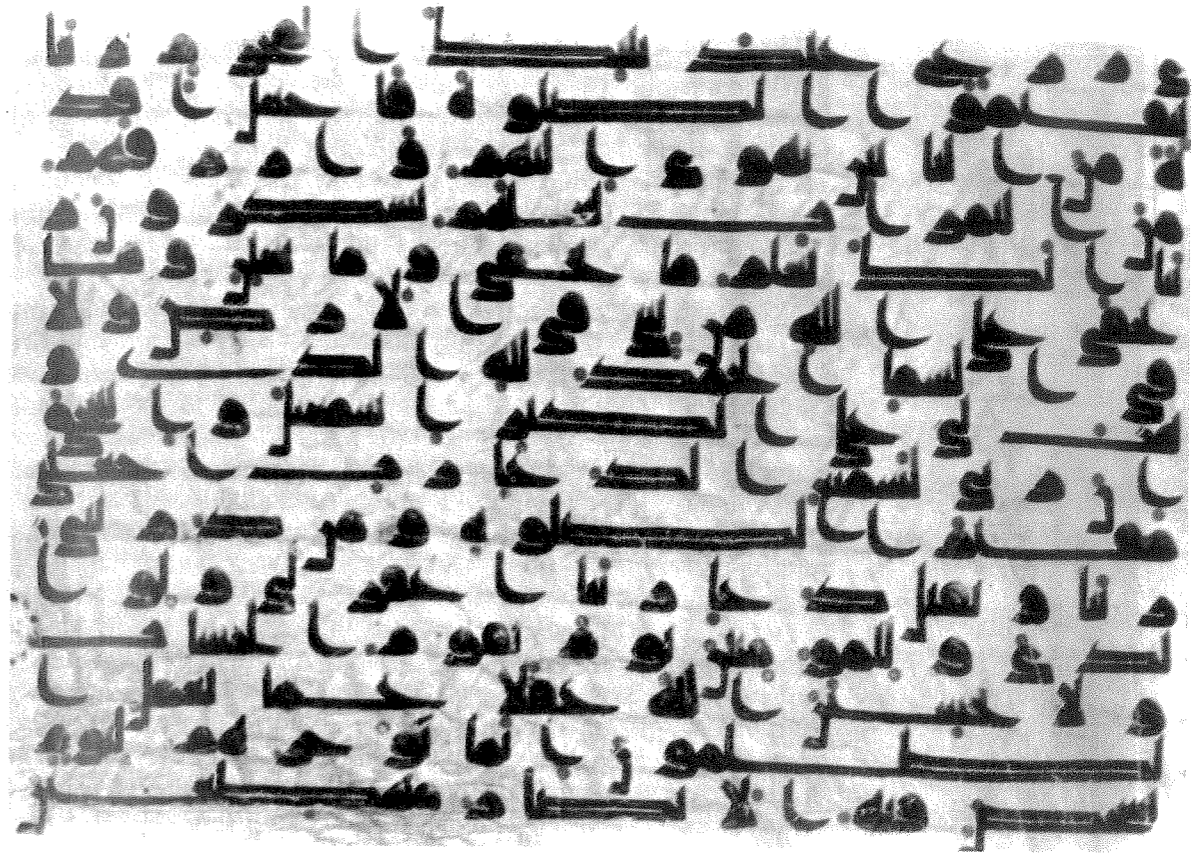


Figure 1.5 Page containing Sura 14:37–43 from a parchment Koran manuscript with fifteen lines per page. This fragment from an early Koran manuscript was part of a major gift by the Safavid shah 'Abbas to the shrine of the eighth imam 'Ali ibn Musa at Mashhad in Iran. The last page contains a colophon alleging that the manuscript was penned by the Prophet's son-in-law, 'Ali ibn Abi Talib, and the first page contains an attestation to its authenticity by the leading theologian of the day, Shaykh Baha'i Amili. The Safavids collected these manuscripts to bolster their legitimacy as descendants of the Prophet through his family, though modern scholars doubt that manuscripts like these actually date to the first century of Islam.

for at this time reading meant reading aloud. Silent reading – like the word separation that was adopted in Roman script beginning in the seventh century CE – was embraced only in medieval times.

Calligraphers writing Arabic script sometimes did the same thing, willfully abandoning the spaces between words. We can see this readily on a page from an early Koran manuscript now in the Astan-i Quds library in Mashhad (Figure 1.5).²⁶ The first letter on the page (Figure 1.5a) is a final *ya'*, the last letter and penstroke of the word *dhi* (possessing) that began on the preceding page. The space between this final *ya'* ending the word is the same size as the spaces between the next three letters *za'*, *ra'*, and *'ayn*, three separate penstrokes that make up the following word *zar* (cultivation). In these early Koran manuscripts,



Figure 1.5a

therefore, spacing gives no visual clues as to where one word ends and the next one begins. Such manuscripts must have been used for recitation by someone who already knew the text by heart, with the written record serving as an aide-memoire. Such spacing also performed the positive function of slowing down reading and recitation.

Calligraphers' ability to manipulate both the simple forms and the breaks between penstrokes allows for great flexibility in writing Arabic script. They have the possibility of extension and contraction, more often the former than the latter, and they deliberately exploited the contrast between the two. On the page from the Koran manuscript in Mashhad (Figure 1.5), much of the visual excitement arises from the regular distribution of elongated shapes, either the connector between letters or especially the two parallel bars of graphemes such as *dal*, *kaf*, *ta'*, and *sad*. Such broad rectangular shapes demanded a steady hand, and their rectilinear forms contrast in turn with the curved shapes in other letters such as the bent foot of *alif* and the bowed head of initial *'ayn*. The mark of a good calligrapher, such as the anonymous one who penned this large and thus expensive copy of the Koran, was to distribute these shapes across the page in regular and therefore mentally pleasing patterns.

Some scholars today have attempted to find underlying geometric frameworks to explain the distribution of shapes across the written page. Valery Polosin, for example, suggested that certain aspects of the Islamic book are generated by a geometric grid based on the intersection of various proportional systems of line segments and curves. Most of his work deals with later manuscripts, including frontispieces, book covers, and other aspects of page layout, but he has also suggested that the pages in early Koran manuscripts written in the angular script known as kufic were designed on a proportional grid based on the rhomboidal dot formed by pressing the nib of the pen to paper.²⁷ To my mind, such analyses are not convincing. They are reductionist to the point of absurdity, for, as with the spiraling scrolls that Alexandre Papadopoulo proposed as the underlying basis of all Islamic painting,²⁸ the manipulation of size and scale allows the justification and rectification of virtually any composition to an underlying grid. All Islamic calligraphy is based on geometric considerations, especially the width of the nib and hence the size of the penstroke, but in most cases the art of the calligrapher lies in manipulating the forms free-hand within the constraints imposed by the rectangular page and the lines of text written across it.²⁹

The Koranic text

Written copies of the Koran comprise the most important text for Muslims. Revealed orally to Muhammad, the scripture was soon committed to writing, although scholars have debated exactly how soon this occurred (see Chapter 4). Verses very similar to, though not identical with, the text are inscribed on coins issued by the

Umayyads (Figure 3.4) and on the Dome of the Rock in Jerusalem, ordered by the caliph 'Abd al-Malik in 72/692 (Figures 3.6 and 3.8), and beautifully written codices of the Koran soon became common. Throughout the course of Islamic civilization, selected verses were also inscribed on all sorts of objects and buildings, such as the Taj Mahal (Figure 12.4).

In view of the Koran's seminal role as the primary text for Islamic calligraphy, then, it is important that readers have some idea of its content and form. The Koran is probably the most important topic in Islamic studies, and there is a vast literature about it. It not only forms the longest single article in the second edition of the *Encyclopaedia of Islam*, but has also recently become the subject of its own encyclopedia, a reference tool devoted more to the content of the scripture than to its form.³⁰ Even the text itself can be approached in many ways, as shown by the recent spate of articles by the Russian scholar Efim Rezvan, who has written on various aspects, ranging from its ecstatic dimensions to its role as a signifier of social relations in late seventh-century Arabia.³¹ This discussion is intended only as an introduction, focusing on the formal and physical realizations of the Koranic text and its relevance to Islamic calligraphy.

As a book, the Koran is comparable in length to the New Testament. It contains some seventy-seven thousand words arranged in 114 chapters (Arabic *sura*) of varying length. It opens with the *Fatiha*, a beautiful short prayer that serves as an invocation in many situations:

In the Name of God, the Merciful, the Compassionate
Praise belongs to God, the Lord of all Being
the All-merciful, the All-compassionate
the Master of the Day of Doom
Thee only we serve; to Thee alone we pray for succour.
Guide us in the straight path
the path of those whom Thou hast blessed,
not of those against whom Thou art wrathful
nor of those who are astray.³²

In codices this chapter was frequently enhanced by splendid illumination across a double page (e.g., Figure 8.2) or as the right half of a double page (e.g., Figures 1.8, 1.9, 10.3, 11.2, 11.3, 12.11, and 12.15). Since it also served as a talisman, this chapter was scrawled on potsherds or bones.³³ It was also penned in special scripts as a calligraphic exercise (Figure 10.10).

The other chapters of the Koran follow in roughly descending order of length, from the nearly three hundred verses of the second chapter to the final two chapters, which are short prayers of a few lines each.³⁴ Pages with these concluding short chapters are also singled out for rich illumination (e.g., Figure 5.7 and 12.5). The chapters of the written text of the Koran are thus arranged neither in the order in which they were revealed nor in a narrative sequence.

Neither the chapter names nor the verse numbers were part of the original revelation; rather, they were coined later to help distinguish sections of the text. Muslims traditionally identify the chapters by name. They often use a catchword, an unusual word or thought that occurs in the chapter. The second (and longest) chapter in the Koran, for example, is called the Cow (Surat al-Baqara), from the parable of the heifer that God commanded Moses to sacrifice, mentioned in verses 67 to 71. For purists, this should be written precisely as 'the chapter in which the cow is mentioned,' and such an exact system of nomenclature was occasionally used in fine manuscripts, such as the large codex made by a royal scribe at Hamadan in 559/1164 (Figure 6.9) and the magnificent copy on paper dyed purplish-brown that the Hafsid sultan Abu Faris endowed to the mosque of the Qasba at Tunis in 805/1407 (Figure 9.12).

Since the chapter names were adopted by believers only after the revelation, it is no surprise that they have not been accepted uniformly. The seventeenth chapter, for example, is usually known as Bani Isra'il (the Children of Israel), but is sometimes called al-Isra' (the Night Journey) from Muhammad's night journey mentioned in the opening verses. Some commentators took their names from the opening words in the chapter, regardless of their meaning. The great commentator al-Tabari (d. 923), for example, called the one hundred and fifth chapter *a-lam tara* (literally, did you not see) after the very first words.³⁵ Most people, however, call it the Elephant (*al-Fil*), after the main reference in it to the victory over the people of the elephant, thought to refer to the Meccans' defeat of the Abyssian prince Abraha, who c. 570, like Hannibal against the Romans, invaded with an army of elephants. Analysis of these variant names may help to distinguish different traditions, and descriptions of an individual manuscript should properly include the variant chapter names used in it.

The numbering of the verses within the chapters is equally problematic. Already from the tenth century scholars were arguing over variant readings of the Koranic text (see Chapter 4 for further details about some of these readings), and the addition of a pause between phrases could allow for the insertion of an extra verse number. Some readers counted the basmala – the introductory phrase *bism allah al-rahman al-rahim* (in the name of God the Merciful, the Compassionate) that precedes all but one chapter (the exception is Chapter 9, al-Tawba, Repentance) – as a verse; most did not. The debates became so heated that from the tenth century calligraphers frequently added frontispieces specifying the reading they had used (Figure 5.9) and/or the number of verses in it (Figure 6.9).

Modern readers still do not agree on the numbering of verses. Montgomery Watt's classic study of the Koran contains an appendix with two numbering systems common in modern times: one found in Gustav Flügel's 1834 edition of the text, traditionally used by Western scholars in the nineteenth and early twentieth centuries,

and the other used in the standard Egyptian text printed in Cairo under King Fu'ad I, the edition sanctioned by Muslim authorities.³⁶ The bilingual edition of the Koran most readily available in English, the one done by Yusuf Ali, uses a third system with a few variants.³⁷

In contrast to Muslims, Western scholars have traditionally used a numerical system to cite Koranic chapter and verse. They adapted the model for citing Biblical texts, designating the chapter with a Roman number and the verse with an Arabic numeral (e.g., II:255). They chose a numerical system in part to avoid the variations in chapter names. The numerical system was also in keeping with the taxonomic tradition popular in the West since the age of Darwin, making the study of the Koran seem more scientific and less devotional.

But this numerical system too has problems. Roman numerals are clumsy, and it is easy to drop one digit of longer numbers (XVIII, for example, often gets mistakenly truncated to XVII). Furthermore, the visual aspect privileges the Roman system of lettering. For simplification here, I have used a modified Western system, with 2:255 meaning the 255th verse of Chapter 2, following the numbering system used in the Standard Egyptian edition of the Koran.³⁸ The standard Arabic concordance to the Koran uses a similar system,³⁹ although many Muslims would cite the same verse as Surat al-Baqara, 255 or Ayat al-Kursi (Throne Verse).

In Koran manuscripts, the name of the chapter and the number of verses were typically accompanied by the word Mecca or Medina, to indicate the place of revelation. None of this information is part of the Koranic revelation, and to show that it is of human, not divine, inspiration, Muslim calligraphers wrote it first in a different color of ink and later in a different script than that used for the main text of the revelation. Anglo-Saxon calligraphers, beginning in the eighth century at Wearmouth-Jarrow and elsewhere, developed a similar hierarchy of scripts to distinguish text from commentary, typically using uncial for the former and minuscule for the latter. By the ninth century they had evolved a more elaborate system, using a display script for headings and colophons; a secondary one to distinguish the beginning of a text, chapter or paragraph; and a tertiary one to indicate the beginning of a thought or sentence.⁴⁰

To underscore the point that this information about chapter name and verse count did not belong to the Koranic text, it was set off in boxes, often with palmettes extending into the margin. In this way, the reader flipping through the codex would instantly recognize the divisions between chapters. These boxes typically occur as headings to the chapter, but sometimes they were appended at the end of a chapter and indicate the subject of the preceding chapter, as is the case in the Hafsid Koran manuscript (Figure 9.12). The difference between headings and footers is known in other book traditions: it parallels the different traditions followed by American and some European, particularly French, presses, which place the table of

contents at the beginning or the end of the volume, respectively. For the study of Islamic calligraphy, these pages with headings/footers are particularly important as they illustrate the hierarchy of scripts that a single calligrapher had mastered at a particular time. In the same way calligraphers often set off the opening of a literary or theological work in another script (Figures 5.11 and 8.14).

Because of the unique arrangement of the Koran, it is impossible to classify its contents into standard literary types, such as legends, parables, short stories, and the like. The text contains various types of material, including prayers, oaths, regulations, 'sign' passages (in which certain aspects of nature and human life are 'signs' [Arabic *ayat*] of God's omnipotence and benevolence towards man), 'say' passages (in which believers are told to say something), and finally narratives. Although the easiest to remember, the narrative elements in the Koran actually form a very small part of the whole. Furthermore, they are not read continuously. Parts of the story of Moses, for example, are scattered over forty-four different passages. Those reared in the Biblical tradition traditionally criticized this segmental approach as non-linear, but scholars have recently pointed out its positive virtues as the fragmented mode of composition allows the text to 'achieve its most profound affects, as if the intensity of the prophetic message were shattering the vehicle of human language in which it was being communicated.'⁴¹

Most of the narratives are versions of traditional stories found in other Near Eastern cultures. For example, the text several times mentions the creation of the world in six days and the throne from which the universe is controlled creation of the world in six days. One of the most lyrical evocations of God's majesty is the Throne Verse or *Ayat al-Kursi* (2:255):

God
there is no god but He, the
Living, the Everlasting.
Slumber seizes Him not; neither sleep;
to Him belongs
all that is in the heavens and the earth.
Who is there that can intercede with Him
save by His leave?
He knows what lies before them
and what is after them,
and they comprehend nothing of His knowledge
save such as He wills.
His Throne comprises the heavens and the earth;
the preserving of them oppresses Him not;
He is the All-high, the All-glorious.

This passage was a particular favorite, often inscribed on objects and buildings and still popular with calligraphic artists.

Along with the concept of divine omnipotence, the Koran maintains the concept of man's responsibility for his actions. On the Day of Judgment, those who have acted rightly will gain Paradise and its pleasures, while those who have acted wrongly will earn eternal fire and its chastisements. Paradise is described in the Koran as a verdant garden through which rivers flow and in which the residents, adorned with jewels and rich clothing, recline on silken couches beneath God's throne. By contrast, the damned endure a variety of torments in Hell's burning furnaces, where they must eat fruits shaped like devils' heads. Much of the Koran's message can be summed up in the beautiful ante-penultimate chapter (112) known as *Ikhlas* (Sincere Religion), one of the first verses to be revealed in the early Meccan period:

In the Name of God, the Merciful, the Compassionate
Say: 'He is God, One
God, the Everlasting Refuge
who has not begotten, and has not been begotten,
and equal to Him is not any one.'

This chapter too was a favorite, used already by the Umayyads in the late seventh century on their first epigraphic coins (Figure 3.4) and in the mosaic inscription around the interior of the Dome of the Rock and perennially popular on amulets and talismans.

Copies of the Koranic text are never illustrated. By this I mean that they are never accompanied by pictures. There are several reasons for this absence of illustration. In part, it is due to the relatively small role of narrative in the text and the pre-eminence there of moral and legal themes that do not lend themselves readily to pictorial representation. Furthermore, illustrations were not needed to tell the story of Muhammad's mission, as he, unlike Christ, was human, not divine, and his life was not part of the scripture. More importantly, illustration came to be seen by Muslims as usurping God's prerogative of creation, and it was considered blasphemy to add illustrations to God's sacred word. As a consequence, the exquisite transcription of God's word became the most important vehicle for aesthetic outpouring in Islamic civilization, and one that acquired sacred overtones and special resonance. The sanctity of the word also had further implications for its reproduction by mechanical means (see further, Chapters 11 and 13).

The fine calligraphy used to transcribe the scripture was often embellished with fancy illumination, by which I mean geometric, floral, or other non-figural decoration (as distinct from illustration, meaning embellishment with pictures).⁴² Illumination was commonly used not only to divide verses and chapters, but also for full-page frontis- and finispieces (e.g., Figure 5.9). One fragmentary manuscript found hidden in the mosque at San'a in the Yemen has a unique frontispiece apparently representing two mosques (or two

views of the same mosque), though without people.⁴³ The decoration in all other frontis- and finispieces is exclusively geometric and floral.

In the seventh century Insular artists developed such full-page decorations on the left-hand page, or verso, of a leaf. They perceived Latin in graphic, not oral, terms, and were concerned with the content, rather than the appearance, of the text. Along with new forms of punctuation and script, such 'carpet-pages' were part of their 'grammar of legibility,' serving to indicate a new text or a major division.⁴⁴

In Koran manuscripts, illumination was also used to mark other divisions. Although compiled in a single text, the revelation was often broken into parts to aid in recitation. The most popular division comprised thirty parts (Arabic *juz*, pl. *azja*; Persian *si-para* [30 parts] or simply *para* [part]) to correspond to the days of the month. This division was current already by the ninth century, as in the famous manuscript made for Amajur (Figure 4.2) and a similar one endowed by 'Abd al-Mun'im to the mosque of Damascus in 298/978. This format was common throughout the Islamic lands, from Morocco to China (Figure 9.3). These thirtieths, in turn, were sometimes divided into four parts, including one-quarter (*al-rub*), one-half (*al-nisf*), or three-quarters (*al-thalatha*). The sixtieths were known as *hizb* (group or band). The division into sixtieths, while not popular in India, was common in the Maghrib and is said to have been a more recent division than the *juz*.⁴⁵

Another common way of dividing the Koran is by sevenths (*manzil*, literally station), to correspond to days of the week. This division was also known from early times and is found in codices made over a wide geographic swathe. It was used, for example, in the so-called Blue Koran, attributed to Tunisia in the tenth century (Figure 4.10), the parchment copy made at Palermo in 372/982-83 (Figure 5.4), the paper copy transcribed by 'Uthman ibn Muhammad at Bust in 505/1111-12 (Figure 6.6), and the paper copy transcribed by Ibn al-Wahid for the Mamluk amir Baybars (Figure 8.13). Nevertheless, it does not seem to have been as popular as the thirty-part division.

The long text could also be divided in two volumes. This was usually a functional division adopted also for practical reasons. In east Africa, for example, the two halves were set in niches on the sides of a doorway of a house to symbolically protect those entering, and older manuscripts were sometimes split into two volumes for this purpose (see Chapter 12 and Figure 12.12). Similarly, publishers sometimes divide the text into halves, as in the original edition of A. J. Arberry's English translation, which was then reprinted in paperback in a single volume.⁴⁶

These divisions into parts are often marked in the margin, along with similar indications for pauses, places of prostration, and the like. Larger divisions into thirtieths, sevenths, or halves can also be marked by an illuminated page or pages (e.g., Figure 9.8), but often the

manuscript was divided into that number of volumes. This was the case not only with large presentation copies of the Koran used for public recitation in the mosque, but also with smaller copies that were then stored in a single box (Figure 7.8).

For orthodox Muslims like the Damascene scholar and polemicist Ibn Taymiya (d. 1328), the Koran is God's literal word and therefore can be read only in the majestic and glorious Arabic language in which it was revealed. The necessity of reading the Koran in Arabic means that all believers should learn Arabic in order to do so. This requirement has had several important ramifications for the way in which Islamic civilization developed. It has created a linguistic bond among believers, particularly as Islam spread beyond the boundaries of Arabia to regions inhabited by speakers of other languages. Having learned to use Arabic as the language of religion, they also used it as a language of literature, science, commerce, and social intercourse. The primacy of Arabic as the language of God's revelation has also helped to preserve the purity of the Arabic language, for Muslims constantly call to mind the noble and magnificent words and phrases of the Koran. Although the Arabic language has evolved over the fourteen centuries since the Koran was revealed, it has not changed as much as English has in the six centuries since the time of Chaucer. Finally, the primacy of the Arabic language has encouraged the spread and use of the Arabic script, which is known from the shores of the Atlantic to the Pacific to render a variety of languages, including not only the original Arabic, but others ranging from Persian and Ottoman Turkish to Malay.

Despite the necessity of learning the Koran in Arabic, there have been many attempts to render it into other languages. The English monk Robert of Ketton made the first translation into a Western language in 1143, translating the Arabic into medieval Latin for Peter the Venerable, abbot of the monastery of Cluny, who wanted to understand the Koran so as to counter it.⁴⁷ Robert's autograph manuscript survives in the Bibliothèque de l' Arsenal in Paris, but it took exactly four centuries for the work to be printed.⁴⁸ The first edition was printed at Basel in 1543 by Theodor Buchman or Bibliander, a Protestant divine who served as professor of theology at Zurich. The publication was quite controversial: when it first appeared, the copies were seized and the printer arrested. Only after lengthy negotiations with the city's authorities and the intervention of several Reformers, notably Martin Luther, was the work released. Nevertheless, it was a popular seller, and a second edition, with a preface by Martin Luther, was issued seven years later at Basel and Zurich.

For more than a century the printed edition of Robert of Ketton's Latin translation served as the basis for other translations of the Koran into modern European languages. The first was Andrea Arrivabene's Italian version of 1547 printed in Venice. The German theologian and traveler Salomon Schweigger produced a German edition at Nuremberg in 1616. Only in 1647 did anyone attempt a

translation into a modern Western language directly from the Arabic original: this was done by André du Ryer, a nobleman who had been French consul in Alexandria and Cairo, spent some time in Istanbul, and traveled widely in the region. It, in turn, served as the source for the first translation into English, *The Alcoran of Mahomet*, made by the Scotsman Alexander Ross and published in 1649.

George Sale's English version, published in London nearly a century later in November 1734, marks a watershed. Unlike Ross' translation of a translation, Sale worked from the original Arabic and rendered the text in a language familiar from the King James translation of the Bible. He also included copious notes based on the works of traditional Muslim commentators, especially al-Baydawi (d. 1286 or 1291) as well as a 'preliminary discourse' giving a brief but objective account of Islam. The scholarly importance and popularity of Sale's translation is evident from its numerous reprintings.⁴⁹

Many other English versions have appeared in recent years. Marmaduke Pickthall, an English novelist who spent many years in India where he converted to Islam, prepared the first translation by an English Muslim, and his book *The Meaning of the Glorious Koran: An Explanatory Translation* was approved by Muslim authorities in Egypt.⁵⁰ The renowned Orientalist A. J. Arberry, sensitive to the views of orthodox Muslims who hold that the Koran, which was revealed by God in Arabic, can be read only in that language, called his English version *The Koran Interpreted*.⁵¹ He translated the text in a sort of free verse, and his translations are the ones quoted in this book, although the usefulness of his translation is sometimes compromised since he used the Flügel rather than the standard Egyptian system of numbering and he did not separate individual verses.

Recent interest in Islam and Islamic civilization has sparked many other books that introduce the Koran to non-Muslims. Michael Sells' *Approaching the Qur'an: The Early Revelations* renders parts of the text in a version intelligible and accessible to modern Americans.⁵² It also comes with a CD-rom containing recitations by nine distinguished reciters, thereby underscoring the importance of the oral and aural version alongside the written and read one. Michael Cook's *The Koran: A Very Short Introduction*, despite its tiny size, contains many good ideas in a readable form.⁵³ Furthermore, he emphasizes visual aspects of the written text.

Although sometimes considered substitutes or paraphrases, translations of the Koran have long been necessary as Islam spread to non-Arabic-speaking regions. Bilingual copies, with the Arabic text and a translation/paraphrase in the vernacular language, were used in proselytizing, and calligraphers worked out several different methods of combining the text in two languages. The earliest and most common method is the interlinear text, in which one line of Arabic is followed by one line in the vernacular language, which is often distinguished by a different color of ink and/or size or style of script. The first interlinear copies seem to have been made in Arabic and Persian and

may well date as far back as the tenth century,⁵⁴ although extant manuscripts survive only from several centuries later (Figure 1.6).⁵⁵ To make the correspondence between text and translation even clearer, the calligrapher sometimes wrote each word or phrase of the vernacular translation or commentary diagonally below the words or phrases in Arabic.⁵⁶ In this way, not only size and script, but also orientation on the page distinguish text from translation.

This technique of interlinear translation was used not only for Persian but also for many other languages written in Arabic script. Manuscripts from the fourteenth century in Chaghatay, or eastern, Turkish, are sometimes combined with a translation into Persian (Figure 9.2). With the expansion of Islam across the Indian Ocean and into sub-Saharan Africa, bilingual manuscripts were made in other languages, as, for example, a seventeenth-century copy with Kanembu, a dialect of Kanuri still spoken by parts of the Bornu population around Lake Chad (Figure 12.15). Cook illustrates several later examples with other languages in his small handbook on the Koran.⁵⁷

The interlinear technique could also be used with different styles of script. The Koran scholar Arthur Jeffery mentioned a lithographed copy printed in Tehran in 1323/1905-6 that had a line of kufic script with interlinear *naskh*.⁵⁸ Clearly the kufic script was considered authentic but unreadable to many, so the text was also written out in the more familiar rounded script.

There were also several other methods of combining Arabic and a vernacular language. A second one was to pen the translation in the margin. In this case too, the vernacular text was often written in diagonal lines. Placement and orientation on the page, along with size and script, thus distinguish text, considered more important, from translation or commentary.

A third, and more unusual, method of transcribing bilingual Koran manuscripts entails interspersing both texts in the same line, with one phrase in Arabic followed by a translation or explanation in the vernacular language. This technique allows the teacher to read the text aloud in Arabic, while the student seated beside him can follow the meaning in the vernacular. This unusual technique was adopted by the Ottomans, as shown by a manuscript in the Ghassan Ibrahim Shaker Collection (Figure 1.7).⁵⁹ On stylistic grounds the manuscript is attributed to the late sixteenth century, but a note added at the end says that it copies an earlier manuscript transcribed by Ghazi ibn Mahmud at the end of Jumada I 736/15 January 1336. The title page gives the name of the work, a Turkish translation (*tarjuma*) of the commentary (*tafsir*) entitled *Sharif al-asdaf* (the Noblest of Pearls). Both Arabic text and Turkish translation are written in the same *naskh* script, but the Arabic is distinguished by a red horizontal slash over the words. The bilingual text was intended to be used in proselytizing, for the given name of the calligrapher, Ghazi, was carried in fourteenth-century Anatolia by those who distinguished themselves in the war against infidels.⁶⁰

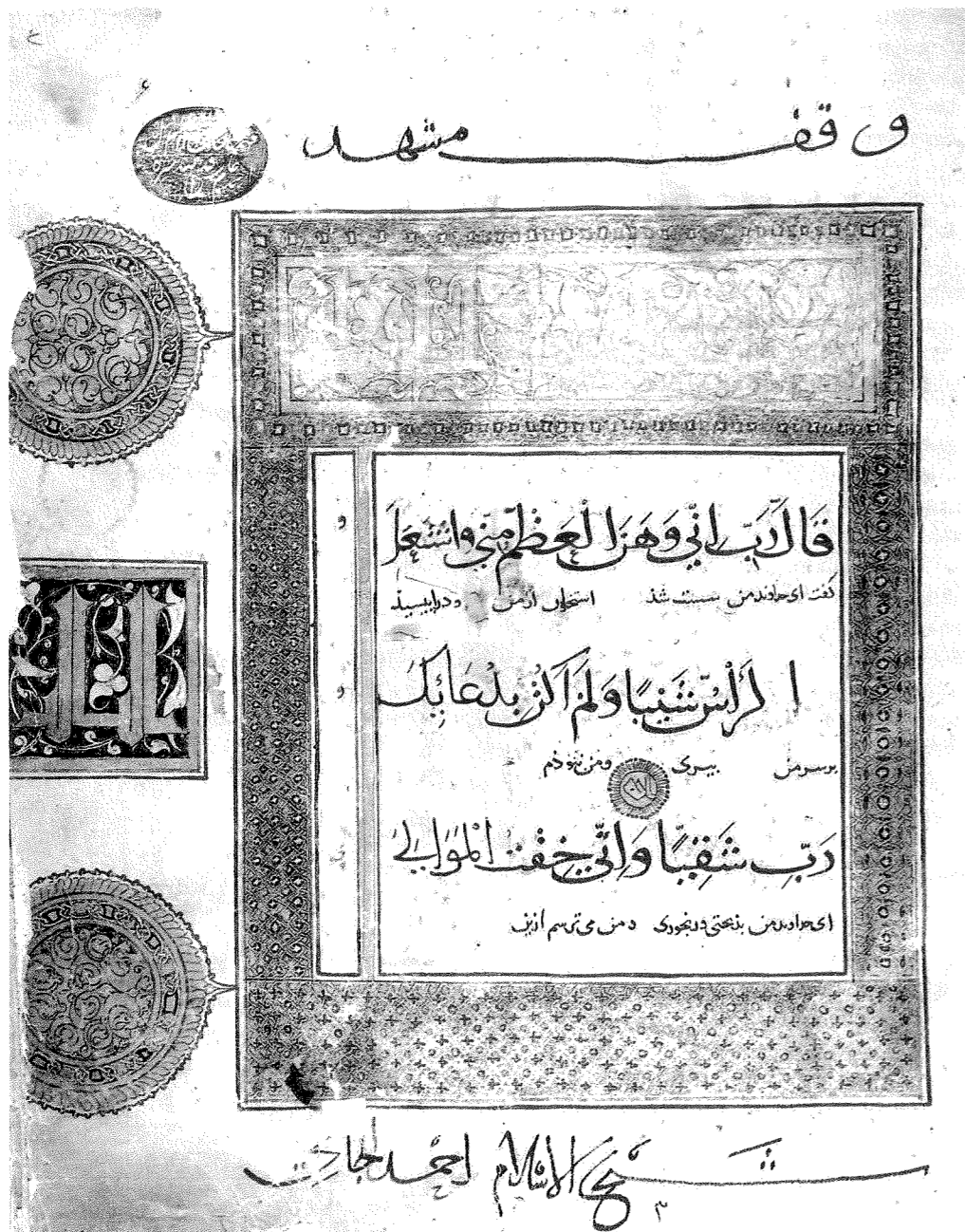


Figure 1.6 Page containing Sura 19:4-5 from a four-volume bilingual manuscript of the Koran with six lines per page copied by Muhammad ibn 'Ali ibn Muhammad ibn 'Ali al-Nishapuri in 584/1188-9 for the Ghurid amir Ghiyath al-Din Muhammad ibn Sam.

Although bilingual Koran manuscripts were probably made from the tenth century, this is one of the earliest dated copies to survive. It was a luxury manuscript, of large size, with extensive gold, and a Persian translation in small script between the Arabic text in large script. The manuscript was later endowed to the shrine of Ahmad Jami, as indicated by the endowment text added at the top and bottom of this page.

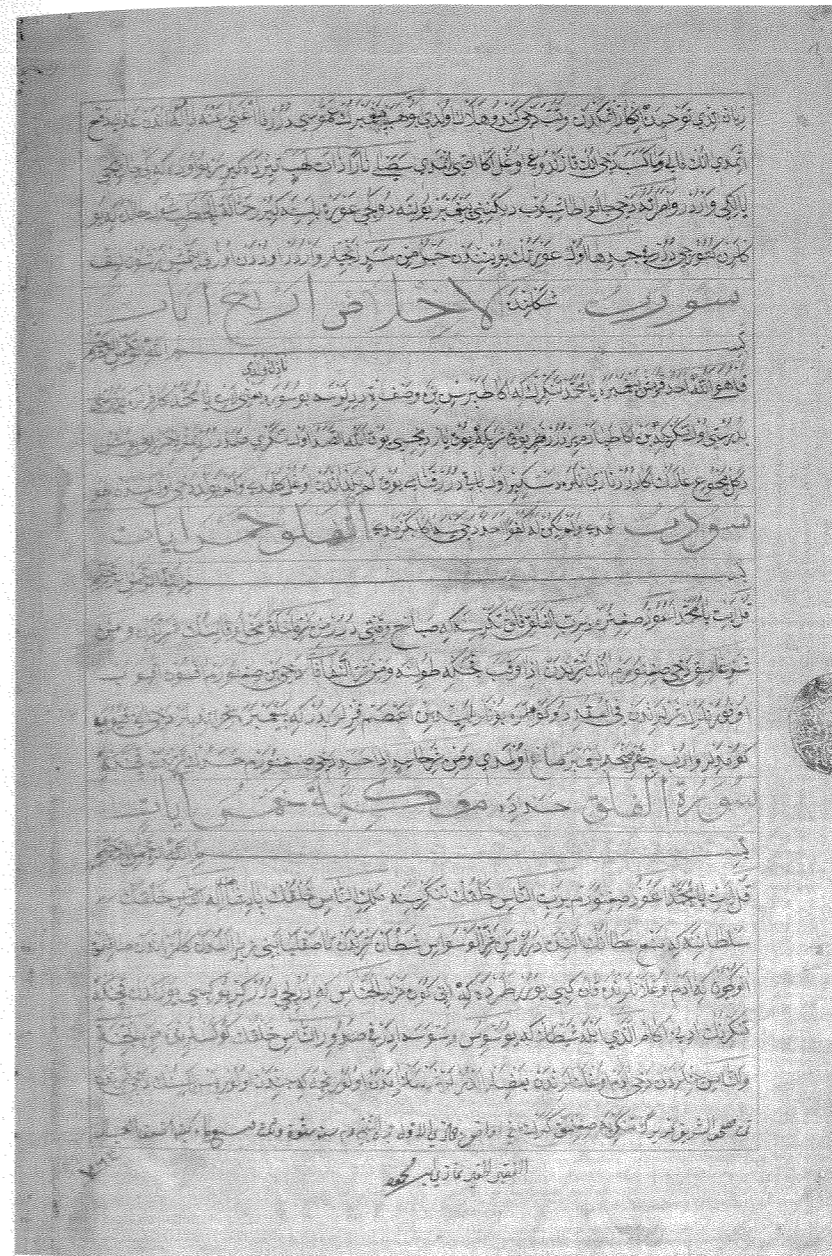


Figure 1.7 Page with Suras 111:1-114 and the colophon from a single-volume Koran manuscript with twenty-three lines per page and a Turkish translation of the commentary Sharif al-asdaf.

Bilingual Koran manuscripts were needed for proselytizing, and calligraphers worked out several methods of combining text with translation and/or commentary. The vernacular translation was often written between the lines or in the margin, but this manuscript, copied in the late sixteen century from an original dated Jumada I 736/December 1335-January 1336, shows an unusual third method, in which the Turkish translation is interspersed within the Arabic text. Text is distinguished from translation by a red slash over the Arabic.

This technique of combining two languages within the same line works with those that read from right to left, but to produce translations in other languages that read from left to right, scholars introduced the multi-column format. This layout, which aids a philological reading of the text, was adopted by humanist scholars. The first known example is that made in 1480-1 by Flavius Mithridates, a Jewish convert to Christianity. He produced a Latin translation

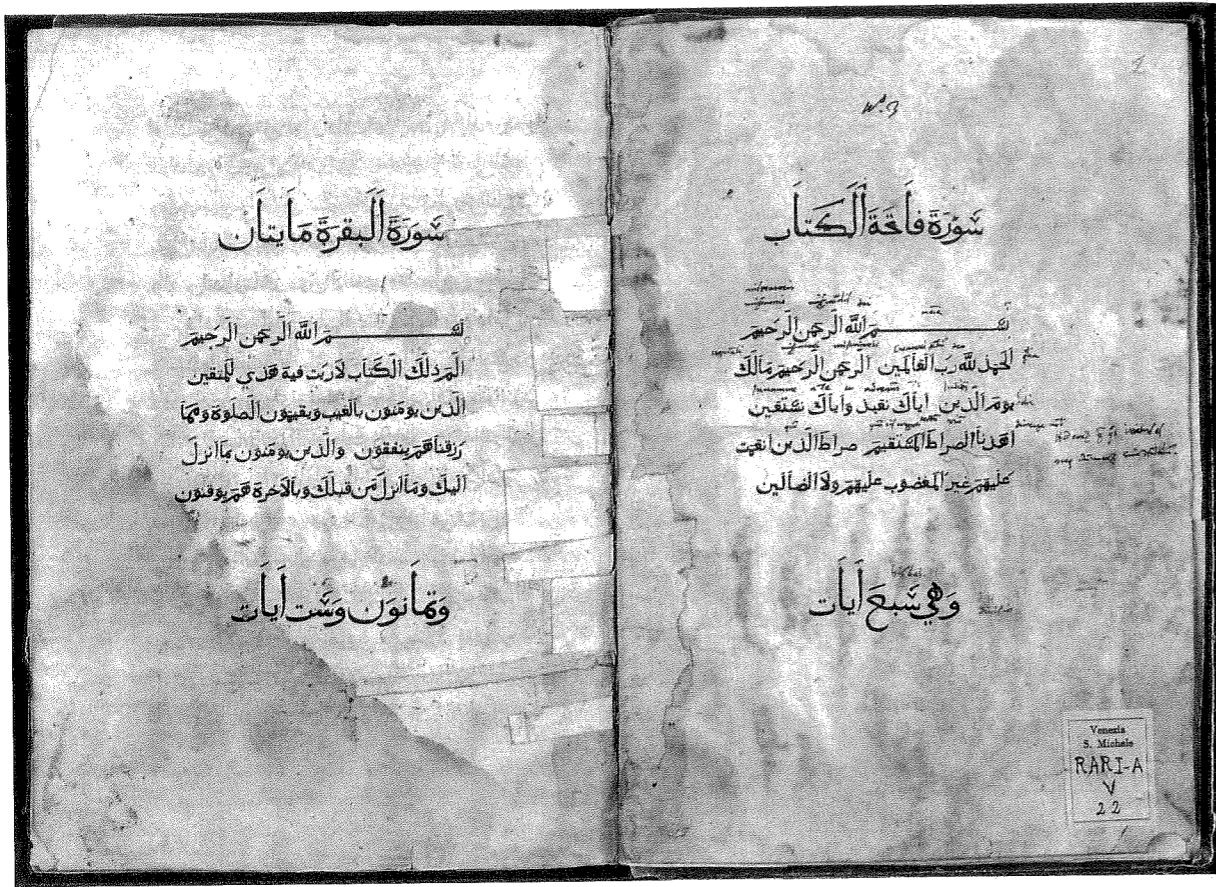


Figure 1.8 Opening double page with Suras 1–2:4 from an edition of the Koran printed by Paganino and Alessandro Paganini in 1537–8.

This is the earliest printed copy of the Koran known. Intended for Christian missionaries, it was neither a commercial nor an evangelical success, perhaps because it did not distinguish between certain letters of the Arabic alphabet and used an ungainly typeface. All copies were thought to have perished until the 1980s when a single remaining one was discovered in Venice.

of Suras 21 and 22, which he had copied as a sumptuous manuscript in which text is set beside translation in facing columns.⁶¹ This multi-column layout became the typical format used in modern printed versions, which have one column or page of text in Arabic facing one in another language. This is the format adopted in Yusuf 'Ali's often reprinted edition, which includes not only text and English translation but also a commentary at the bottom (see Figure 1.10 below).⁶²

Commentaries on the Koran, to be distinguished from translations or interpretations, were typically written on the same page with the text, but again using a different color of ink and a different, usually smaller, script. Most commentaries, however, are much longer than the Koranic text itself, and commentaries were often written in a small hand in the margin, as with interlinear bilingual manuscripts made in the age of empires in Kashmir (Figure 12.5) and near Lake Chad (Figure 12.15). The calligrapher could also divide the page horizontally, using one part for the text and the other for the commentary. This is the case with a manuscript transcribed by one Muhammad ibn Muhammad al-'Amid al-Imam Awhad al-Din in

630/1232–3 (Figure 6.14), which has the Persian commentary transcribed in a small *naskh* above the Koranic text written in a large *thuluth*. Similarly, in Yusuf Ali's modern printed edition, the notes are printed in a smaller font at the bottom of the page.

All of these methods were used by calligraphers to visually distinguish divine revelation from extraneous text, be it headings, translations, interpretations, or commentaries. The sacredness of the scripture led to its transcription manually in a beautiful hand, and this sanctity explains why handwritten copies remain popular and why printed editions of the Koran were so slow to be accepted. The first ones were made by non-Muslims.

The earliest was produced by the Venetian brothers Paganino and Alessandro Paganini in 1537–8 (Figure 1.8).⁶³ Printed as a private edition and probably intended for Christian missionaries, it used an ungainly typeface that did not distinguish between certain letters of the Arabic *abjad*, such as *dal* and *dhal*. Note, for example, that the words *al-din* (Figure 1.8a) and *alladhina* (Figure 1.8b) are printed in exactly the same way. Chapter titles are particularly graceless, with distorted proportions between low letters and tall strokes. The script also exemplifies the difficulty typesetters had in reconciling the exigencies of setting type on a line with the piling up of letters in Arabic script. Note, for example, the awkward spacing and piling up of the phrase *ihdina al-sirat al-mustaqim* from the fourth line of text on the right (Figure 1.8c). The suffix *-na* floats and is crowded by the initial *alif* of the next word. In *al-mustaqim*, the letters are plunked down next to each other in a flat line, with a large and ungainly hook for *sukun*. Ligatures are extremely awkward, with a sharp angle, especially when a toothed letter like *ya*' is joined to *ra*' or final *nun*, as in *ghayr* or *al-dalin* (Figure 1.8d), the last word of the Fatiha on the right page. The 1537 Paganini edition was neither a commercial nor an evangelical success, and all copies were thought to have perished until the 1980s when a single remaining one was discovered in Venice.

It took two and a half centuries before Muslims themselves were willing to produce a printed edition of the Koran, although this too was something of an outsider's work: the first edition printed by Muslims for Muslims (Figure 1.9) was made at St Petersburg in 1787.⁶⁴ Intended for the new population of Muslims in Russia, it was made at the behest of Catherine the Great, who had occupied and annexed the Crimean Khanate four years earlier, thereby incorporating many Kirghiz into her empire. Distributing copies of the Koran, while sometimes explained as a mark of her tolerance, also fitted her expansionist plans: she was plotting to expel the Turks from Istanbul and restore Byzantine rule there and to wrest India from Britain's ever-tightening grip. This edition, done at a time when printing the scripture was still forbidden in the Ottoman empire, thereby helped to curry favor with Muslims.⁶⁵ Containing a marginal commentary by Mulla 'Uthman Isma'il, the text was set in a flat type that corrected the errors in letters

الدين

Figure 1.8a

الدين

Figure 1.8b

اهدنا الصراط المستقيم

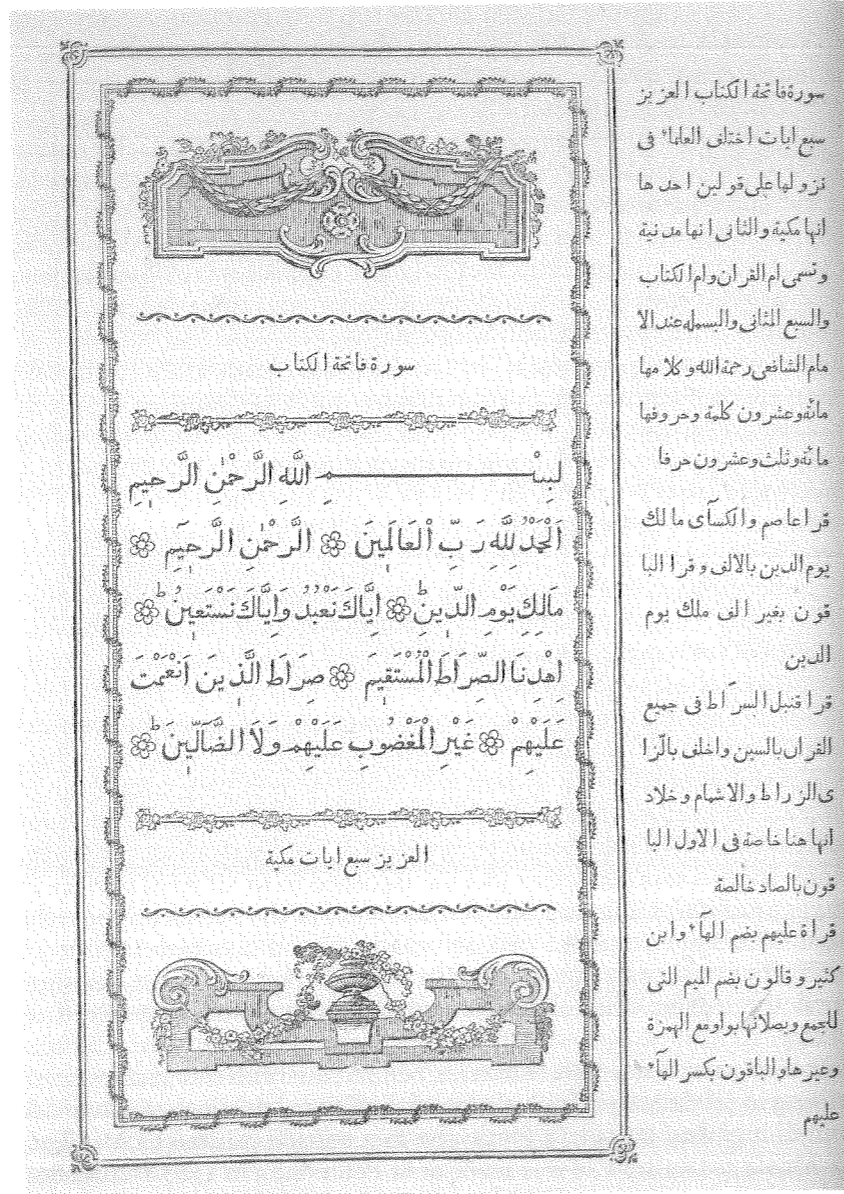
Figure 1.8c

الفالين

Figure 1.8d

Figure 1.9 Opening page with Sura 1 from an edition of the Koran printed at St Petersburg in 1787.

This is the opening page to the first edition of the Koran printed by Muslims for Muslims. It was made under the auspices of Catherine the Great, who had just annexed the Crimean Khanate, thereby incorporating many Muslims into the Russian empire. This edition was done at a time when printing the scripture was still forbidden in the Ottoman empire.



الدين

Figure 1.9a

الدين

Figure 1.9b

اهدنا الصراط المستقيم

Figure 1.9c

بسم الله الرحمن الرحيم

Figure 1.9d

found in the Paganini edition (Figure 1.8). The words *al-din* (Figure 1.9a) and *alladhina* (Figure 1.9b), for example, are correctly punctuated in the St Petersburg edition, with a dotless *dal* and a dotted *dhal*. The spacing is more uniform written, as in the phrase *ihdina al-sirat al-mustaqim* (Figure 1.9c), and rosettes have been added to divide verses. Nevertheless, ligatures still presented a problem. The extender between *sin* and *mim* in the basmala (Figure 1.9d) is set in at mid-height so the final *mim* floats in space. Chapter titles and supplementary information are not set off in a different display script, but printed

in a version of the same script that is, unusually, smaller, rather than larger, than the text script. Vocalization is set at an even more uniform height than that used in the Ottoman styles of *naskh* (e.g., Figures 11.2 and 11.4). The overall aspect is lifeless.

Despite its awkward physical appearance, this edition was a success: it was reprinted several times until 1798 in St Petersburg and then from 1803 to 1859 at Kazan, the city of the Volga that had served as the capital of the khans of Kazan. It is estimated that as many as one hundred and fifty thousand copies were printed, and it played a role in the centuries-long process of creating a uniform text of the Koran.⁶⁶ Conceived as a colonial endeavor, the Kazan Koran was also a commercial commodity carried by Tatar merchants not only throughout Central Asia but to India and even the Hijaz.

Only in the twentieth century was the Koran at last printed on a large scale in the Muslim world. The edition produced by the Official Printing House at Bulaq, Cairo, in 1342/1923-4 marked another watershed in the history of the Koran. The printed edition was put together after a decade of collaboration by Muslim specialists in the Koran not by collating texts and fragments, but rather from the oral tradition.⁶⁷ The text does not use traditional orthography, but relied on the oral and written traditions of the 'science of readings' (*'ilm al-qira'at*). It adopted the version of the text canonized by Hafs (d. 805) following 'Asim, the most common reading used in many regions, although that of Warsh (d. 812) following Nafi' is popular elsewhere in North Africa.⁶⁸ The Cairo edition was done under the patronage of Fu'ad I, partly to promote unity in a Muslim world rocked by setbacks such as the abolishment of the sultanate in Turkey, and with its official sanction, the Cairo edition achieved canonical status. It is now generally accepted as the standard version and has been reprinted many, many times.

Despite the widespread availability of the Cairo edition, the idea of printing the Koranic text remained controversial into the twentieth century. When Abdullah Yusuf Ali prepared his bilingual Arabic-English edition in 1934 (Figure 1.10), he did not use type for the Arabic, but commissioned special calligraphy, specifically asking the calligrapher Pir 'Abdul Hamid to separate words, place vowels close to the letters to which they relate, and number verses so that they could be juxtaposed to their English equivalents. The uniformly set vowels of printed texts such as the St Petersburg edition had clearly jarred aesthetic sensibilities. Pir 'Abdul Hamid's calligraphy was then transferred to photographic blocks prepared by Master Muhammad Sharif. Yusuf Ali followed this elaborate procedure, he tells us in the preface to the first edition, because 'calligraphy occupies an important place in Muslim Art, and it is my desire that my version should not in any way be deficient in this respect.'⁶⁹ Typeset Arabic, then, was still considered inferior to handwritten calligraphy. Yusuf Ali's edition fulfilled his aims: it has been reprinted many times and is widely available. The aversion to Arabic type, especially for scripture,

S. LXII. 2-6.] 1546

They had been, before,
In manifest error.

3. As well as (to confer)
All these benefits upon
Others of them,⁵¹⁵⁵ who
Have not already joined them:
And He is Exalted
In Might, Wise.

4. Such is the Bounty of God,
Which He bestows
On whom He will,⁵¹⁵⁶
And God is the Lord
Of the highest bounty.

5. The similitude of those
Who were charged
With the obligations
Of the Mosaic Law,
But who subsequently failed
In those obligations, is
That of a donkey⁵¹⁵⁷
Which carries huge tomes
(But understands them not).
Evil is the similitude
Of people who falsify
The Signs of God:
And God guides not
People who do wrong.

6. Say: "O ye that
Stand on Judaism!"⁵¹⁵⁸

كَاذِبِينَ قَبْلَ كُنْ صَادِقِينَ
وَأَنْصُرِينَ وَمُنْجِيَةً
لِكُلِّ سَفِيحٍ وَهَشِيمٍ
وَهُوَ الْعَزِيزُ الْحَكِيمُ
فَالَّذِي فَضَّلَ اللَّهُ
يُرِيدُ مَنْ يَشَاءُ
وَاللَّهُ ذُو الْفَضْلِ الْعَظِيمِ
مَكَانَ الَّذِينَ
سُئِلُوا الْقَوْلَ
ثُمَّ لَمْ يَجِئُوا بِالْحُجَّةِ
يَسْمَعُونَ أَسْمَاءً
يَسْمَعُونَ مَكَانَ الْقَوْمِ الَّذِينَ
كَذَّبُوا بِآيَاتِ اللَّهِ
وَاللَّهُ لَا يَهْدِي الْقَوْمَ الظَّالِمِينَ
قُلْ يَا أَيُّهَا الَّذِينَ هَادُوا

1547

If ye think that ye
Are friends to God,
To the exclusion of
(Other) men, then express
Your desire for Death,
If ye are truthful!⁵¹⁵⁹

7. But never will they
Express their desire
(For Death), because of
The (deeds) their hands
Have sent on before them!
And God knows well
Those that do wrong!

8. Say: "The Death from which
Ye flee will truly
Overtake you: then will
Ye be sent back
To the Knower of things
Secret and open: and He
Will tell you (the truth⁵¹⁶⁰)
Of the things that ye did!"

SECTION 2.

9. O ye who believe!
When the call is proclaimed
To prayer on Friday⁵¹⁶¹
(The Day of Assembly),

إِنْ تَحْسَبُوا أَنَّكُمْ
أَوْلِيَاءُ لِلَّهِ مِن دُونِ
الذَّكَرِ
فَقُتِلُوا الْمَوْتِ لَنْ
تَكْتُمُوا صِدْقِيْنَ
وَلَا يَكْفُرُونَ الْإِيمَانَ
بِمَا كَانْتُمْ تَعْبُدُونَ
وَاللَّهُ عَلِيمٌ بِالظَّالِمِينَ
قُلْ إِنَّ الْمَوْتِ الَّذِي
تَفِرُّونَ مِنْهُ
يَأْتِيكُمْ وَمَنْ يَفِرْ
فَمَا كَانْتُمْ تَعْبُدُونَ
قُلْ يَا أَيُّهَا الَّذِينَ
آمَنُوا إِذَا دُعِيَ
إِلَى الصَّلَاةِ

5155. Cf. II, 91-96. If they claimed to be special friends of God, why do they not eagerly desire death, which would bring them nearer to God? But of all people they are the most tenacious of this life and the good things of this life! And they know that their grasping selfish lives have run up a score of sin against them, which will meet its recompense.

5160. Before God's Judgment-Seat, when Judgment is established, we shall see the full inwardness of all deeds in this world. The veil of illusion and delusion will be torn off. All our secret motives will be laid bare. The results of all our little plots and plans and their reactions on our spiritual and eternal welfare will be clearly visible to us. All make-believe will disappear.

5161. Friday, "the Muslim Sabbath", is primarily the Day of Assembly, the weekly meeting of the Congregation, when we show our unity by sharing in common public worship, preceded by a Khutba, in which the Imam (or Leader) reviews the week's spiritual life of the Community and offers advice and exhortation on holy living. Notice the gradations of social contact for Muslims if they followed the wise ordinances of their Faith. (1) Each individual remembers God for himself or herself five or more times every day, in the home or place of business, or local mosque, or open air, as the case may be. (2) On Friday in every week, there is a local meeting in the central mosque of each local centre,—it may be a village, or town, or ward of a big city. (3) At the two 'Eids every year, there is a larger local area meeting in one centre, the Id-gah. (4) Once at least in a lifetime, where possible, a Muslim shares in the vast international assemblage of the world, in the centre of Islam, at the Meccan Pilgrimage. A happy combination of decentralisation and centralisation, of individual liberty and collective meeting, and contact at various stages or grades. The mechanical part of this ordinance is easy to carry out. Are we carrying out the more difficult part—the spirit of unity, brotherhood, mutual consultation, and collective understanding and action?

important works that were commensurate with the overarching importance of the Arabic language in the religion and the culture that that faith engendered.

Notes

1. Alan S. Kaye, 'Adaptations of Arabic Script,' in *The World's Writing Systems*, ed. Peter T. Daniels and William Bright (New York, 1996), 743-62.
2. Jane Turner (ed.), *The Dictionary of Art* (London, 1996): 'Mesopotamia,' §III, 5, is a convenient introduction to the reliefs. John Malcolm Russell, *From Nineveh to New York, the Strange Story of the Assyrian Reliefs in the Metropolitan Museum and the Hidden Masterpiece at Canford School* (New Haven, 1997), Appendix 6, gives a sample text. Irene Winter, 'Royal Rhetoric and the Development of Historical Narrative in Neo-Assyrian Reliefs,' *Studies in Visual Communication* 7, no. 2 (Spring 1981): 2-38, discusses the role of narrative.
3. See Chapter 13 for a further discussion of Arabic typography and its sometimes uneasy relationship with Arabic script.
4. By medieval times, however, writing in the West had lost its public function and become commemorative and symbolic rather than transmissive and expressive. On this change, see Armando Petrucci, *Public Lettering: Script, Power, and Culture*, trans. Linda Lappin (Chicago and London, 1993). The re-emergence of public writing in the southern Italian peninsula in the eleventh century might profitably be examined not only from the internal Western perspective, but also from the external view of connections with the nearby Islamic lands, where monumental epigraphy had flourished for centuries.
5. The bibliography on Roman script and epigraphy is vast; for a readable introduction written by someone who was trained as a sign-painter and calligrapher, see Edward M. Catich, *The Origin of the Serif: Brush Writing and Roman Letters* (Davenport, IA, 1991 [1968]). In his first work, *Letters Redrawn from the Trajan Inscription* (Davenport, IA, 1961), Catich redrew the letters in the Trajan inscription, now in the National Museum in Rome, to show its fundamental importance. His work was groundbreaking in using extant examples as a theoretical basis to explain the development of Roman lettering.
6. There are several good translations of the Koran into English. The one used here is Arthur J. Arberry, *The Koran Interpreted* (New York, 1955; R1973), the best at conveying the original tone without sacrificing accuracy. Arberry, however, used the older numbering system adopted by Gustav Flügel (ed.), *Corani Textus Arabicus* (Leipzig, 1842), but here I have cited verses according to the numbering system used in the Standard Egyptian edition. See below, for further details of the various numbering systems.
7. Munich, Bayerische Staatsbibliothek, C. arab. 464, fol. 36a. The painting is illustrated and discussed in Richard Ettinghausen, *Arab Painting* (Geneva, 1962), 138-40. The text was popular in the early fourteenth century; for other examples, see Stefano Carboni, 'The London Qazwīnī: An Early 14th-Century Copy of the 'Ajā'ib al-Makhlūqāt,' *Islamic Art* 3 (1988-9): 15-32; Stefano Carboni and Anna Contadini, 'An Illustrated Copy of al-Qazwīnī's *The Wonders of Creation*,' *Art at Auction* (1990): 228-33.

Figure 1.10 Double page with Sura 72:2-9 in Arabic and English translation from the bilingual edition of the Koran prepared by Abdullah Yusuf Ali in 1934.

Yusuf Ali's bilingual edition of the Koran is the one most frequently used in America. The Arabic text is written in the right column, facing a verse-by-verse translation in English on the left, with commentary in a smaller type at the bottom. Script, size, and technique distinguish the Arabic text, which is not typeset, but was specially calligraphed by Pir 'Abdul Hamid and transferred to photographic blocks prepared by Master Muhammad Sharif. Even in the twentieth century it was deemed more suitable to transcribe scripture with handwritten calligraphy.

and the resulting insistence that it follow calligraphic norms created problems for designers of type fonts (see Chapter 13 for further details). This incident shows not only that many still desire to see the Koran as a handwritten document, but also that Arabic calligraphy continues to carry significant visual resonance for Muslims today, evoking sanctity and the divine revelation. Following a chapter on materials and tools, the remainder of this book traces the process of how calligraphers over the past fourteen hundred years developed different styles of Arabic script to write the sacred text and other

8. Li Si (d. 208 BCE), prime minister under Qin Shihuangdi, China's unifier and first emperor, is traditionally credited with designing small seal script (*xiao zhuan*), a script designed to replace the orthographic irregularities of the ones used on oracle bones and bronzes. This script represents the first standardized system of writing in China. Political unification was thus equated with unification of script, although practically such standardization did not occur for several centuries, as marked by the great codification on the Chinese writing system at the end of the first century CE in Xu Shen's dictionary *Shuowen jiezi* (Explaining Graphs and Analyzing Characters). For an introduction to Chinese writing systems, see the chapters by William G. Boltz, 'Early Chinese Writing,' in *The World's Writing Systems*, 191–9; Victor H. Mair, 'Modern Chinese Writing,' in *The World's Writing Systems*, 200–8. Lothar Ledderose, *Ten Thousand Things: Module and Mass Production in Chinese Art*, Bollingen Series (Princeton, 2000), Chapter 1, argues that script was the most powerful instrument to foster cultural coherence in China. Seal script, which was inscribed on stone stele throughout the realm, established a precedent that still carries political significance today; see Robert E. Harrist, 'Record of the Eulogy on Mt. Tai and Imperial Autographic Monuments of the Tang Dynasty,' *Oriental Art* 46, no. 2 (2000): 68–79.
9. See, for example, Shen Fu, Glenn D. Lowry, and Ann Yonemura, *From Concept to Context: Approaches to Asian and Islamic Calligraphy* (Washington, DC, 1986), which gives examples from all three traditions.
10. The article 'China, IV, 1: Calligraphy, Introduction' in Turner, *DoA*, evokes the sense of movement and personality with which Chinese calligraphy is imbued. For a theoretical overview, see further John Hay, 'The Human Body as a Microcosmic Source of Macrocosmic Values in Calligraphy,' in *Theories of the Arts in China*, ed. Susan Bush and C. Murch (Princeton, 1983), 88, where he notes: 'If there is a single, fundamental characterization of [Chinese] calligraphy, it is that of a line of energy materializing through the brush into the ink-traces.' These traces, called 'heart prints' or 'mind prints' (*xinyin*), reflect the gestures and inner disposition of the calligrapher. For a practical introduction to the physical aspects of Chinese writing, see Jean François Billeter, *The Chinese Art of Writing* (Geneva, 1990). The same is true in Japan; for a convenient and recent introduction to Japanese calligraphy, and the informative comments of two American collectors, see Miyeko Murase, *The Written Image: Japanese Calligraphy and Painting from the Sylvan Barnet and William Burto Collection* (New York, 2002), 11.
11. In the words of Lothar Ledderose, *Mi Fu and the Classical Tradition of Chinese Calligraphy*, Bollingen Series (Princeton, 1979), 29, one of the distinctive features of Chinese calligraphy is that 'the process of creation in all its consecutive phases is visible in the object.' One of the earliest known treatises on the subject, written in the fifth century CE, already accords the highest praise to calligraphy imbued with spontaneity (*ziran*). See Ledderose, *Ten Thousand Things*, 195 and n. 21. Lothar Ledderose, 'Chinese Calligraphy: Its Aesthetic Dimension and Social Function,' *Oriental Art* 17, no. 10 [October 1986]: 35–50, outlined three characteristics of Chinese calligraphy that distinguish it from other traditions, both European and Islamic: (1) the sense of time and movement imparted by the brushstrokes; (2) the technical and stylistic coherence achieved through the use of the same materials – paper or silk, brush, ink, and ink – over the last two thousand years and the same three types of script – regular (*kaishu*), semi-cursive (*xingshu*)

- and fully cursive draft (*caoshu*, literally, grass); and (3) its mode of transmission through canonical masterpieces that were inscribed by later masters.
12. Edoardo Fazzioli, *Chinese Calligraphy* (New York, 1987) is a convenient introduction to Chinese characters and their development from pictographs into ideograms.
13. There are, of course, exceptions to this rule. Handscrolls with copies of the sutras, for example, contain solely calligraphy. Examples of Chinese Buddhist sutras from the Tang period (618–907) and earlier are typically written in columns of characters in finely written seal script, probably by professional calligraphers; see, for example, Fu, Lowry, and Yonemura, *From Concept to Context*, no. 6. More often, however, writing was added, either by the same artist or by a separate calligrapher, to illustrated scrolls. One of the earliest and finest examples of this format is the 'Admonitions of the Court Instructress' attributed to Gu Kaizhi (341–402), now in the British Museum; see Fu, Lowry, and Yonemura, *From Concept to Context*, no. 4. The addition of writing to image is clear from the layout in which the lines of characters enframe the scenes. See the example of the handscroll with three letters by Wang Xizhi (itself a copy) comprised of only two lines but surrounded by a vast and complicated commentary added over the course of the centuries; Ledderose, 'Chinese Calligraphy,' 46–9 and fig. 16.
14. Erica Cruikshank Dodd, 'The Image of the Word (Notes on the Religious Iconography of Islam),' *Berytus* 18 (1969): 35–62; Erica Cruikshank Dodd and Shereen Khairallah, *The Image of the Word: A Study of Quranic Verses in Islamic Architecture* (Beirut, 1981).
15. The subject of aurality is not treated in this book, but is of growing interest. See, for example, Kristina Nelson, *The Art of Reciting the Qur'an*, Modern Middle East Series Sponsored by the Center for Middle Eastern Studies, the University of Texas at Austin (Austin, TX, 1985); William A. Graham, *Beyond the Written Word: Oral Aspects of Scripture in the History of Religion*, rep. 1987 (New York, 1993 [1987]); Michael Anthony Sells (ed.), *Approaching the Qur'an: The Early Revelations* (Ashland, OR, 1999); *Encyclopedia of the Qur'an*, ed. Jane Dammen McAuliffe (Leiden, 2001), 'Orality,' for an introduction to the vocal elements of the Koran and the importance of Koranic reading and recitation, *qira'a* and *tajwid*. For a brief overview of the three forms as applied to Koranic calligraphy, see Sheila S. Blair, 'Written, Spoken, Envisioned: The Many Facets of the Qur'an in Art,' in *The Qur'an in Art*, ed. Fahmida Suleman (London, forthcoming).
16. One might contrast this right-to-left orientation in Arabic script to Jackson Pollock's large-scale poured paintings in which the designs flow from left to right, like writing in Roman script. For a concise description of his technique, see Francis V. O'Connor's article in Turner, *DoA*, 'Pollock, Jackson'.
17. The best introduction to Mayan hieroglyphics is still Michael D. Coe, *Breaking the Mayan Code* (New York, 1992). See also the recent essay in Mary Miller, Simon Martin, and Kathleen Berrin, *The Courtly Art of the Ancient Maya* (New York, 2004).
18. Daniels and Bright, *The World's Writing Systems*, 4. Arabic is the most widespread example of an *abjad*, and the term itself is derived from the first four letters of Arabic according to their historic order. All known *abjads* belong to the Semitic family of scripts, whose morphemic structure renders the denotation of vowels redundant in most situations. There are a few exceptions to the consonantal structure of the Arabic

- abjad*. The first and last two letters – *alif*, *waw*, and *ya* – represent not only also the glottal stop, *w*, and *y*, but also the three long vowels (*a*, *u*, and *i*).
19. On the versatility of the Arabic script, see Peter T. Daniels, 'The Protean Arabic Abjad,' in *Humanism, Culture, and Language in the Near East: Studies in Honor of Georg Krotkoff*, ed. Asma Afsaruddin and A. H. Mathias Zahniser (Winona Lake, IN, 1997), 369–84. On its adaptation for writing Persian, see *EI/2*: 'Iran, iii Languages (f): New Persian.'
 20. Vlad Atanasiu, *De la fréquence des lettres et de son influence en calligraphie arabe* (Paris, 1999).
 21. On the mystical interpretation of letters, as on many other literary aspects of calligraphy, see the works by Annemarie Schimmel, including *Mystical Dimensions of Islam* (Chapel Hill, 1975), Appendix 1, and *Calligraphy and Islamic Culture* (New York, 1984).
 22. There are III *fā'ala*, IV *af'ala*, VI *tafā'ala*, VII *infa'ala*, VIII *ifta'ala*, IX *if'alla*, and X *istaft'ala*.
 23. These points were made recently by William Hanaway and Brian Spooner, *Reading Nasta'liq: Persian and Urdu Hands 1500 to the Present* (Costa Mesa, CA, 1995), 11–13.
 24. Lisa Volov (Golombek), 'Plaited kufic on Samanid Epigraphic Pottery,' *Ars Orientalis* 6 (1966): 107–34.
 25. Paul Saenger, *Space between Words, the Origins of Silent Reading, Figurae: Reading Medieval Culture* (Stanford, 1997). The change from oral to silent reading also brought with other changes in written form, such as punctuation. See M. B. Parkes, *Pause and Effect: An Introduction to the History of Punctuation in the West* (Berkeley and Los Angeles, 1993).
 26. Mashhad, Astan-i Quds, no. 6; Aḥmad Gulchīn-i Ma'ānī, *Rāhnamā-yi ganjīna-yi qur'ān* (Mashhad, 1347), no. 1; Ramazān-'alī Shākīrī, *Ganj-i hizār sāla-yi kitābkhāna-yi markazī-yi āstān-i quds-i rizāvī qabl wa ba'd az inqalāb* (Mashhad, 1367/1989), 36 and 38.
 27. Valery Polosin, 'Frontispieces on Scale Canvas in Arabic Manuscripts,' *Manuscripta Orientalia* 2, no. 1 (March 1996): 5–19; Valery Polosin, 'Muslim Bindings with *al-Khālidiyānī* Double Borders,' *Manuscripta Orientalia* 2, no. 2 (June 1996): 9–12; Valery Polosin, 'Unknown Numerical Aesthetics in the Design of Turkish Manuscripts,' *Manuscripta Orientalia* 7, no. 4 (December 2001): 30–6; Valery Polosin, 'Ibn Muqlah and the Qur'anic Mss of Oblong Format,' International Conference on the MSS of the Qur'an (Bologna, 2002).
 28. Alexandre Papadopoulo, *Islam and Muslim Art*, trans. Robert Erich Wolf (New York, 1979).
 29. Alain Fouad George, 'The Geometry of the Qur'an of Amajur: A Preliminary Study of Proportion in Early Arabic Calligraphy,' *Muqarnas* 20 (2003): 1–16, has analyzed the geometric structure of the Amajur Koran and shown how the width of the penstroke determined the size of the letters and even the layout of the page. I remain less convinced by his attempt to connect the proportions with the Golden Rule.
 30. *EI/2*, 'Qur'an'; *EQ*.
 31. Efim A. Rezvan, 'The Qur'an and its World: I. The Problem of Reconstructing Ancient Arabian Cosmogonic and Anthropogenetic Lore,' *Manuscripta Orientalia* 2, no. 4 (December 1996); Efim A. Rezvan, 'The Qur'an and its World: II. The Miracle of the Book (The Qur'an and Pre-Islamic Literature),' *Manuscripta Orientalia* 3, no. 1 (March 1997); Efim A. Rezvan, 'The Qur'an and Its World: III. "Echoings of Universal Harmonies" (Prophetic Revelation, Religious Inspiration,

- Occult Practice),' *Manuscripta Orientalia* 3, no. 3 (September 1997): 11–21; Efim A. Rezvan, 'The Qur'an and its World: IV. "Raise not Your Voices above the Prophet's Voice" (Society, Power and Etiquette Norms),' *Manuscripta Orientalia* 3, no. 4 (December 1997): 35–44; Efim A. Rezvan, 'The Qur'an and its World: V. Language, the Unconscious and the Real World,' *Manuscripta Orientalia* 4, no. 1 (March 1998): 26–39; Efim Rezvan, 'The Qur'an and its World: VI. Emergence of the Canon: The Struggle for Uniformity,' *Manuscripta Orientalia* 4, no. 2 (June 1998): 13–54; Efim A. Rezvan, 'The Qur'an and its World: VII. Talisman, Shield, and Sword,' *Manuscripta Orientalia* 4, no. 3 (September 1998): 24–34; Efim A. Rezvan, 'The Qur'an and its World: VIII/1. Contra Legem Saracenorum: The Qur'an in Western Europe,' *Manuscripta Orientalia* 4, no. 4 (December 1998): 32–62; Efim A. Rezvan, 'The Qur'an and its World: VIII/2. *West-Östlichen Divans* (The Qur'an in Russia),' *Manuscripta Orientalia* 5, no. 1 (March 1999): 32–62; Efim A. Rezvan, 'The Qur'an and its World: IX. The Triumph of Diversity: Muslim Exegesis,' *Manuscripta Orientalia* 5, no. 2 (June 1999): 37–57.
32. See also *EQ*, 'Fātiḥa.'
 33. See, for example, the text inscribed on the shoulder blade of a camel and now in Princeton University Library; *EQ*, II, pl. III.
 34. This order became fixed when the revelation was regularly transcribed in codex format. Some early fragments found in the Yemen have a different ordering, particularly in the middle *suras*; see Gerd-R. Puin, 'Observations on Early Qur'an Manuscripts in Ṣan'ā' in *The Qur'an as Text*, ed. Stefan Wild (Leiden, 1996), 110–11; *EQ*, 1:347–51 (Codices of the Qur'an). The same holds for the order of chapters in the three great codices of the Bible, which were probably copied from a boxful of earlier codices. See Thomas S. Pattie, 'The Creation of the Great Codices,' in *The Bible as Book: The Manuscript Tradition*, ed. John L. Sharpe III and Kimberly van Kampen (London, 1998), 61–72.
 35. Michael Cook, *The Koran: A Very Short Introduction* (Oxford, 2000), 65–6 provides a quick introduction to these naming practices.
 36. W. Montgomery Watt, *Bell's Introduction to the Qur'an*, Islamic Surveys (Edinburgh, 1970); Flügel, *Corani*; Gustav Flügel (ed.), *Concordantiae Corani Arabicae* (Leipzig, 1842); *Al-Muṣḥaf al-Sharīf or al-Qur'an al-Karīm* (Cairo, 1342/1923–4). On the Flügel and Cairo (sometimes called the Azhar Koran as the text was vetted with the assistance of the shaykh at al-Azhar Mosque), see also Hartmut Bobzin, 'From Venice to Cairo: On the History of Arabic Editions of the Koran,' in *Middle Eastern Languages and the Print Revolution, a Cross-Cultural Encounter, a Catalogue and Companion to the Exhibition*, ed. Eva Hanebutt-Benz, Dagmar Glass, and Geoffrey Roper, in collaboration with Theo Smets (Westhofen, 2002), 169–71.
 37. Abdullah Yusuf Ali, *The Holy Qur'an: Text, Translation and Commentary* (n. p., 1946).
 38. To show how tricky these numbering systems can be, this verse is the same number in Abdullah Yusuf Ali's bilingual edition of the Koran, but it is the 256th verse in Flügel's edition.
 39. Muḥammad Fuwād 'Abd al-Baqī, *al-Muḥjam al-mufahras li-alfāt al-qur'an al-karīm* (Beirut, 1364/1945, new edn 1388/1968).
 40. Paleographers working on Western scripts typically distinguish between the text script, used for writing a continuous text, and the display script, used for headings or titles. Such distinction was already made by the time of the venerable Bede, as in a commentary on Luke, made at Tours c. 820. See Turner, *DoA*, 'Script' and fig. 1. The term 'hierarchy

of scripts' was adopted by E. A. Lowe, *Handwriting: Our Medieval Legacy* (Rome, 1969). Parkes, *Pause and Effect*, 27 and 33-4 and n. 44, distinguished between the three types used in later Anglo-Saxon manuscripts. The most elaborate of these display scripts are found in the Bibles prepared under the auspices of Alcuin, the Anglo-Saxon scholar who assisted Charlemagne. The connections between Insular and Anglo-Saxon manuscripts and contemporary Islamic ones is a subject that deserves further study.

41. Sells, *Approaching the Qur'an*, 15-16, citing arguments made by Norman O. Brown, 'The Apocalypse of Islam,' *Social Text* 3, no. 8 (Winter 1983-4): 155-71.
42. See also EQ, 'Ornamentation and illumination.'
43. Hans-Caspar Graf von Bothmer, 'Architekturbilder im Koran: Eine Prachthandschrift der Umayyadenzeit aus dem Yemen,' *Bruckmanns Pantheon* 45 (1987): 4-20.
44. Parkes, *Pause and Effect*, Chapter 2, lays out the components of what he labels this 'grammar of legibility.' Such carpet pages were typical by the eighth century, as in the splendid Lindisfarne Gospels (London, BL, Cotton MS Nero D.IV), a pinnacle of Insular art datable c. 700 (Turner, *DoA*: 'Insular art 3,' 'Manuscript illumination,' fig. 3), but scholars debate which is the earliest example to survive. According to Parkes (note 55), the earliest surviving example of such a carpet page occurs in the Milan Orosius, a copy of the universal chronicle written in the early fifth century, for which see Jonathan J. G. Alexander, *Insular Manuscripts 6th to 9th Century: Survey of Manuscripts Illuminated in the British Isles* (London, 1978), pl. 6. According to Turner, *DoA*: Ireland III, 1 'Painting and Graphic Arts, before 1600,' the earliest examples occur in the Book of Durrow (Dublin, Trinity College, Library MS 57), a small copy of the Gospels ascribed to the second half of the seventh century. Again, the relationship of the Insular carpet pages to similar decorated pages in Islamic books needs further investigation.
45. The exhibition catalogue, *De l'Empire romain aux villes impériales: 6000 ans d'art au Maroc* (Paris, 1990), gives several examples of Koran manuscripts from the Maghrib, including two made in thirtieths (nos. 502 and 505) and three made in sixtieths (nos. 496, 509 and 514). The statement that the division into sixtieths is a recent one is found on p. 250.
46. Arberry, *The Koran Interpreted*.
47. As Thomas Burman has recently shown ('Polemic, Philology, and Ambivalence: Reading the Qur'an in Latin Christendom,' *Journal of Islamic Studies* 15, no. 2 [May 2004]: 181-210), Robert of Ketton's translation was made not only for polemic and philological reasons (to attack Islam and to chase down the meaning of odd words and constructions) but also involved more sophisticated reading practices, using rhetoric and elegant paraphrase. Later manuscripts of his translation often incorporate design features, such as titles, colors, and paragraph markers, to 'introduce the reader into the text' and make it look like a scholastic textbook.
48. The best introduction to early printed editions of the Koran is Alastair Hamilton, *Europe and the Arab World: Five Centuries of Books by European Scholars and Travellers from the Libraries of the Arcadian Group*, originally published as an exhibition catalogue, *L'Europe et le Monde Arabe* (Dublin, 1994), which contains reproductions of and commentaries on virtually all early specimens. The first Basel edition of 1543 is no. 4, the second one of 1550 is no. 5; the Nuremberg edition of 1616 is no. 6; André du Ryer's French translation of 1649 is no. 29; and George Sale's English translation of 1734 is no. 35. See also the recent essay by Hartmut Bobzin, 'From Venice to Cairo,' 151-76.
49. *The Korân*, trans. George Sale (London, n.d.).
50. Marmaduke Pickthall, *The Meaning of the Glorious Koran: An Explanatory Translation* (London, 1930).
51. Arberry, *The Koran Interpreted*.
52. Sells, *Approaching the Qur'an*.
53. Cook, *The Koran*.
54. Priscilla Soucek, *EI/2*: 'Iran,' viii(a) Art (Supplement, 7-8: 448) suggested, for example, that the translation into Persian of al-Tabari's commentary on the Koran produced by a group of scholars during the reign of the Samanid Mansur ibn Nuh (961-76) may have been produced in bilingual manuscripts. A copy made in the early thirteenth century for the vizier of the atabeg of Azerbaijan, Abu'l-Qasim Harun ibn 'Ali ibn Zafar Dindan (Paris, BN, ms. or. supp. pers. 1610; *Splendeur et majesté: Corans de la Bibliothèque Nationale* [Paris, 1987], no. 30; Francis Richard, *Splendeurs persanes: Manuscrits du XIIIe au XVIIe siècle* [Paris, 1997], no. 2), for example, contains the Koranic text in Arabic with an inter-linear translation into Persian. Each sequence of Arabic text is followed by a section containing the Persian translation of the commentary.
55. This copy (Tehran, INM, no. 3496; *The Arts of Islam*, exhibition catalogue, Hayward Gallery [London, 1976], no. 509; *Gulchīnī az qur'ānhā-yi khatī-yi mūza-yi dawrān-i islāmī* [A Selection of Koran Manuscripts in the Museum of the Islamic Eras] [in Persian] [Tehran, 1375/1997], 45) transcribed by Muhammad ibn 'Ali ibn Muhammad ibn 'Ali al-Nishapuri in 584/1188-9 for the Ghurid amir Ghiyath al-Din Muhammad ibn Sam is the earliest dated manuscript that I know with a bilingual translation. For further discussion of the manuscript, see Chapter 6.
56. This is the case with an early manuscript copied by Mahmud ibn al-Husayn at Hamadan at the end of Jumada I 559/April 1164 (Figure 6.9), which has brief paraphrases in Arabic written in red diagonally between the lines of Koranic text written in black. Sometimes these paraphrases were added after the text was completed, as with a manuscript dated 667/1268-9, in which a rough *naskh* has been added over the rulings. London, Khalili Collection, QUR573; David James, *The Master Scribes: Qur'ans of the 10th to the 14th Centuries AD*, ed. Julian Raby, The Nasser D. Khalili Collection of Islamic Art (London, 1992), no. 17.
57. Cook, *The Koran*, figs. 18-20. One is a sixteenth-century manuscript written in Aljamiado. Another has Polish written in Arabic script, with the Polish phrase written diagonally below each Arabic one. The copy that Cook illustrates dates from the nineteenth century, but the translation was probably made earlier. A third example shows a line-by-line Afrikaans translation, probably dating from the 1880s.
58. Arthur Jeffery, *Materials for the History of the Text of the Qur'an* (Leiden, 1937), 4.
59. Ghassan Ibrahim Shaker Collection, ms. 61; Nabil F. Safwat, *Golden Pages: Qur'ans and Other Manuscripts from the Collection of Ghassan I. Shaker* (Oxford, 2000), no. 46; Nabil F. Safwat, 'The Oldest Qur'an Interpretation into Ottoman Turkish Dialect Called *Tafsir Sharif al-Asdaf*,' in M. Uğur Derman 65 *Yaş Armağanı*, ed. Irvin Cemil Schick (Istanbul, 2000), 447-56.
60. *EI/2*, 'Ghāzī.'

INTRODUCTION

61. Vatican City, Biblioteca Apostolica, Urb. Lat. 1384; see Angelo Michele Piemontese, 'Il corano latino,' *Rinascimento: Rivista Dell' Instituto Nazionale di Studi Sul Rinascimento* 2nd ser., no. 36 (1996): 227-73; Burman, 'Polemic,' 205 and fig. 2. The manuscript, dedicated to Federigo da Montefeltro, was apparently meant for display, as much as anything. It contains lavish illumination, including the shield of the Dukes of Urbino, and the translation is faulty. The volume contains no marginalia and shows no evidence of ever having been read.
62. Yusuf Ali, *Qur'an*.
63. Jonathan M. Bloom, *Paper before Print: The History and Impact of Paper in the Islamic World* (New Haven, 2001), 220; Bobzin, 'From Venice to Cairo,' 153-4.
64. Hamilton, *Europe and the Arab World*, no. 50; Bobzin, 'From Venice to Cairo,' 59 and pl. 75.
65. Klaus Kreiser (ed.), *The Beginnings of Printing in the Near and Middle East: Jews, Christians and Muslims* (Wiesbaden, 2001). On the history of printing in the Ottoman empire, see further Chapter 11.
66. Efim Rezvan, 'Qur'an VI,' 26-7.
67. Graham, *Beyond the Written Word*, 96-7; Efim Rezvan, 'Qur'an VI.'
68. On the two readings, see also Adrian Brockett, 'The Value of the ḥafs and Warsh Transmissions for the Textual History of the Qur'ān,' in *Approaches to the History of the Interpretation of the Qur'ān*, ed. Andrew Rippin (Oxford, 1988), 31-45.
69. Yusuf Ali, *Qur'an*, iv.

CHAPTER TWO

Materials

THIS BOOK COVERS the development of calligraphy written in Arabic script on supple supports, and our survey begins with the three main materials used in the Islamic lands – papyrus, parchment, and paper.¹ Papyrus and parchment, the only two writing materials mentioned in the Koran, were preferred in early Islamic times, but they were eventually replaced by paper, which was both cheaper and easier to use. It also received the most elaborate preparation, and the development of specialty papers designed as supports for fine calligraphy became an art form in itself. The nature of the support also affected the type of pens and inks used and therefore the development of different scripts.

Supports

Of the three supports used in the Islamic lands, the most limited – both chronologically and geographically – is papyrus.² Papyrus (Arabic *qirtas*), from which we derive our word paper, is made from a tall fresh-water reed native to Egypt, *Cyperus papyrus*. Used as early as 3000 BCE, it became the main writing support in Egypt in classical times, since it was easier to handle than available alternatives like wood, skins, and clay tablets. Egyptians maintained a monopoly on production, and papyrus remained the main writing support in Egypt until the late tenth century, when it was replaced by its cheaper rival, paper. When manufactured, papyrus is light-colored, smooth, strong, and flexible. With age, however, it becomes brittle, and most specimens are now brownish. It can be made in a range of thicknesses and qualities. Official documents, for example, are done on the finest quality.

Classical and medieval sources such as Pliny the Elder (writing around the year 70 CE) and Abu'l 'Abbas al-Nabati (d. 1239) describe how papyrus was manufactured.³ Although the sources differ in detail, the main steps are consistent. The stalk was cut into lengths, the outer layer of the plant peeled off, and the stalk split. The resulting sheets or strips were laid in two layers at right angles to each other so that the fibers of the stem ran horizontally on one surface and vertically on the other. No glue was necessary, for the natural gummy substance released when the stalks were cut served to bind the pieces

Nationale suggested that the materials used for illumination might also be distinct from those used for illustration. A copy of al-Idrisi's Geography (ms. arabe 2221) made in the Maghrib in the thirteenth century used materials and pigments not found in the other manuscripts tested. These included such colors as rose-violet, yellow ocher, and compound green, as well as white lead to brighten the colors. This manuscript was the only one of the group tested to have full-page paintings, so further work needs to be done to ascertain the distinction between illumination and illustration.

99. BN, ms. arabe 6935; Déroche, *Manuscrits du coran II*, no. 302; Déroche, *Manuel*, 152-3.
100. Sheila S. Blair, 'Scribes and Artists in the Ilkhanid Scriptorium,' *Beyond the Legacy of Genghis Khan*, ed. Linda Komaroff (Leiden, 2006).
101. *EI/2*, 'Dawāt.'
102. A. S. Melikian-Chirvani, 'State Inkwells in Islamic Iran,' *Journal of the Walters Art Gallery* 44 (1986): 70-94.
103. Annemarie Schimmel, 'The Book of Life-Metaphors Connected with the Book in Islamic Literatures,' in *The Book in the Islamic World: The Written Word and Communication in the Middle East*, ed. George N. Atiyeh (Albany, 1995), 75.
104. FGA 36.7; Esin Atıl, W. T. Chase, and Paul Jett, *Islamic Metalwork in the Freer Gallery of Art* (Washington, DC, 1985), no. 14; Blair, *Islamic Inscriptions*, fig. 9.51.
105. Atıl, *Renaissance*, no. 24.
106. Paris, Louvre, 3621; Atıl, *Renaissance*, no. 23.
107. Atıl, *Süleyman the Magnificent*, gives several examples.
108. Turner, *DoA*, 'Islamic art' VIII, 10: Lacquer.
109. Derman, *Letters in Gold*, fig. 5.
110. Atıl, Chase, and Jett, *Islamic Metalwork in the Freer Gallery of Art*, 106; Melikian-Chirvani, 'State Inkwells,' fig. 21.

Part II: The Development of Arabic Script in Early Islamic Times

CHAPTER THREE

The Standardization of Arabic Script

A SYSTEM OF writing Arabic had already developed in pre-Islamic times. The script was derived from Aramaic, a script used to transcribe a variety of languages spoken in the Mediterranean region and west Asia. Driven by the need to administer a large empire, scribes in early Islamic times regularized and standardized this Arabic script. The desire to write down the text of the Koran, which had been revealed orally, also seems to have stimulated the development of fine calligraphy already in the seventh century. No dated manuscripts have survived from this early period, so to trace the development of Arabic calligraphy at this time, we must look to other kinds of more fixed evidence, notably papyri, coins, and inscriptions. Using dated or datable examples in these media, it is possible to follow the increasing regularization and standardization of Arabic script and the development of a style that came to be used throughout the Umayyad realm, from the Mediterranean to Central Asia, as well as a more formal rectilinear style used for manuscripts.

The origins of Arabic script

The exact origins of the Arabic system of writing are open to question. The script is ultimately derived from that used for writing Aramaic, the lingua franca of south-west Asia from early in the first millennium BCE to the time of the Arab conquest in the mid-seventh century CE. Aramaic script was used not only for Aramaic languages, such as Syriac, but also for many other types, including Iranian and Altaic languages. For many generations scholars have fiercely debated which of these languages written in Aramaic was the immediate source for Arabic script. Two main hypotheses have been put forward, and the date of the first surviving inscription in Arabic script depends in part on the author's view of the immediate source for that script.

The older, more traditional, and more widely cited argument is that the script used for writing Arabic developed from the type of Aramaic script used by the Nabateans. The Nabateans, centered around Petra in southern Jordan, spoke Arabic but wrote in Aramaic script. Their kingdom reached its heyday in the second century CE, but Nabatean Aramaic script is also known from late inscriptions

dating to the third and fourth centuries CE. The best-known inscription is the one discovered by René Dussaud in 1901 at the site of al-Namara, the fortified post of Safa located some 120 km south-east of Damascus.¹ Its five-line text of Arabic words incised in Nabatean characters on a basalt lintel records that the building was the tomb of the Arab prince Imru'l-Qays, who died in 328 CE. Its carefully planned and cut letters, which are spaced by lines, attests to a fine tradition of stereotomy. Other inscriptions discovered more recently and dating to the early centuries of the Common Era are likewise Arabic texts written in Nabatean characters.² Supporters of the Nabatean hypothesis take these inscriptions as the first evidence of the Arabic language, if not its script. First put forward by Theodor Nöldeke in 1865, summarized by Bernhard Moritz in his 1910 article 'Arabie' in the first edition of the *Encyclopaedia of Islam*, and reiterated by Nabia Abbott in her seminal book on the rise of North Arabic script, the Nabatean hypothesis remains the favorite of most scholars, especially Anglo-Saxons, and is often given as the sole explanation for the origin of Arabic script.³

The difficulty with the Nabatean hypothesis lies in explaining the chronological gap between the heyday of Nabatean civilization and the rise of Arabic. To circumvent this problem, Adolf Grohmann pushed back the origins of Arabic script before 350 CE, close to the date of the inscription from al-Namara as well as its more recently discovered contemporaries.⁴ But for many, the earliest examples of Arabic script (as distinct from the language) are several inscriptions found in Syria that date from the sixth century. They include a trilingual inscription in Arabic, Greek, and Syriac dated 512 from Zebed in the Syrian steppe south-east of Aleppo and three inscriptions dating between 528 and 568 CE found to the south and south-east of Damascus.⁵ Grohmann's early date for the rise of Arabic script has not been widely accepted, and other scholars have proposed an alternate hypothesis to explain the origins of Arabic script from Aramaic in the fifth or sixth century CE.

This second and more recent hypothesis, put forward by J. Starcky in 1966, is that the origins of Arabic script should be traced to the Syriac alphabet.⁶ Such an idea was already current among Muslim scholars of the eighth and ninth centuries. The historian al-Baladhuri, for example, reports on the basis of several earlier sources that Arabic writing had been invented in Mecca by three members of the tribe of Tayy who had used the Syriac alphabet as a model.⁷ Starcky adjusted the argument slightly, arguing that the immediate precursor of Arabic script was the cursive chancery Syriac used at the court of the Lakhmid kings of al-Hira, located near Kufa in southern Iraq. On the whole, this hypothesis of a Syriac origin for Arabic script has been disregarded by Anglo-Saxons but heartily accepted by French scholars.⁸

Most of the earlier studies on the origins of Arabic script have concentrated on comparing the individual letters used in the different

languages, producing charts with the forms of the individual letters in different languages in adjacent columns.⁹ Françoise Briquel-Chatonnet has recently argued that such an approach is inadequate, because it gives priority to a script's technical qualities and individual forms rather than its general principles and aspect and because it disregards the historical context in which the script was created. On these grounds she again raised the argument for the Syriac origin of Arabic script.¹⁰ Briquel-Chatonnet posited that two general traits distinguish Syriac from Nabatean. In Syriac, the letters are posed on an ideal baseline, whereas in Nabatean they are suspended from it. The proportions of the letters also differ in the two scripts: in Syriac, the letters are spread out and flattened and are usually wider than they are tall, but in Nabatean they are elongated and usually taller than they are wide. The earliest Arabic writing on papyrus and monuments, she argued, shares both characteristics – position on (not below) an ideal baseline and squat shape – with Syriac.

Briquel-Chatonnet also opted for a Syriac origin of Arabic script on historical grounds, arguing that in the centuries before the rise of Islam, Syriac was more prestigious than Nabatean. Nabatean script, she argued, had gone out of fashion by the sixth century and was used mainly for graffiti and ostraca. In the same way, other south Arabian scripts used in pre-Islamic times that were actually more suitable for writing Arabic had also fallen out of fashion and hence were not ultimately adopted for writing it. Syriac, by contrast, had blossomed in the period before the rise of Islam. Inscriptions in Syriac have been found north of Raqqa in Syria near the sites of the earliest Arabic inscriptions dating from the sixth century. Briquel-Chatonnet therefore abandoned the al-Hira intermediary of the Syriac hypothesis, arguing in favor of a more Western source in the Christian-speaking Aramaic community that expanded in Syro-Palestine after the fall of the kingdom of Edessa in the mid-third century CE.

Other scholars have documented the well-established tradition of writing Syriac in the centuries before the rise of Islam.¹¹ The earliest dated Syriac manuscript to survive (BL Add. 12150) was produced at Edessa in 411 CE and shows a well-developed calligraphic style. It is written in the script known as *estrangelo*. Several other dated manuscripts allow us to trace the development of this script until it was replaced by the *serbo* script in the late eighth century.¹²

Briquel-Chatonnet's argument of a Syriac origin for the Arabic script deserves serious consideration for several reasons. She has moved the argument about script to a more sophisticated level, articulating principles and aspect, not just comparing individual graphemes or letters, and addressing the historical context. At the very least, her article suggests that the discussion about the origins of Arabic script is not closed and that the Nabatean hypothesis is not unilaterally accepted.¹³

Whatever the immediate source, Aramaic script had to be adapted for writing Arabic. Since Arabic has more consonants than other

north-west Semitic languages, diacritical marks had to be introduced to expand the limited repertory of eighteen different graphemes, or characters, to record the twenty-eight phonemes, or sounds, used in Arabic. Furthermore, Arabic script did not maintain a monumental form, in which the letters are written separately from each other, but used only a cursive form, in which the letters are connected, and all Arabic writing is characterized by ligatures between letters.

The development of Arabic script in the seventh century

Arabic was definitely written in Arabia by the time of the Prophet Muhammad. Poets writing before and after the advent of Islam refer to writing, both directly and indirectly, and copies of their poems collected by grammarians in the late eighth and early ninth centuries contain visual mistakes that could have occurred only in transcribing a written text.¹⁴ Writing is also mentioned in the Koran, the message recited orally by Muhammad. The text itself is called a writing (*kitab*), and it is filled with technical terms about writing, such as reed pen or calamus (*qalam*) and tablet (*lawh*).¹⁵ The diverse accounts relative to Muhammad, including the Prophetic Traditions, biographies of him, and lists of his secretaries, also show that in the late sixth and early seventh centuries knowing how to write was in no way exceptional.¹⁶

To explain the development of Arabic script, Estelle Whelan used the analogy of a tree trunk, itself continuously growing, from which a series of specific stylized scripts branched off independently.¹⁷ All surviving evidence, albeit scarce and piecemeal, suggests that in this early period writing in Arabic script developed two different branches, probably derived from the cursive and monumental forms of Aramaic script used in other languages: a more free-flowing style for recording transactions of daily life and a more formal style for monumental inscriptions, numismatics, and eventually manuscripts of the Koran.

We can trace the development of the everyday style from the early seventh century onward through dated papyri and graffiti.¹⁸ Adolf Grohmann estimated that some sixteen thousand fragments of papyri survive from the first centuries of Islam.¹⁹ Most are in extremely poor condition. Unlike Greek and Latin papyri that were handed down from generation to generation, Arabic examples were typically found in the rubbish dumps of old towns, mixed with pot sherds, slag, cinder, coals, rags, straw, and kitchen waste. These rubbish dumps contained a valuable type of dung (*sibakh*) exploited since the nineteenth century, particularly in the cultivation of cotton, and dung diggers often further damaged the papyri, rendering most of them fragmentary. The vast majority of these papyri come from Egypt, as the dry climate there insured better preservation. A few were found in Syro-Palestine, but none relate to the Hijaz or Iraq, the two areas most often identified with the development of calligraphy in this early period of Islam.

Although most Arabic papyri date from the eighth century or later, a group of some two dozen dated examples allows us to sketch the development of writing in the first century of Islam.²⁰ The earliest (PERF 558 from the Erzherzog Rainer papyrus collection in Vienna) is a bilingual record requisitioning sixty-five sheep from the people of Iknas (Herakleopolis) in upper Egypt to be slaughtered for the troops of 'Abdallah ibn Jabir in 22/643-4.²¹ The text is written in a fairly well-developed script, with spaced lines and words composed of regularly shaped letters pointed with a generous sprinkling of dots.²²

By the end of the seventh century a more uniform script had developed, probably as part of the reform of the bureaucracy carried out under the Umayyad caliph 'Abd al-Malik (r. 685-705). This standard script can be seen in official documents issued by the Umayyad chancery, such as a letter from Qurra ibn Sharik, governor of Egypt from 709 to 714 under al-Walid, to the ruler of Asfuh (Figure 3.1).²³ The letter was part of a large cache of papyrus documents found in 1901 in Upper Egypt at the site of Aphrodito, now the village of Kom Eshqaw, seven kilometers south-west of Tima.²⁴ Some, like the one illustrated, are in Arabic; others are in Greek; still others are bilingual in Arabic-Coptic or Arabic-Greek.

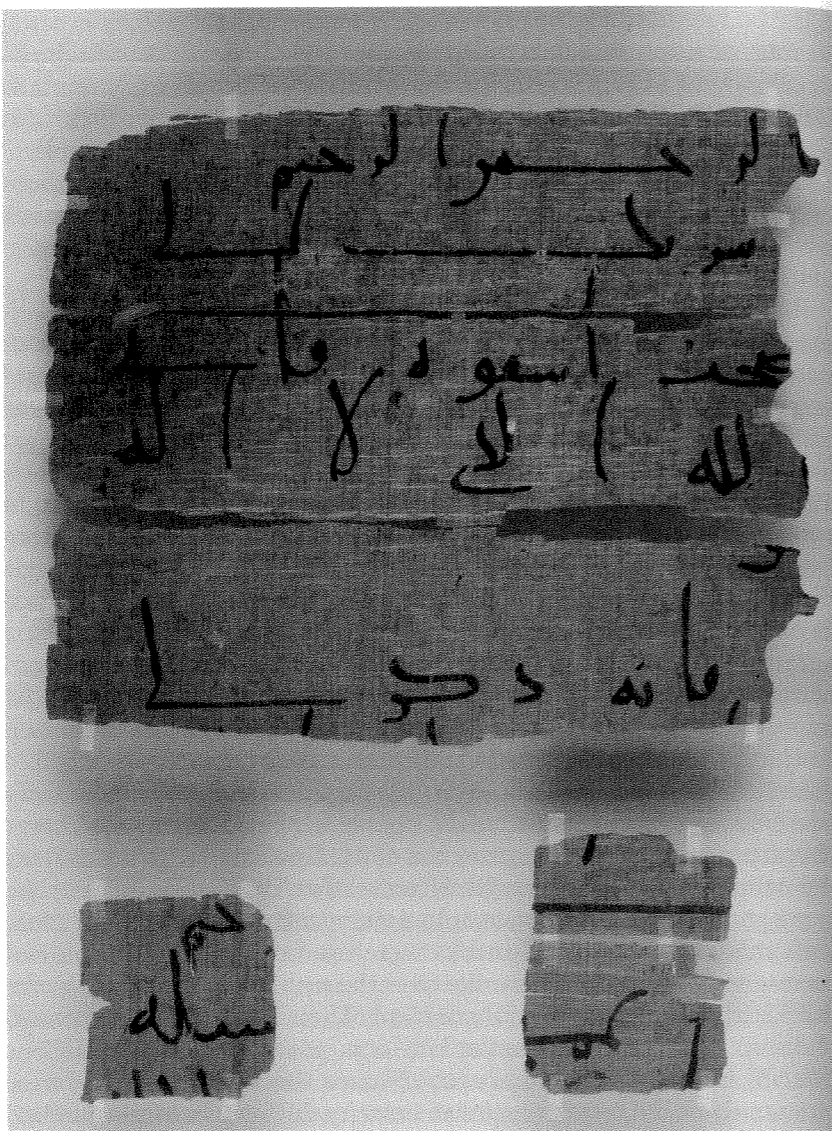
The letters shows the hand of a government scribe, to whom correct style was important. Literary sources frequently stress the importance of a clear and well-formed script in official documents.²⁵ Bad handwriting could cause a petition to a high official to be rejected regardless of its contents.²⁶ Legibility was clearly a problem in early Islamic times: Yusuf Ragib cited a case in which a secretary in charge of correspondence for the governor of Medina misread a letter from the caliph Hisham with tragic effect: rather than count (*akhsī*) the city's entertainers, the governor had them castrated (*ihṣī*).²⁷ To avoid such mistakes, diacritical marks were used occasionally in official correspondence, as in the stroke over the *nun*, the third letter in the third strip, but they were not standard. Their use was recommended in disciplines such as grammar, language, poetry, and rare Traditions (*gharib*), but surviving literary papyri show that even there they were often omitted.²⁸ Only in the tenth century did they become standard in book scripts (see Chapter 5).

The most notable features of the script used in the papyri are the extensions of and between letters, as in the tail of final *ya*' that extends backward under the word *alladhi* in the second line of the second strip. Even more dramatically, in the top strip the final *kaf* of *sharik* in the second line is extended, as is the connector between *ha*' and *mim* in *al-rahman* in the line above.

The script used for the text in the body of official letters and documents issued by the Umayyad chancery can be distinguished from that used on the protocol of a papyrus scroll (Figure 2.2).²⁹ The protocol was written with a brush, using broad flowing strokes and many loops and connections between letters that are not permitted in other styles. There are no dots. Despite (or perhaps because of) the

Figure 3.1 Letter on papyrus from the chancery of Qurra ibn Sharik to the sovereign of Asuh, c. 710.

Part of a cache of documents found at Aphrodito in Upper Egypt, this letter shows the official script used by scribes in the Egyptian chancery during Umayyad times. Like contemporary monumental inscriptions, it uses elongation for emphasis and diacritical strokes to clarify letters in important or potentially confusing words.

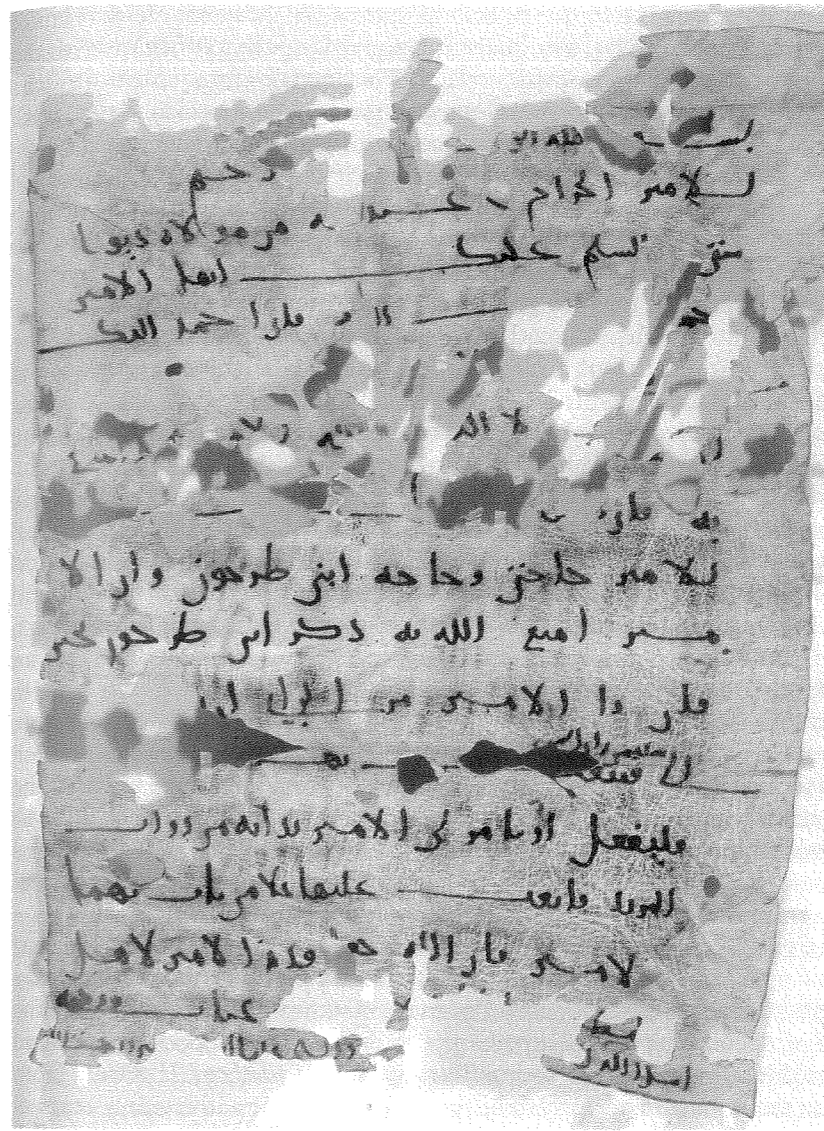


formulaic text in the protocol, the script itself is extremely individualized, possibly, as Gruendler suggested, because the cryptic aspect of these cover sheets served as a mark of authenticity preventing misuse and imitation.³⁰

The chancery script found in the letter from Qurra ibn Sharik belonged to a style that was used throughout the Umayyad realm. The same style is found, for example, in a short text, possibly from a letter, from the caliph al-Hisham (r. 724–43) to his nephew and successor al-Walid II written on a marble plaque found at the Umayyad site of Qasr al-Hayr al-Gharbi in Syria.³¹ This style can be taken as typical of the period, for many of the same features appear in a better

Figure 3.2 Letter in black ink on leather from Divastich, last ruler of Panjikent, to the amir al-Jarrah ibn 'Abdallah.

This letter was found in the 1933 excavations at Mt Mugh in the ruins of a castle in the Zerafshan Valley. Datable to 718–19 because of the dates of al-Jarrah's service, it shows that the round style of script typical of the Umayyad chancery was also used in Central Asia and that pointing was standard for names.



preserved letter (Figure 3.2) found in 1933 at Mt Mugh in the Zerafshan Valley of Central Asia alongside Sogdian manuscripts, a Chinese document, and various other objects. Transcribed in velvety black ink on yellowish leather, the letter is written in the name of Divastish, the last ruler of Panjikent, to the Arab amir al-Jarrah ibn 'Abdallah. It can be dated precisely because al-Jarrah was in office for seventeen months in 99–100 (718–April 719).

Penned in the firm hand of an experienced secretary, the letter from Mt Mugh shows many of the letter shapes and conventions used elsewhere, such as long initial 'ayn, dal and kaf with an extra hook, and extended letters and connectors (all visible in Figure 3.2a) and



Figure 3.2a



Figure 3.2b



Figure 3.2c

final *ya'* returning to the right in (Figure 3.2b). Nevertheless, it is not as finely written as the letter on papyrus, perhaps because of the unevenness of the tanned surface. The letters are squatter and the horizontal strokes bumpier. The space between lines also varies, with wider spacing at the top, but more cramped lines near the bottom, probably because the scribe realized that he was running out of space in which to fit the sixteen lines on the single piece of leather measuring 26 by 19 cm. The scribe was also interested in speed, for he sometimes did not lift his pen. For example, he wrote medial and final *'ayn* with one fluid stroke to make an upside-down triangle (Figure 3.2c) rather than the V with antennae used elsewhere. The scribe was also intent on legibility. The words are clearly spaced, and the names of several people – including that of Divastish, whose name is divided between the end of line two and the beginning of line three, and those of several amirs in line eight – are pointed.

Variations of the same style can be found on many of these early papyri, especially those of an official nature. Geoffrey Khan enumerated ten characteristic letter shapes of this script.³² Independent *alif* bends to the right at the bottom and is taller than the other vertical strokes. *Dal* has a little hook at the top. The body of certain letters, particularly *kaf* and *sad*, is elongated.³³ The base of initial *'ayn* extends to the right, whereas medial *'ayn* is written like a V with antennae. The tail of final *qaf* extends downward vertically before bending to the left. It can thus be distinguished from final *fa'*, which is elongated in a straight line. The tail of final *ya'* extends far to the right underneath the word that it ends and sometimes beyond to the previous word. Khan also called attention to several conventions used in the script on papyri, such as elongation of letters and connectors and the separation of letters in a word.

Such features are most commonly found on official documents, but typically the script used in day-to-day business correspondence and accounts was not carefully and consistently executed according to a specific standard (*muhaqqaq*), but rather a poorly executed unofficial script used for popular purposes (*mutlaq*). It differs from the well-written script used in state documents and literary texts of high standing, but even there, a scribe's performance sometimes fell short of the style at which he aimed. In this sense, the script used on many papyri often reflects personal handwriting, rather than the characteristics of a given 'school' or style.

The evolution of a calligraphic style

The evidence from papyri, then, helps us to sketch the development of Arabic script in the early centuries of Islam. It is less help in tracing the development of a calligraphic style, which seems to have developed along another path, or was, using Whelan's metaphor, another branch of the writing tree. Such a script would have been used for fine manuscripts, but we have no dated examples of such

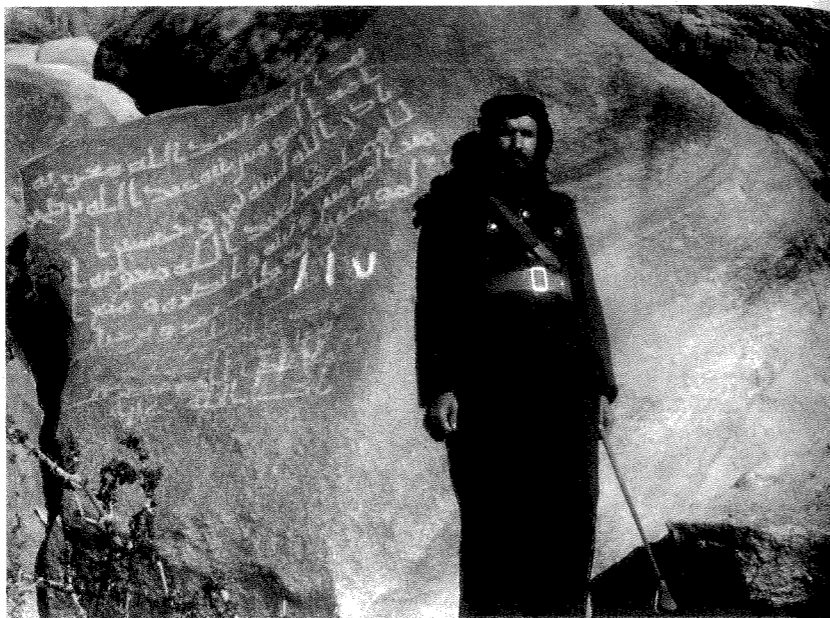
manuscripts, particularly copies of the Koran, and some scholars, notably John Wansbrough, have denied that they ever existed, thereby challenging the traditional Muslim view about the writing down of the Koran and arguing that a canonical text was established only at the end of the eighth century.³⁴ Whelan has rebutted this argument.³⁵ Citing forgotten witness, mainly evidence from inscriptions and scattered references in texts, she showed that already by the seventh century an established group of calligraphers (*ashab al-masahif*) penned fine copies of the Koran in the city of Medina. The specific area where these Koran manuscripts were transcribed and sold was located near the west end of Balat al-A'zam, the paved street extending west from the Prophet's mosque to the prayer ground (*musalla*). Whelan also collected the names of at least three people who had copied the Koran professionally there in the last quarter of the seventh century and the beginning of the eighth: Sa'd, Khalid ibn Abi'l-Hayyaj, and 'Abd al-Rahman ibn Hurmuz ibn Kaysan al-A'raj. All her evidence leads to the conclusion that the Muslim tradition is reliable, at least in broad outline, in attributing the first codification of the Koranic text to the early Islamic period, if not specifically to the reign of the caliph 'Uthman.³⁶ Copies of the sacred text were needed to propagate the new faith and weld the diverse peoples of the rapidly expanding empire into a relatively unified polity, as Arabic script – like seal script in China – was a tool in fostering cultural coherence.³⁷

Since we have no dated manuscripts or fragments to identify what this early Arabic script looked like, we have to examine ancillary sources that are dated, such as monumental inscriptions and coins. Each medium offers certain advantages, but each also has its own limitations and idiosyncrasies. Monumental inscriptions, like the texts on papyri, vary in length and formality. The vast majority are graffiti.³⁸ Ranging in length from a few words to several lines, they were inscribed at major holy sites or along pilgrimage routes like the Darb Zubayda connecting Iraq with the shrines in Arabia. Most of these graffiti, like many of the day-to-day papyri, are not very helpful in tracing the evolution of calligraphy, as they tell us more about the development of ordinary handwriting than about the development of artistic style(s).

The longest and most important graffito to survive from early Islamic times is the foundation text scratched in the rock near Ta'if in the Hijaz (Figure 3.3), recording the construction of a dam by the Umayyad caliph Mu'awiya in 58/677–68.³⁹ The letters in the six-line text are well-formed, compact, and clear; fifteen of them, including the letters *ba'*, *ta'*, *tha'*, *nun* and *ya'*, are pointed (Figure 3.3a). In addition to documenting the shapes of individual letters, the inscription provides evidence about the conventions used in writing longer excerpts and organizing a line or page. The words are spaced, and certain letters there, particularly *dal* and *sad* but also the final *ba'* in *kataba*, are extended horizontally. By stretching out horizontal

Figure 3.3 Foundation inscription carved on a rock near Ta'if in the Hijaz in 58/677–8.

The text, one of the few monumental inscriptions to survive from early Umayyad times, commemorates the construction of a dam by the Umayyad caliph al-Mu'awiya. The engraved letters show that a squat and rectilinear script was standard in Arabia by the third quarter of the seventh century. Diacritical marks are used extensively, and words are divided between lines without regard to meaning, perhaps to enhance the symmetry and visual impact of the inscription.



كنا السك لعك الله صويه
 احد المومس بنيه عك الله بر طهر
 ناك ر الله لسنه ثمر وحمسيرا
 اللهم اعمر لسك الله صويه يا
 صد المومس وثنيه وانظده ومثرا
 (مدا) لموضبر به كتب عمرو بن خطاب

Figure 3.3a

letters and connectors, the scribe 'Amru ibn Janab varied rhythm and spacing. This convention of elongation is of fundamental importance in laying out the text in fine manuscripts of the Koran.

Words in the Ta'if inscription are divided between unconnected letters. Lines three, four, and five all end in *alif*, the opening letter of the word that continues on the next line. The reader was not expected to pause at the end of a line, but rather to read seamlessly from the end of one line to the beginning of the next without a break. This division in the middle of (rather than between) words also shows that decorative effects were already important at this early date, for the *alifs* with a bent right foot written at the end of the middle lines form a pattern balanced by the similar vertical strokes that begin lines two, three, and four (*alif*, *ba'-alif*, and two *lams*, respectively).

The inscription scratched in the rock at Ta'if, like many papyri, tells us about ordinary writing, but coins provide more ample evidence showing how the written word became increasingly important as the official signifier of Islam and the caliphate over the course of the seventh century. Not only are coins numerous and well preserved, but they also have the tremendous advantage of being dated, if not to a precise year, then to the reign of a particular ruler. Issuing coins is the prerogative of the government, and thus the writing on coins represents an officially sanctioned style. The Umayyads issued coins in Syria, Egypt, and Iraq, so the numismatic evidence supplements the graffiti from Arabia. As with papyri, however, the evidence from coins has limitations. Coins are conservative, for no government would wish to issue a coin that might not be accepted. The writing and iconography on coins, therefore, should be taken as the



Figure 3.4 Epigraphic dinar issued under the Umayyad caliph 'Abd al-Malik from 77/697–8.

Coins issued by Muslims over the course of the seventh century show the increasing importance of religious slogans, culminating in this dinar that is entirely epigraphic and proclaims the triumph of Islam. The letters are written in a squat rectilinear script that descends only slightly from the baseline.

standard for the formal acceptance of certain conventions, but never the date of innovation of a new device or style.

The first Muslims continued the minting practices of the regions they had conquered, but in the late seventh century they developed their own distinctive coinage in which religious phrases became increasingly important.⁴⁰ One of the first to appear was *bism allah rabbi* (in the name of God, my lord). Coins minted at Bishapur in Iraq in 66/685–6 introduce *muhammad rasul allah* (Muhammad is God's prophet), a phrase that was to become the second part of the Muslim profession of faith (*shahada*). By 72/691–2 the phrase 'there is no god but God alone' (*la ilah illa allah wahda*), the first part of the profession of faith, was also included in the marginal legend. The complete profession of faith was soon accompanied by new imagery such as the standing caliph or the caliph at prayer, figures that were meant to illustrate the text and proclaim the primacy of the caliphal office. This evolution of written legends culminated in 77/697–8 with the appearance of gold coins (dinars) that are entirely epigraphic (Figure 3.4).

On these new epigraphic dinars the written word reigns supreme. The text in the obverse field proclaims the central doctrine of Islam: there is no god but God alone, without associate. The margin contains the Prophetic Mission taken from Surat al-Tawba (Koran 9:33): Muhammad is the messenger of God who sent him with guidance and the religion of truth that he might make it supreme over all other religions. The text in the reverse field rejects the idea of the Trinity, citing Surat al-Ikhlās (Koran 112): God is one, eternal; He does not beget nor is He begotten. The margin contains the date, the same legend that had been used on earlier types.

As the text on these epigraphic dinars (and on the silver coins issued shortly afterwards) is mainly Koranic, their inscriptions are fundamental in charting the history of Arabic calligraphy.⁴¹ The script shows a practiced calligraphic hand that differs from the style used in most documents, whether those issued by the chancery or those written for more quotidian purposes. The coin legends display a squat, rectilinear script like the graffiti at Ta'if. Letters descend only slightly from the uniform baseline. *Alif* has a foot that bends to

the right. Isolated *ba'* opens with a short curved stroke and ends in an long open one, as in the word *duriba*. Medial *ha'/jim* is a short stroke that bisects the baseline diagonally. *Dal* and *kaf* have a sloping upper bar that ends with a short stroke. Final *qaf* descends below the line and then trails to the right, as in the word *al-haqq*, about seven o'clock in the marginal inscription on the obverse. Final *mim* has a tiny tail to the left. Final *nun* is an open descending stroke. Final *ya'* trails to the right under the word, as in *bi'l-huda* and *'ala* (at nine and five o'clock on the obverse margin, respectively) as well as *fi* (at eight o'clock on the reverse margin). Details like the right foot on *alif*, the hook on *dal*, and the slight bends in other strokes – features that are difficult to reproduce when engraving metal – show that the text was drawn up by a calligrapher.

Coins issued in Iraq in the early 70s/690s had been designed to improve the legibility of both text and image, and this entirely epigraphic type marks the culmination of readability and visual impact, in which all seventy letters fit on a surface less than 2 cm in diameter (smaller than an American quarter). The orientation of the marginal inscriptions has been reversed from that used on all earlier coins, both gold and silver. There, the baseline of the marginal inscription ran around the rim of the coin, and the tops of the letters faced inwards toward the figural imagery. In contrast, on the epigraphic coins, the marginal inscriptions face outward. This reorientation effects reading. To read the marginal text on earlier issues, one turned the coins clockwise, whereas to read the marginal legends on the epigraphic type, one turns them counterclockwise, thereby facilitating reading of the text in the fields, which runs from right to left. Visually, the new inward-facing baseline also sets off the text in the central fields, which, in turn, are laid out for maximum visual impact, with lines divided between words, and words and letters set symmetrically. On the obverse, for example, the distinctive scissor-like combination of *lam-alif* repeats at the beginning and end of line one (as well as the beginning of line three), and final *ha'* (though in independent and final forms) repeats at the end of lines two and three. Exactly the same pattern occurs on the reverse: the first line begins and ends with *allah*, and lines two and three end with the letters *lam-dal*.

Such a sophisticated design took time to plan. It was needed because these new epigraphic dinars were struck to a new weight standard: rather than continuing the old one pegged to the Byzantine solidus (approximately 4.55 grams), these dinars were struck to twenty Arabic carats (approximately 4.25 grams).⁴² The new epigraphic design thus announced the metrological innovation.⁴³

Die-cutting is a specialized art, done by a die-cutter skilled in engraving metal dies. To make these epigraphic coins, the die-cutter, who could well have been illiterate, must have taken the design that the calligrapher had drawn up with pen on another support, perhaps at a larger scale, and reproduced it in mirror reverse. We can get another view of how handwritten calligraphy was transferred to a



Figure 3.5 Interior view of the Dome of the Rock in Jerusalem, ordered by the Umayyad caliph 'Abd al-Malik in 72/692, showing the north-east part of the mosaic inscription around the inner side of the ambulatory.

Both sides of the ambulatory in the Dome of the Rock are ringed by a 240-meter inscription band executed in blue/green and gold mosaic. The text, which includes prayers, short Koranic passages, and the date 72/692, provides the earliest dated evidence for the writing down of the Koran and shows that diacritical marks were part-and-parcel of script in early Islamic times.

different medium at this time by looking at a contemporary architectural inscription: the long (240-meter) band of gold and blue/green glass mosaic that encircles both faces of the inner façade of the Dome of the Rock in Jerusalem (Figure 3.5).⁴⁴ The inscription is preserved in its entirety, except at the end where the 'Abbasid caliph al-Ma'mun (r. 813–33) had his name inserted in place of that of the original patron, the Umayyad caliph 'Abd al-Malik. Al-Ma'mun retained, nevertheless, the original date of 72/691–2. The main body of the text consists of brief invocations combined with a series of passages taken from the Koran, all dealing with the same theme of challenging Christian dogma in the main pilgrimage city for Christians.

Since Oleg Grabar's landmark study of the Dome of the Rock,⁴⁵ most scholars have accepted the importance of the inscription in explaining the meaning and function of the building, but only a few have paid attention to its importance in tracing the development of Arabic script.⁴⁶ Yet studying it in detail shows its close connection

Figure 3.6 Limestone milestone in the name of 'Abd al-Malik measuring the distance of eight miles from Jerusalem and datable c. 692.

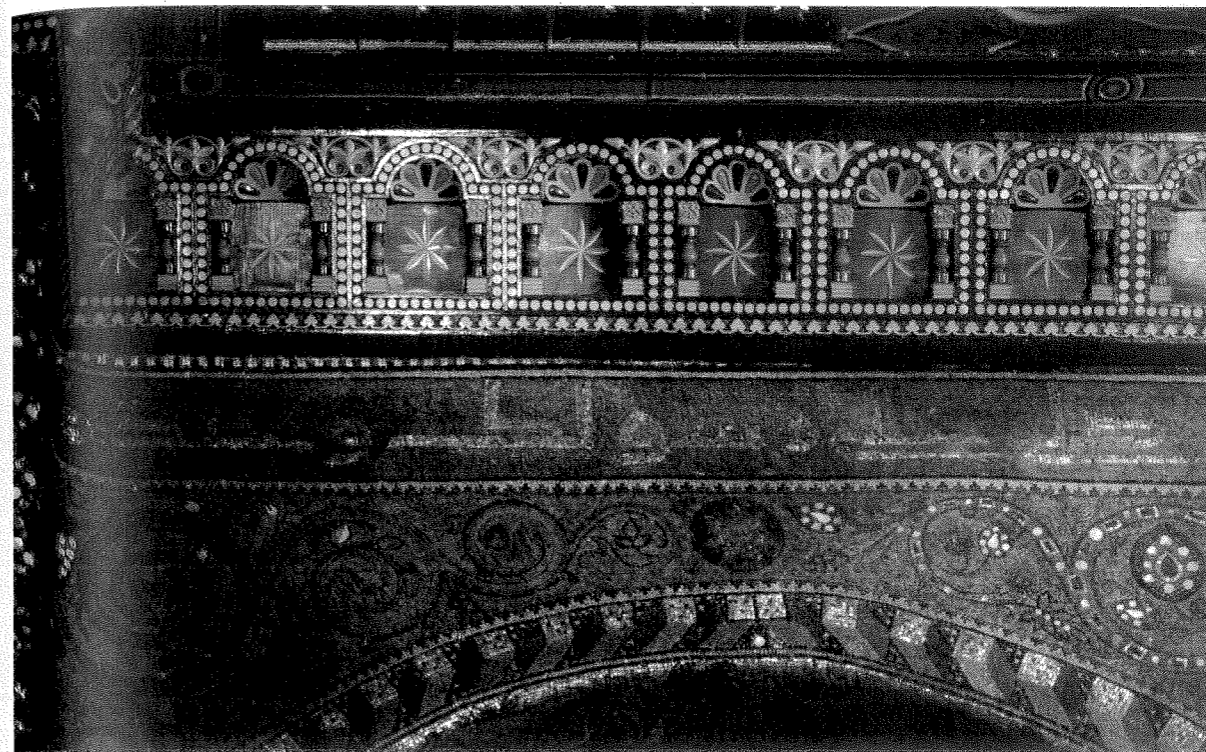
The text is written in the style typical of Umayyad inscriptions. The last line shows that diacritical marks were used at this early date, and the palmette at the bottom suggests the type of ornament that might have been used on contemporary Koran manuscripts.



to calligraphy. It confirms, for example, that diacritical marks were used from earliest times. Thin strokes accompany at least ninety-two letters, all but three in the text on the inner face, presumably because that part of the inscription was more brightly lit and hence more visible. The section of the band from the north-east side illustrated in (Figure 3.5), for example, contains the phrases *lahu ma fi'l-samawati wa'l-ardi wa-kafa billah wakilan lan yastankifa [l-masih . . .]* (To Him belongs all that is in the heavens and in the earth. God suffices for a guardian. The Messiah will not disdain [to be a servant of God]) from Koran 4:171-2. Seven letters are marked by thin diacritical strokes.

Similar marks were added to five milestones erected in the name of 'Abd al-Malik. Four undated examples discovered in Palestine in the nineteenth century mark the number of miles from Damascus or Jerusalem.⁴⁷ This one (Figure 3.6) records that it is eight miles from Jerusalem.⁴⁸ A fifth milestone discovered in the 1960s describes the leveling of a difficult pass on the road from Damascus to Jerusalem in Muharram [7]3/May-June 692.⁴⁹ Its date allows us to date the group c. 692. The generic part of the text on the milestones, the first six lines with the name of the caliph, could have been prepared in advance, but when carving the last lines giving the specific distance from Jerusalem, the carver added diacritical strokes to the letters *tha'*, *nun*, and *ya'* in the word *thamaniya* (eight) in the last line to insure the correct reading.

The contemporary inscriptions on the milestones (Figure 3.6) and the Dome of the Rock (Figure 3.5) also tell us about the decoration that accompanied this early script. The bottom of the milestone is filled by a scroll that unfurls in two directions from a central



palmette. It shows that already by the end of the seventh century decorative devices were used to fill empty spaces and suggests the type of decorative rubrics that might have been used to decorate fancy manuscripts of the Koran made in early Islamic times. Similarly, the sections of text in the mosaic inscription at the Dome of the Rock are divided by simple ornaments in the shape of rosettes or stars inscribed in squares. These ornaments call to mind the markers used to divide groups of verses in later manuscripts of the Koran and suggest that verse markers were already used in manuscripts penned in early Islamic times.

The mosaic inscription at the Dome of the Rock also gives clear evidence about the archaic fashion of vocalization and pointing. The script used is one of the so-called *scriptiones defectivae*, in which certain vowels, such as the long *alif* in *salam*, are omitted. In the Dome of the Rock inscription, *alif* is regularly omitted in hortative phrases such as *ya ahl* or *ya ayuha*, and words such as *wahada* and *al-samawat* are written in the *scriptio defectiva* form without the long *alif*, as in Figure 3.5. In addition, the letter *qaf* is repeatedly pointed in the archaic style. Now conventionally written with two dots above the letters, *qaf* is pointed here with one stroke below the letter to differentiate it from *fa'*, which is pointed with one stroke above the letter.

Looking at a detail of the mosaic inscription on the Dome of the Rock (Figure 3.7) shows the skilled hand of a calligrapher in designing

Figure 3.7 Detail of the mosaic inscription on the inner side of the ambulatory in the Dome of the Rock, Jerusalem, 72/692.

Close examination of the mosaic inscription shows many characteristics of a calligraphic style, such as tapered, rounded, and hairline strokes, and prove that the inscription was designed by a master calligrapher for execution by a professional mosaicist.

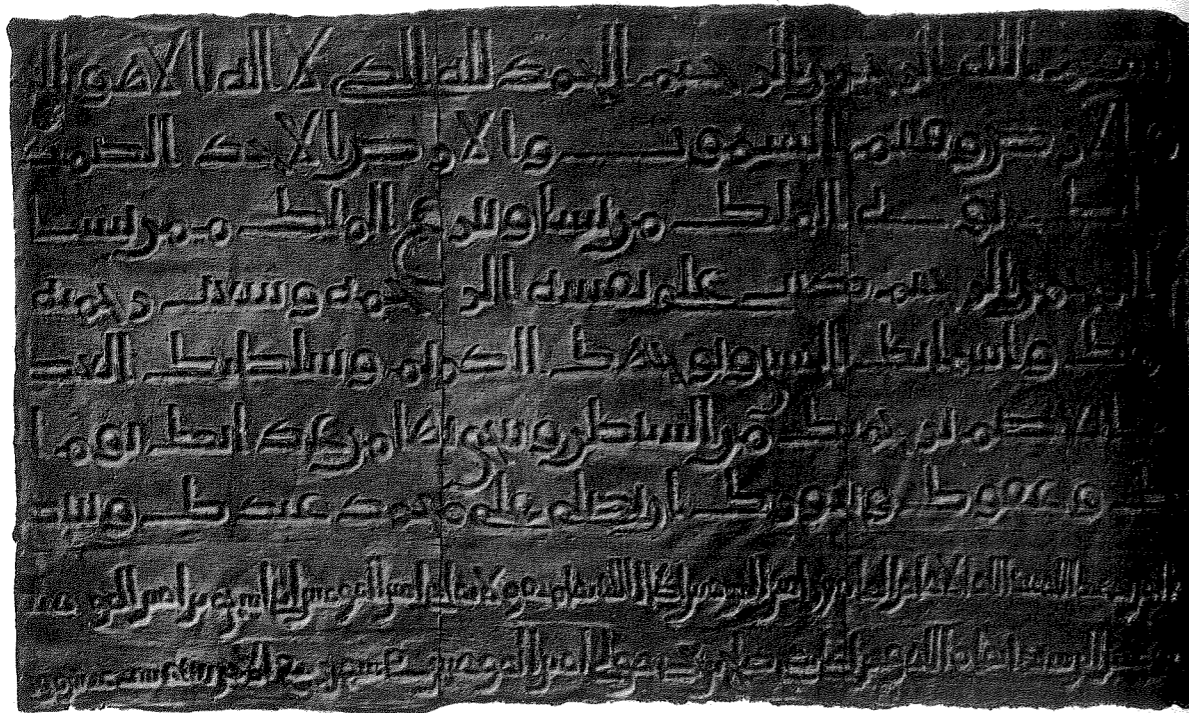


Figure 3.8 Van Berchem's squeeze (digitally enhanced) of the right half of the hammered copper plaque that once adorned the lintel over the inner door of the east entrance to the Dome of the Rock.

The relief letters show the same style as those in the mosaic band in the interior of the building, but with more rounded and nested strokes, typically of the hand of a calligrapher.

the letter shapes. The ends of some letters taper to a point, as with the beginning of *alif* and 'ayn or the end of final *ya*, which always trails to the right. Initial *ba*' is slightly curved rather than rigidly vertical. Some tails are rounded, such as final *nun*, *sad*, *ha*', and *ya*'. *Dal* has a hairline upper stroke. Toothed letters vary in height. Many letters are elongated, notably the body of *kaf*. The strokes of the letters also vary in width. Some are six tesserae wide; others only five. Features like tapering, curved, and hairline strokes are typical of the pen, not of mosaic, which is a rectilinear and blocky technique.

Many of these calligraphic traits can also be found on the hammered copper plaques (Figure 3.8) that once adorned the lintels over the inner doors of the east and north entrances to the Dome of the Rock.⁵⁰ Like the mosaic inscription, these ones were adjusted by the 'Abbasid caliph al-Ma'mun, who had the two crowded lines added at the bottom; only the first seven lines are original. They show the same letter shapes and elongation of letters found in the mosaic inscriptions on the building. *Mim*, for example, ends with a horizontal, rather than a vertical tail. Initial *jim* bisects the baseline. If anything, the ones on the copper plaques are closer to the hand of the calligrapher, for not only are the bodies and ends of some letters rounded, but occasionally they are nested inside one another, as with the tails of *sad* and *waw* in *al-ardi wa* at the beginning of the second line. The following word *al-samawati*, written without long *alif*, uses the same *scriptio defectiva* found in the mosaic inscription.

To clarify the role of the calligrapher at the Dome of the Rock, we need to examine the way mosaics are executed. Mosaics were a standard technique of decoration in Byzantine times, and scholars have established the successive steps used in that tradition.⁵¹ Since the mosaics at the Dome of the Rock are done in Byzantine style, most likely by Byzantine-trained craftsmen, we can safely assume that a similar method was used there. First, the interior of a building was coated with a thick layer of plaster that covered up the inconsistencies of the wall surface. This was covered by a second finer layer of plaster, on which the artist sketched out the scheme of decoration. This type of sketch is often called a *sinopia*, because it was executed in the red earth pigment that was traditionally sold in Sinop, a town on the southern coast of the Black Sea. A final, thin layer of plaster served as the setting bed for the mosaic tesserae. Because the tesserae had to be pressed into the plaster before it hardened, the third coat was laid in daily sections, often termed *giornati*. Although the size of this area varied in different climates and surfaces of a building, the typical *giornata* established for the eleventh-century cathedral of St Sophia in Kiev was approximately two square meters. On this third layer the artist rapidly painted the design he intended to cover with mosaic that day. Should any plaster have been left unused at the end of the day, he probably cut it away before starting afresh the next day.

Marguerite van Berchem's examination of the mosaics at the Dome of the Rock confirmed the presence of a *sinopia* on the soft layer of plaster there.⁵² The artist used red under the gold tesserae, the ones used for the inscription, and dark grey underneath the blue/green ground. The strokes for the letters, measure some 5 cm, the same height as those in a protocol (Figure 2.2), and were probably drawn using a similar brush, in the same way that Roman inscriptions, including the serifs, were first written with a brush and then V-cut in stone.⁵³

Materials and technique prove that the inscription was the most important part of the band ringing the arcade. Close-up photographs of the Dome of the Rock show that the mosaicist first set the cubes that formed the outlines of the letters, then filled the interiors, and finally surrounded the letters with the blue/green ground.⁵⁴ He set the letters in gold tesserae, the most expensive part of an already expensive medium.⁵⁵ He also set the gold tesserae using a more time-consuming (and hence costly) technique: the gold (and elsewhere the silver) tesserae are laboriously set at a 30° angle to reflect the light.

The person who drew the inscription on the plaster at the Dome of the Rock was therefore a highly talented and specialized artist. We can speculate about his identity. The mosaicist himself could not have designed the inscription, for he was probably a Greek-speaking Christian who had trained on nearby monuments such as the Church of the Nativity in Bethlehem.⁵⁶ Nasser Rabbat suggested that Raja'

ibn Haywa al-Kindi, one of the two men charged with supervising work at the Dome of the Rock, may have drawn up the text.⁵⁷ A theologian, transmitter of hadith (*muhaddith*), and *éminence grise* of the period,⁵⁸ he also served as administrator in charge of accounts. He may have stipulated the content of the inscription, but there is no evidence that he was a copyist.

Rather, the evidence of the mosaic inscription itself shows that it was designed by a skilled calligrapher. This was a common practice in early Islamic times. According to the tenth-century chronicler Ibn al-Nadim, the Medinese calligrapher Khalid ibn Abi'l-Hayyaj transcribed copies of the Koran, poems, and reports for the Umayyad caliphs al-Walid (r. 705–15) and 'Umar II ibn 'Abd al-'Aziz (r. 717–20) and also designed the gold mosaic inscriptions for the Mosque of Medina, restored under al-Walid c. 93/710.⁵⁹ Since there is no evidence of a group of copyists working in Palestine at this time, Whelan suggested that he or one of his contemporaries working in Medina designed the inscriptions for the Dome of the Rock.⁶⁰ The mosaic inscription on the Dome of the Rock would then represent the original *mushaf* script devised at Medina. Such a calligrapher would have been brought to the site, for the designs must have been sketched *in situ* as they exactly fit the space allotted to them.⁶¹

The writing in letters on papyri and leather, the graffiti on walls and pot sherds, the legends on coins, and the inscriptions on architecture, then, show how a calligraphic script developed during the seventh century and beginning of the eighth. At the same time professional copyists undoubtedly produced fine manuscripts of the Koran, but no dated examples survive. In the following chapter we shall examine different methodologies to try to group the many fragments from these early manuscripts and trace how calligraphic styles developed in the early centuries of Islam.

Notes

1. Étienne Combe, Jean Sauvaget, and Gaston Wiet, *Répertoire chronologique d'épigraphie arabe* (Cairo: Institut français d'archéologie orientale, 1931), no. 1; James A. Bellamy, 'A New Reading of the Namārah Inscription,' *Journal of the American Oriental Society* 105, no. 1 (1985): 31–48. The stone is now in the Louvre Museum in Paris (MAO 4083).
2. One found at 'En Avdat in the Negev dates between 88–9 and 125–6 CE. Another found at Mada'in Salih, the Nabatean outpost in the Hijaz, dates to 267/8 and shows a linguistic admixture of Arabic; see A. Negev, 'Obodas the God,' *Israel Exploration Journal* 36 (1986): 56–60, cited in Beatrice Gruendler's article 'Arabic Script' in *Encyclopedia of the Qur'an*, ed. Jane Dammen McAuliffe (Leiden, 2001), 1:135–44.
3. Nabia Abbott, *The Rise of the North Arabic Script and its Kur'anic Development, with a Full Description of the Kur'an Manuscripts in the Oriental Institute*, University of Chicago, Oriental Institute Publications (Chicago, 1939); Beatrice Gruendler, *The Development of the Arabic Scripts: From the Nabatean Era to the First Islamic Century*

- According to Dated Texts*, Harvard Semitic Series (Atlanta, 1993); Thomas Bauer, 'Arabic Writing,' in *The World's Writing Systems*, ed. Peter T. Daniels and William Bright (New York, 1996), 559–64; Beatrice Gruendler, 'Arabic Script,' in *EQ*, 1:135–44.
4. Adolf Grohmann, *Arabische Paläographie II: Das Schriftwesen und die Lapidarshrift*, Österreichische Akademie der Wissenschaften Phil.-Hist. Klasse. Denkschriften. Bd. 94/2 (Vienna, 1971), 3–33. John F. Healey, 'Nabataean to Arabic: Calligraphy and Script Development among the Pre-Islamic Arabs,' *Manuscripts of the Middle East* 5 (1990–1): 41–52, has recently made the same argument that cursive forms close to Arabic script already existed in Nabataean as written in the first and second centuries CE.
 5. Combe, Sauvaget, and Wiet, *RCEA*, 2–4; Grohmann, *Arabische Paläographie II*, 14–15; Gruendler, *Development of the Arabic Scripts*, 13–14.
 6. J. Starcky, 'Pétra et la Nabatène,' in *Dictionnaire de la Bible. Supplément* (Paris, 1966), 7:886–1017.
 7. Abu'l-'Abbās Ahmad ibn Jābir al-Balādhurī, *The Origins of the Islamic State* [Kitāb Futūh al-Buldān], trans. Philip Khmri Hitti (New York, 1968), 2:270.
 8. E.g., Janine Sourdel-Thomine in her article 'Khatt' in *EI*/2 and 'Les origines de l'écriture arabe à propos d'une hypothèse récente,' *Revue des Études Islamiques* 34 (1966): 151–7, and Solange Ory, 'Calligraphy' in *EQ*, 1:278–6.
 9. A good example is Giovanni Garbini's chart, reproduced in Peter T. Daniels and William Bright, *The World's Writing Systems* (New York: Oxford University Press, 1996), table 5.5, showing the various scripts that are derived from Aramaic script, such as square Hebrew, Palmyrene, Nabatean, and Ancient Arabic. This is the methodology used by Gruendler, *Development of the Arabic Scripts*, the most recent study of the origins of Arabic script.
 10. F. Briquel-Chatonnet, 'De l'araméen à l'arabe: quelques réflexions sur la genèse de l'écriture arabe,' in *Scribes et manuscrits du Moyen-Orient*, ed. François Déroche and Francis Richard (Paris, 1997), 135–50.
 11. John F. Healey, *The Early Alphabet* (London, 1990).
 12. The first dated example of a Syriac manuscript in *serto*, BL Add. 14548, is dated 790 CE.
 13. Gruendler, for example, in her most recent discussion of the formation of pre-Islamic Arabic script (*EQ*, 1:138), sticks to her original position in that 'the individual Arabic graphemes descend through Nabatean from the west Semitic alphabet,' but accepts that the general proportions 'suggest Syriac calligraphic influence.' Alan Jones, 'The Word Made Visible: Arabic Script and the Committing of the Qur'an to Writing,' in *Texts, Documents and Artifacts: Islamic Studies in Honour of D. S. Richards*, ed. Chase F. Robinson (Leiden, 2003), 1, suggests that other influences from south Arabia must be involved to explain such features as the differentiation in Arabic between *dal* and *ra'*, a difference lacking in Nabatean, Syriac, and Palmyrene.
 14. F. Krenkow, 'The Use of Writing for the Preservation of Ancient Arabic Poetry,' in *Ajabnama: Studies in Honour of Edward Granville Browne* (Cambridge, 1922); Jones, 'The Word Made Visible.' For an example of such a metaphor by Salama ibn Jandal, a poet who flourished in the second half of the sixth century, see Chapter 5 and Figure 5.10.
 15. The Koran uses the term *kitab* 261 times, not only to describe itself but also to refer to earlier scriptures. See the thoughtful article by David

- Madigan, 'Book' in *EQ*, 1:242–51, especially the sub-section 'The Qur'an as *kitāb*' as well as his longer and denser exegesis on the subject, *The Qur'an's Self-Image: Writing and Authority in Islam's Scripture* (Princeton, 2001). The first inscription mentioning the Koran as a separate entity occurs only in 'Abbasid times in the eighth century; see Robert G. Hoyland, 'The Content and Context of Early Arabic Inscriptions,' *Jerusalem Studies in Arabic and Islam* 21 (1997): 86. The celestial pen was a powerful image. Luce López-Baralt, 'The Supreme Pen (Al-Qalam Al-A'la) of Cide Hamete Benengeli in *Don Quixote*,' *Journal of Medieval and Early Modern Studies* 30, no. 3 (Fall 2000): 505–18, has recently argued that the celestial pen mentioned in Koran 68:1 inspired the closing scene of Cervantes' masterpiece *Don Quixote*, in which the fictional author addresses his dry pen suspended in the air from a kitchen hook, a pen whose destiny has therefore been sealed by God.
16. Alan Jones, 'Orality and Writing in Arabia,' in *EQ*: 3:587–93. The question of whether the Prophet himself knew how to write is a different one. The Koran (*Surat al-a'raf*, 'The Heights,' 7:157–8) speaks of *al-nabi al-ummi*. Traditionalists take this phrase to mean the 'unlettered Prophet' and use it as evidence that he did not know how to read or write. Western Orientalists, however, interpret this phrase as meaning the Prophet of the common folk.
 17. She used this metaphor in her article 'The Phantom of *Hijāzī* Script: A Note on Paleographic Method' (unpublished), submitted to *Manuscripts of the Middle East* in 1997, but unfortunately never published. Before her death, she shared a copy with me, and with the permission of her husband, I share it here.
 18. The most recent discussions of these papyri are Geoffrey Khan, *Arabic Papyri: Selected Material from the Khalili Collection* (London, 1992); Geoffrey Khan, *Bills, Letters and Deeds: Arabic Papyri of the 7th to 11th Centuries*, ed. Julian Raby, The Nasser D. Khalili Collection of Islamic Art (London, 1993); Gruendler, *Development of the Arabic Scripts*, 22–8, which summarize the work of earlier scholars such as Joseph von Karabacek, *Führer durch die Ausstellung Papyrus Erzherzog Rainer* (Vienna, 1892) and Adolf Grohmann, *From the World of Arabic Papyri* (Cairo, 1952); Grohmann, *Arabische Paläographie II*. Gruendler's work is particularly valuable as she not only lists twenty-three dated examples of cursive script on papyri, leather, and stone from the first century of Islam, but also includes drawings of them and charts of the individual letters used in these texts.
 19. Grohmann, *Arabic Papyri*, 2. As Khan observes (*Bills, Letters and Deeds*, n. 2, p. 21), this figure refers only to moderately well-preserved documents. The total number of extant papyrus fragments with Arabic writing is far higher.
 20. Working from a list prepared by Grohmann ('The Problem of Dating Early Qur'ans,' *Der Islam* 33 [1958]: 213–31), Gruendler (*Development of the Arabic Scripts*, 21–8) assembled a list of twenty-three specimens, including two graffiti on stone from Qasr Kharana dated 92/711 (her P17), a letter on leather from Mt Mugh (her P22; see Figure 3.2), and an undated palimpsest (her P23). Gruendler assigned a single number to groups of dated papyri found at the same site and dealing with the same subject. For example, she assigned the number P4 to the group of thirteen papyri, mostly entagia (announcements of taxes owed by a local community) dating to the period 52–70 (672–89), that was discovered at 'Awja' al-Hafir (Nessana) near Be'ersheva by the H. Dunscombe Colt

- expedition of 1936–7. C. J. Kraemer, *Excavations at Nessana III* (Princeton, 1958) had reproduced only one of them, a requisition of taxes from the governor dated 54/674, drawn by Gruendler, *Development of the Arabic Scripts* as P4, p. 158. Her P14 comprised the Greek-Arabic entagia found at Aphrodito written in the name of the Umayyad governor of Egypt, Qurra ibn Sharik (of which she listed eight), and her P15 comprised letters from Qurra to Basil, the Coptic patriarch (of which she listed fourteen).
21. Gruendler, *Development of the Arabic Scripts*, P1; Alan Jones, 'The Dotting of a Script and the Dating of an Era: The Strange Neglect of PERF 558,' *Islamic Culture* 72, no. 4 (October 1998): 95–103.
 22. Six letters (*ha/jim, kha', dhal, za', shin, and nun*) are dotted, though they also occur without dots.
 23. St Petersburg, Academy of Sciences, A-240; Yuri A. Petrosyan, et al., *Pages of Perfection: Islamic Paintings and Calligraphy from the Russian Academy of Sciences, St Petersburg* (Lugano, 1995), no. 5.
 24. The documents are now scattered in collections in Heidelberg, St Petersburg, Chicago, Cairo, and Paris. They form entry P14 in Gruendler, *Development of the Arabic Scripts*.
 25. Grohmann, *Arabische Paläographie II*, 7.
 26. Franz Rosenthal, 'Abū Haiyān al-Tawhīdī on Penmanship,' *Ars Islamica* 13–4 (1948): 1–30.
 27. Yūsuf Rāgib, 'L'écriture des papyrus arabes aux premiers siècles de l'Islam,' in *Les premières écritures islamiques* (Aix-en-Provence, 1990), 14–29.
 28. The earliest dated example of a literary text on papyrus is dated 229/843 (see R. G. Khoury, 'L'importance d'Ibn Lahī'a et son papyrus conservé à Heidelberg,' *Arabica* 22 [1975]: 11–2, cited in Hoyland, 'Early Arabic Inscriptions,' no. 3). Some fragments published by Adolf Grohmann, *Arabic Papyri from Khirbet el-Mird* (Louvain, 1963), nos. 71–3 date from the mid- to late eighth century.
 29. Some modern authors have given this script a special name. In his catalogue of the protocols in the Rainer collection, Grohmann called it *jalil* (cited in Gruendler, *Development of the Arabic Scripts*, no. 198) and connected it to the script used for large copies of the Koran, but this comparison does not hold. Others have called it *tumar*, the Arabic word derived from the Greek *tomarion* (see Chapter 2).
 30. Gruendler, *Development of the Arabic Scripts*, 134.
 31. Now in the Damascus Museum, the plaque was included in *The Arts of Islam*, exhibition catalogue, Hayward Gallery (London, 1976), no. 470.
 32. Khan, *Bills, Letters and Deeds*; Khan, *Arabic Papyri*.
 33. This is the principle sometimes known in Arabic as *mashq* or *madd*, from the verbs *mashaqa* and *madda*, to extend or elongate, or in Persian as *kashida*, from the verb *kashidan*, to pull or stretch. (The latter form is commonly used in typography and computer parlance today.)
 34. John Wansbrough, *Quranic Studies: Sources and Methods of Scriptural Interpretation* (Oxford, 1977). Oleg Grabar, *The Mediation of Ornament*, A. W. Mellon Lectures in the Fine Arts, 1989 (Princeton, 1992), esp. Chapter 2, pushed the argument one step further, contending that calligraphy, or fine writing as distinct from ordinary writing, developed in the Islamic lands only in the tenth century.
 35. Estelle Whelan, 'Forgotten Witness: Evidence for the Early Codification of the Qur'an,' *Journal of the American Oriental Society* 118, no. 1 (1997): 1–14.

36. Writing in the tenth century, our earliest source, Ibn al-Nadim, *The Fihrist of al-Nadim: A Tenth-Century Survey of Muslim Culture*, ed. and trans. Bayard Dodge (New York and London, 1970), 11, reports that Khalid ibn Abu'l-Hayyaj was the first to transcribe copies of the Koran during the reign of al-Walid, thereby setting the start of the tradition at the beginning of the eighth century.
37. See Chapter 1 and note 8 for references about the standardization of Chinese script.
38. Hoyland, 'Early Arabic Inscriptions,' 77-8, estimated that there were thousands of such graffiti etched on rocks throughout the central Islamic lands from the 30s/650s onwards. See also Saad A. al-Rashid, *Darb Zubaydah: The Pilgrimage Road from Kufa to Mecca* (Riyadh, 1980) and Robert G. Hoyland, *Arabia and the Arabs: From the Bronze Age to the Coming of Islam* (London and New York, 2001).
39. George C. Miles, 'Early Islamic Inscriptions Near Ta'if in the Hijaz,' *Journal of Near Eastern Studies* 7 (1948): 236-42; Gruendler, *Development of the Arabic Scripts*, E4. The site includes other graffiti, including one in a similar style with Koran 33:56 signed by 'Abdallah ibn Ta'min?', whose picture is now available on the web at <http://www.islamic-awareness.org/History/Islam/Inscriptions/muwinsc2.html>. I thank Jeff Spurr for this reference. This photograph was taken by Karl Twitchell, an American geologist who worked in the Yemen from 1926, and then from 1931 undertook a systematic geological survey of Saudi Arabia. His extensive photographic record includes Yemen and Arabia plus the work of Charles Crane and continues up to the early 1950s. His photographs are now stored at the Harvard Semitic Museum Photographic Archives.
40. There is a vast bibliography on early Islamic coinage. The classic works are J. Walker's catalogues of the coins in the British Museum, *A Catalogue of the Arab-Sasanian Coins*, Catalogue of the Muhammadan Coins in the British Museum (London, 1941) and *Arab-Byzantine and Post-Reform Umayyad Coins*, Catalogue of the Muhammadan Coins in the British Museum (London, 1956). A more recent monograph based on the collection in the Ashmolean Museum is S. Album and T. Goodwin, *Early Islamic Coinage*, Sylloge of Islamic Coins in the Ashmolean (Oxford, 2001). Michael L. Bates, 'History, Geography and Numismatics in the First Century of Islamic Coinage,' *Revue Suisse de Numismatique* 65 (1986): 231-62, revamped the coinage issued under 'Abd al-Malik. See also Sheila S. Blair, 'What is the Date of the Dome of the Rock?' in *Bayt al-Maqdis: 'Abd al-Malik's Jerusalem, Part One*, ed. Julian Raby and Jeremy Johns, Oxford Studies in Islamic Art 9 (Oxford, 1992), 59-88, and the color plates of the dinars in Jonathan Bloom and Sheila Blair, *Islamic Arts, Art and Ideas* (London, 1997), 66-8. W. Luke Treadwell, 'The 'Orans' Drachms of Bishr Ibn Marwān and the Figural Coinage of the Early Marwanids,' in *Bayt al-Maqdis: 'Abd al-Malik's Jerusalem, Part Two*, ed. Jeremy Johns, Oxford Studies in Islamic Art 9 (Oxford, 1999), 223-71, and "'Mihrab and 'Anaza" or "Sacrum and Spear"? A Reconsideration of an Early Marwanid Silver Drachm' (forthcoming) showed that these experiments in visual and epigraphic iconography started already under the Umayyad governor of Iraq, Bishr ibn Marwan. Many of the silver coins (drachms) issued in the east are illustrated in Malek Iradj Mochiri, *Arab-Sasanian Civil War Coinage: Manichaeans, Yazidiya and Other Khawārif* (Leiden, 1986).
41. The usefulness of coin legends is comprised by their brevity, as the short texts do not show all possible variations of letter shapes and combinations.

42. Philip Grierson, 'The Monetary Reforms of 'Abd al-Malik,' *Journal of the Economic and Social History of the Orient* 3 (1960): 241-64.
43. The skill of this design is also clear when one compares the legends on this coin with others issued in the following years, many available in the on-line database of the American Numismatic Society, available at <http://www.amnumsoc.org/search/>. The script on the later coins is not nearly as handsome. The spacing is irregular and the letter shapes are wiggly. They seem to be copies by less expert hands. A study of the paleography on these coins might repay further study, as is the case with Luke Treadwell's careful studies of their figural iconography; Treadwell, 'Orans Drachms.'; Treadwell, "'Mihrab and 'Anaza" or "Sacrum and Spear"'.
The classic publication of the building is K. A. C. Creswell, *Early Muslim Architecture, Vol. I*, 2nd edn (Oxford, 1969), 42-94 and 151-228. The inscription was first read by Max van Berchem, *Matériaux pour un Corpus Inscriptionum Arabicarum II: Syrie du Sud: Jerusalem*, Mémoires de l'Institut Français Archéologique du Caire (Cairo, 1920-7), no. 215 and then re-examined by Christel Kessler, 'Abd al-Malik's Inscription in the Dome of the Rock: A Reconsideration,' *Journal of the Royal Asiatic Society* 3 (1970): 2-14.
45. Oleg Grabar, 'The Umayyad Dome of the Rock in Jerusalem,' *Ars Orientalis* 3 (1959): 33-62.
46. In addition to Kessler, 'Abd al-Malik's Inscription in the Dome of the Rock', see Whelan, 'Forgotten Witness'.
47. Combe, Sauvaget, and Wiet, *RCEA*, nos. 13-17.
48. Paris, Louvre, MAO4087; *L'Islam dans les Collections Nationales*, exhibition catalogue, Grand Palais (Paris, 1977), no. 71.
49. M. Sharon, 'An Arabic Inscription from the Time of the Caliph 'Abd al-Malik,' *Bulletin of the School of Oriental and African Studies* 29 (1966): 369-72; Bloom and Blair, *Islamic Arts*, fig. 29.
50. Berchem, *MCIJ Jerusalem*, nos. 216-17.
51. Convenient introduction in John Lowden, *Early Christian and Byzantine Art* (London, 1997), 256-9.
52. Creswell, *EMA I/1*, 151-228.
53. Edward M. Catich, *Letters Redrawn from the Trajan Inscription* (Davenport, IA, 1961); Edward M. Catich, *The Origin of the Serif: Brush Writing & Roman Letters* (Davenport, IA, 1991 [1968]).
54. See the superb photographs in Saïd Nuseibeh, *The Dome of the Rock* (New York: Rizzoli, 1996).
55. Later documents from Europe show that in the fourteenth century mosaic revetment cost some four times as much as fresco.
56. André Grabar, *L'Iconoclasme byzantin* (Paris, 1957), 63, suggested that the mosaics in the Church of the Nativity in Bethlehem were installed not long after the sixth ecumenical council in Constantinople in 680-1 CE and that the same team would then have turned to the Dome of the Rock in the 690s and the Great Mosque of Damascus in the early 700s. See also Blair, 'What is the Date of the Dome of the Rock?' 69.
57. Nasser Rabbat, 'The Dome of the Rock Revisited: Some Remarks on al-Wasiti's Accounts,' *Muqarnas* 10 (1993): 67-75.
58. C. E. Bosworth, 'Rajā' Ibn Ḥaywa al-Kindī and the Umayyad Caliphs,' *Islamic Quarterly* 16 (1972): 36-80.
59. Al-Nadim, *Fihrist*, 11. Ibn al-Nadim also describes Khalid as 'the man who at the beginning [of Islam] first wrote copies of the Qur'an, being honored for the beauty of his penmanship.'
60. Whelan, 'Forgotten Witness.'

61. If we take the estimate of 2 square meters per day for the typical *giornato* used at Kiev, then it would have taken some thirty days to execute the mosaics in a long band around the Dome of the Rock, based on an estimation of 240 meters in length and some 25 cm high.

CHAPTER FOUR

Early Manuscripts of the Koran

THE MOST FAMILIAR calligraphic specimens that survive from early Islamic times comprise fragments from Koran manuscripts copied on parchment in various rectilinear scripts.¹ These codices are known in Arabic as *masahif* (sing. *mushaf*), from *sahifa* (pl. *suhuf*), leaf or page in a book. Nearly all of these codices have been broken into fragments or individual leaves, which are now scattered in museums and private collections around the world.² Already prized in medieval times, many of these early manuscripts and fragments were preserved in mosques, as in the spectacular cache discovered recently in the Great Mosque at San'a in the Yemen. In 1971 heavy rains caused the west wall to collapse and when it was rebuilt the following year, the space between the ceiling and the roof was found to contain a treasure of written documents, including some forty thousand fragments from more than a thousand Koran manuscripts, seven hundred on parchment in addition to another three hundred and fifty to four hundred on paper.³ They were probably saved because they contained God's word, much as orthodox Jews preserve fragmentary documents lest they bear God's name.⁴

In addition to the Yemeni hoard, François Déroche has identified leaves from some three hundred parchment manuscripts.⁵ Many are now in the Museum of Turkish and Islamic Art, which has probably the largest collection of early Islamic manuscripts and fragments, amounting to over two hundred thousand folios. Many of these had been stored in the courtyard of the Great Mosque of Damascus in Syria until the disastrous fire there at the end of the nineteenth century. For safekeeping, the manuscripts were then removed to Istanbul, capital of the Ottomans who ruled Syria at the time. The finest went to the Topkapı Library, the rest to the Evkaf Museum (literally the Museum of Pious Endowments), later renamed the Museum of Turkish and Islamic Art. Another large collection of fragments preserved at the Mosque of 'Amr in Fustat is now in the National Library (Dar al-Kutub) in Cairo.⁶ Déroche has worked extensively on these early parchment manuscripts of the Koran, and much of what we know about methods of production is the result of his prodigious research.⁷

Shrines were also repositories for fine Koran manuscripts. Manuscripts from the Dome of the Rock in Jerusalem, for example,

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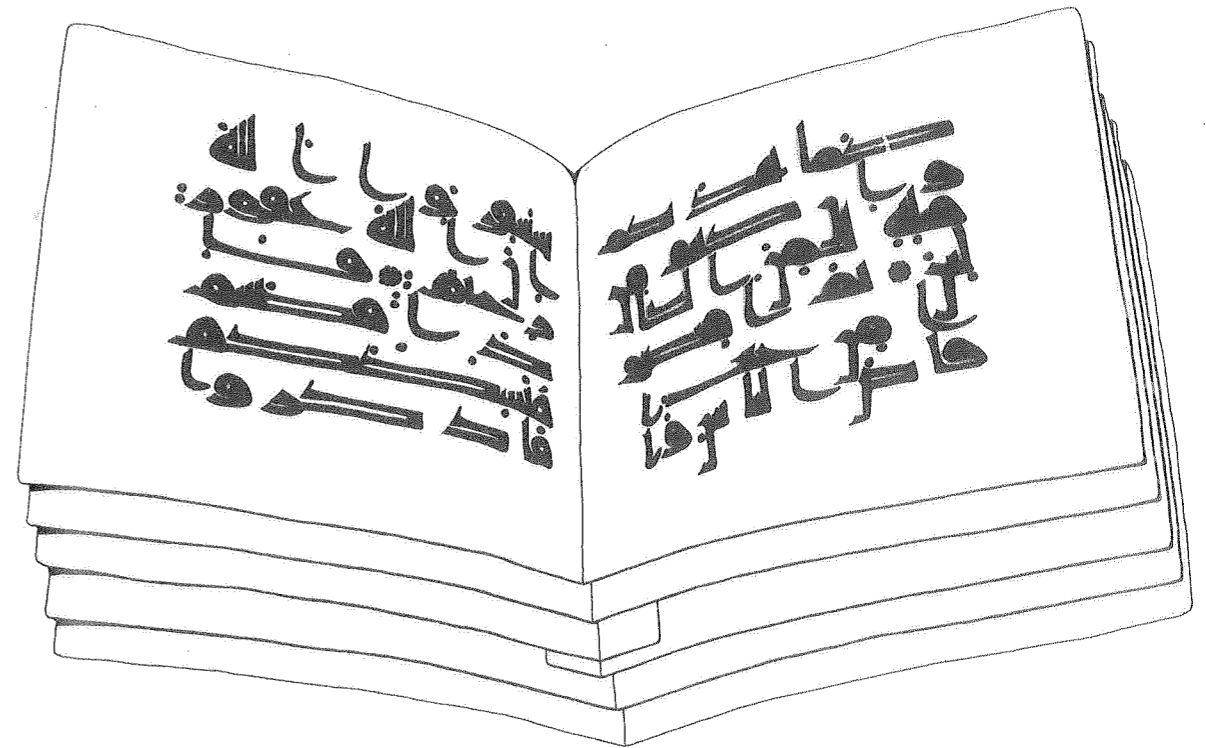
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have been collected in the city's Islamic Museum, which now holds 266 Koran manuscripts.⁸ Shi'ite shrines are another rich source. The Safavid dynastic shrine at Ardabil in Iran possessed at least four hundred fragments, including some fine folios from early manuscripts that have passed to the National Museum in Tehran.⁹ The shrine at Mashhad for the eighth Imam 'Ali ibn Musa al-Rida has a similar collection,¹⁰ and its oldest and most famous Koran manuscript (Figure 1.5) shows how these early fragments acquired particular prestige at certain times.¹¹ The last page of this fragment containing four sections (*juz*' 12-15; Suras 11-18) bears the 'signature' of the Prophet's son-in-law and fourth imam 'Ali ibn Abi Talib. Although added at a later date, the signature was considered authentic in the Safavid period, for the first page of the manuscript bears an endowment notice drawn up in Jumada I 1008/November-December 1599 by Shaykh Baha'i Amili, the leading theologian of the day, attesting to its genuineness. The fragment was part of a substantial gift to the shrine by Shah 'Abbas to bolster his legitimacy, an act that culminated in his famous pilgrimage on foot from Isfahan to Mashhad in the fall of 1010/1601.¹² The Safavids, who claimed legitimacy as descendants of the Prophet through his son-in-law 'Ali and who made Twelver Shi'ism the state religion of Iran, saw these specimens signed by the early imams as bolstering their line. In the same way, copies of the Koran said to have been penned by the Umayyad caliph 'Uthman and even stained with his blood were often deemed relics, cultivated as sites of pilgrimage and visitation, and invoked for aid in times of crisis.¹³

The first section of this chapter summarizes how these parchment Koran manuscripts were made in early Islamic times. The fragments represent a vast corpus of material, none of it signed or dated in the original hand, and the second section discusses different methodologies used to localize and date individual manuscripts and groups. So far, none of these methodologies has allowed us to fix the date or provenance of many manuscripts, and the third section deals with further steps that can help us to do so.

Physical characteristics

Virtually all of these early Koran manuscripts were copied on parchment sheets, typically bifolios, that were assembled into codices.¹⁴ The manuscripts come in two basic formats: vertical ones that are tall and narrow, and oblong ones that are shorter and wider. In modern computer parlance, we might call these portrait and landscape formats. We do not know why these two formats were used. They could represent different centers or schools of manuscript production or different periods of production or both. One likely reason for choosing these two formats is practical: it is this shape (which is really the same but rotated 90°) that makes the most of the animal skin. Déroche established that in many early Koran codices copied on



parchment in angular script, the sum of the folio's height plus its width measures between 30 and 35 cm.¹⁵

The makers of books in the Muslim lands turned this parchment into a codex differently than did their contemporaries in the Christian West, whose techniques have given rise to most of our vocabulary about manuscript production. To make a parchment codex, craftsmen in the Christian West folded the material once (in folio), twice (in quarto), three times (in octavo), or more, thus producing one, two, four, or more sets of bifolios (two, four, eight, or more pages) in a quire, or gathering.¹⁶ As a result of this folding, in an open quire hair sides face hair sides and flesh sides face flesh sides, in the arrangement known as Gregory's rule.

Parchment codices made in the Islamic lands, by contrast, have quires with an uneven number of bifolios, typically five.¹⁷ The uneven number means that the bifolios could not have been obtained by folding a dressed hide. Rather, the sheets of parchment were stacked with flesh sides uppermost and sewn along the crease into a quire (Figure 4.1).¹⁸ As a result, the hair sides are visible on the outside of the quire, and two hair sides are contiguous between quires. When the quire is open, two flesh sides are visible in the center. All the other joins or open spreads within a quire consist of one hair side facing one flesh side (the opposite of Gregory's rule). This practical arrangement had a significant effect on the writing, for

Figure 4.1 Drawing showing the arrangement of a quire, or quire with five folios, used in parchment Koran manuscripts made in the first centuries of Islam.

To take advantage of all the dressed hide available, craftsmen often pieced together bifolios from off-cuts, as in the middle of this quire. The bifolios were then piled in a stack with the flesh sides on the top. When open, any double spread except the uppermost in a quire would have one hair side facing one flesh side.

it means that most double-page spreads, when seen open, are unbalanced, as the hair side is smoother and takes the ink more uniformly than the flesh side (Figure 5.4).¹⁹

It was difficult (and expensive) to turn a single skin into large bifolios, and so parchment workers devised methods to maximize the skin available. They often patched together bifolios from off-cuts by overlapping isolated sheets near the gutter of the quire and treating the patched bifolios as if they were true ones. The typical quinion, or quire of five folios, thus combines true bifolios with bifolios of sheets patched together and inserted symmetrically between them. In this drawing of a hypothetical quinion (Figure 4.1), for example, the middle folio is pieced together of two isolated sheets.

The prepared quires of bifolios were then ready for the calligrapher. In later times a system of lines was often added to the bifolios with a dry point to show the calligrapher where to write. This practice of ruling the page was, by and large, not used in early Islamic times.²⁰ The calligrapher was expected to be proficient at working freehand, relying on his eye to assemble his text on the page. One of the signs of a fine calligrapher in this early period is his ability to write freehand, composing letters set on a straight baseline and uniform in size, without recourse to ruling.

Calligraphers in early Islamic times used a variety of angular hands to transcribe Koran manuscripts. Beginning in the late eighteenth century, Orientalists have used the name *kufic* (French *coufique*) to designate these scripts. The name was introduced to Western scholarship by Jakob Georg Christian Adler (1756–1834), a Lutheran cleric from Schleswig charged with cataloguing the Koranic material in the Royal Library at Copenhagen. The collection comprised only five fragments, and Adler grouped them all under the rubric *kufic*, a term that he had found in the works of the fourteenth century lexicographer al-Firuzabadi and the thirteenth century biographer Ibn Khallikan.²¹ The name refers to Kufa, a city in southern Iraq which was an intellectual center in the first centuries of Islam.

In some ways this choice was unfortunate, for historical sources do not describe the characteristics of the term *kufic*, but use it imprecisely to designate all or many early scripts used to transcribe the Koran. By the beginning of the nineteenth century, Orientalists realized that the term was poorly adapted for the variety of scripts that it might encompass, and some scholars have proposed alternative names for this script. Déroche suggested 'old' or 'early 'Abbasid' script.²² This too is an unfortunate choice, for such an angular script was already used in the late seventh century before the 'Abbasids came to power, as attested by textual sources, numismatics, and epigraphy (see Chapter 2). Rather than introduce yet another name that carries historical or geographic baggage, I have opted to maintain the traditional *kufic*, but it should be taken not as the name of a specific script used at a certain time or place, but as a general rubric for the angular style used in early Islamic times to transcribe the Koran.

After transcription, the quires of bifolios were usually sewn together into a codex and set in a binding that kept the parchment folios flat.²³ Normally, the textblock was attached so loosely to the binding that many covers have become detached from their books, making it difficult to date extant bindings.²⁴ The typical binding comprised two leather-covered wooden boards joined along the back of the volume by a leather spine, with a leather wall the height of the textblock around the three open sides. Pegs or thongs over the front or fore-edge kept the volume closed. Using a variety of stamps and tools, binders often decorated the covers with a wide braided border surrounding an oblong field filled with geometric decoration or an inscription, a design similar to that used on illuminated pages of text.

Methodologies for dating

There is, as yet, no absolute method for dating any Koran manuscript before the ninth century CE. No manuscript contains an authentic colophon with a date. No manuscript contains the authentic signature of a known calligrapher. Some manuscripts are said to have been in the hand of 'Umar, the second caliph, or of 'Ali ibn Abi Talib, the fourth, but Salah al-Din Munajjid proved these claims to be unfounded.²⁵

The most secure type of internal evidence for dating these manuscripts is a notice of pious endowment (*waqfiyya*) or other similar note recording a birth, attestation, or other event, and the earliest of these date to the ninth century. Several scholars have compiled lists of these dated manuscripts; the best is that by Déroche.²⁶ His fifteen Koran manuscripts written in angular script with uniform and regular rectilinear strokes used to draw the letters, especially the horizontals and verticals, can be distinguished from some two dozen non-Koran texts, all written in a round hand that ranges in quality from hasty scrawl to fine calligraphy (see Chapter 5). A good example of the fine Koran manuscripts endowed to a pious foundation in early Islamic times (Figure 4.2) is the one donated by Amajur, 'Abbasid governor of Damascus from 870 to 878.²⁷ It is made of oblong bifolios measuring 13 × 40 cm.²⁸ To maximize the parchment, craftsmen patched together isolated sheets to make bifolios and inserted one or two of these patched bifolios within any quire, which probably consisted of the standard five bifolios. Like many other early Koran manuscripts, the Amajur set was probably bound in leather. A note added to one of the folios tells us that the Amajur Koran originally consisted of thirty parts, and according to an endowment notice at the end of part (*juz'*) sixteen, the manuscript was preserved in two trunks (*sunduqayn*).

The codicology of the Amajur Koran is thus typical, but its calligraphy is not. It is unusually spacious, with only three lines of script per page. It therefore required some two hundred folios for each of the thirty volumes.²⁹ The total manuscript would then have consumed



Figure 4.2 Page containing Sura 2:133 from a parchment Koran manuscript with three lines per page.

This folio comes from one of the few readily datable Koran manuscripts from early times.

The note added at the top of the folio says that it was endowed by Amajur, governor of Damascus. According to two endowment notices, he did so in 262/876. This date provides a *terminus ad quem*, though we do not know how much earlier the manuscript was made. It is written in an unusually spacious script, with only three lines containing some twenty-five letters per page.

the skins of well over three hundred sheep.³⁰ Such an enormous manuscript was obviously expensive. Most manuscripts of this size have many more lines of writing per page and are consequently much shorter books.

The importance of the Amajur Koran lies not only in its size and spaciousness but also in the documentation given in two notices of endowment: one at the beginning of the fourth part is dated Sha'ban 262/April–May 876; another just before the end of the sixteenth part is dated the following month (Ramadan 262/May–June 876).³¹ They provide a *terminus ad quem*, a date by which the manuscript must have been completed, although we do not know how much earlier it had been transcribed. According to one note, the manuscript was endowed in the port of Tyre (now in Lebanon), although the particular mosque or religious foundation is not given. We also do not know how long the manuscript stayed there. Like other manuscripts, it may have been transferred to Damascus for safe-keeping just before the Crusaders arrived in the twelfth century. In the late nineteenth century, most of the Amajur Koran was then moved from Damascus to Istanbul, but other pages went to Cairo. The Amajur Koran shows that manuscripts were peripatetic and that the site of preservation is not necessarily the same as the site of production. Many scholars have assumed otherwise, but Déroche has repeatedly pointed out the error of this assumption.³²

Lacking such an endowment note or other hard evidence like a colophon with names or dates, scholars have turned to other methods to assign date and provenance to these early Koran manuscripts. We can delineate three methodologies they have used, labeled here for the sake of convenience, the textual, the paleographic, and the art historical methods.

The first method used by scholars to localize and group parchment Koran manuscripts was to identify some of the early Koranic scripts from brief textual descriptions. The most famous text cited is the *Fihrist* (Index or Catalogue) written by Abu'l-Faraj Muhammad ibn Ishaq ibn Muhammad ibn Ishaq, usually called al-Nadim (or Ibn al-Nadim) because he was a boon companion (*nadim*) at the 'Abbasid court.³³ Born c. 935, he was the son of a professional book dealer or copyist (*warraq*) and a member of the Shi'ite elite of Baghdad. As a youth, he apparently began work compiling a catalogue of authors and the names of their works for use in his father's bookstore. With age, his interests broadened, and his *Fihrist* includes a great deal of additional material along with his notes about poets and scholars. Instead of the catalogue for a bookshop, it became an encyclopedia of medieval Islamic culture. He completed the work c. 987–8, and after he died in 990, the original copy was probably placed in the royal library at Baghdad.

Ibn al-Nadim's *Fihrist* opens with a section on language and calligraphy.³⁴ In it, he describes the languages of the Arabs and foreign peoples, the characteristics of their ways of writing, and their types of script and forms of calligraphy. He begins with remarks about Arabic writing and then turns to Himyarite script, the one used for an archaic west Arabian dialect. Under that rubric, Ibn al-Nadim mentions that the first of the Arabic scripts was the Meccan, followed by the Medinan, the Basran, and the Kufan. He next gives several characteristics of the first two types: in their *alifs* there is a turning of the hand to the right and an elevation of the ascenders, and in their form a slight incline.³⁵ Ibn al-Nadim then moves to scripts used to transcribe the Koran and names some copyists who were famous for doing so, including Khalid ibn Abi'l-Hayyaj, the person who designed mosaic inscriptions for the Umayyad caliph al-Walid (see Chapter 3).

In the mid-nineteenth century the Sicilian orientalist and statesman Michele Amari (1806–89) already used this brief section of Ibn al-Nadim's text to identify examples of Meccan script.³⁶ This script later became known as *ma'il* (leaning) after the next passage in the *Fihrist*, in which Ibn al-Nadim enumerates the scripts used to copy the Koran. This term, found in Gustav Flügel's Arabic edition of the *Fihrist* published in 1871, however, was based on a corrupt manuscript of the text. The word Ibn al-Nadim actually used was *munabadh* or *munabidh*. Derived from the root *nabadha* (fling or cast away), *munabadh* or *munabidh* is a participle from the third form (separate or secede) and is of unclear vocalization and meaning.³⁷

The *ma'il* script was then renamed *hijazi* after the region of north-west Arabia where both Mecca and Medina lie. Déroche, noting the variety of styles within the small number of manuscripts identified as written in *hijazi*, divided the category into four sub-types, the second of which included manuscripts formerly designated as *ma'il*.³⁸ The *hijazi* script is usually considered the earliest type of Arabic writing known and dated to the first and second centuries of the hijra (seventh and eighth centuries CE).

Estelle Whelan, in a seminal article written shortly before her untimely death in 1997 but unfortunately still unpublished, rebutted the arguments for the identification of *hijazi*, arguing that it was largely a scholarly artifact based on a series of methodological missteps.³⁹ In addition to the problems of interpreting the brief passage from the *Fihrist*, she pointed out two methodological errors. First, the characteristics of a single letter (in this case, the *alif*) is insufficient to define a script. Second, and more importantly, in this crucial passage about Meccan and Medinan scripts, Ibn al-Nadim was not talking about Koran manuscripts, but rather describing the earliest Arabic writing in general. In the earliest known copy of the text – a manuscript that was compared with the original in the author's handwriting, one that may well have been made under the author's supervision using the same style of script and page layout, and one that later belonged to the famous Mamluk historian al-Maqrizi – the text to illustrate the passage (Figure 4.3) shows the basmala, or invocation to God, in a rounded hand.⁴⁰ Such a script might have been used for regular correspondence or even for copying non-Koranic texts, but it was not the angular script used to calligraph Koran manuscripts. Only in the following section does Ibn al-Nadim describe Koranic scripts, including a Meccan, probably three Medinan, a Kufan, a Basran, and eleven or twelve other varieties or subvarieties, including the mysterious *munabidh*. Ibn al-Nadim makes no connection between the regular Meccan and Medinan scripts, with their tall *alifs* and slanted forms, and the scripts used for copying the Koran. Writing some three centuries after the events, Ibn al-Nadim may have been mistaken about some details of the earlier history of writing, but he made every effort to distinguish the categories he thought he knew. His text, though the most explicit, is too vague to be much help in identifying different scripts used for early Koran manuscripts.⁴¹

A second approach to assigning provenance to these early Koran manuscripts is paleographic. On the basis of minute variations in letter forms, manuscripts are grouped according to perceived similarities between the forms and the groups arranged in a sequence implying chronological development. French scholars, particularly Déroche, have pioneered this inductive approach, which is well illustrated in the lavish catalogue of the many fragments from Koran manuscripts in the Khalili Collection in London.⁴² Déroche followed the methodology used in Western paleographic studies, but the large number of homographs or similar letter shapes in Arabic led him to

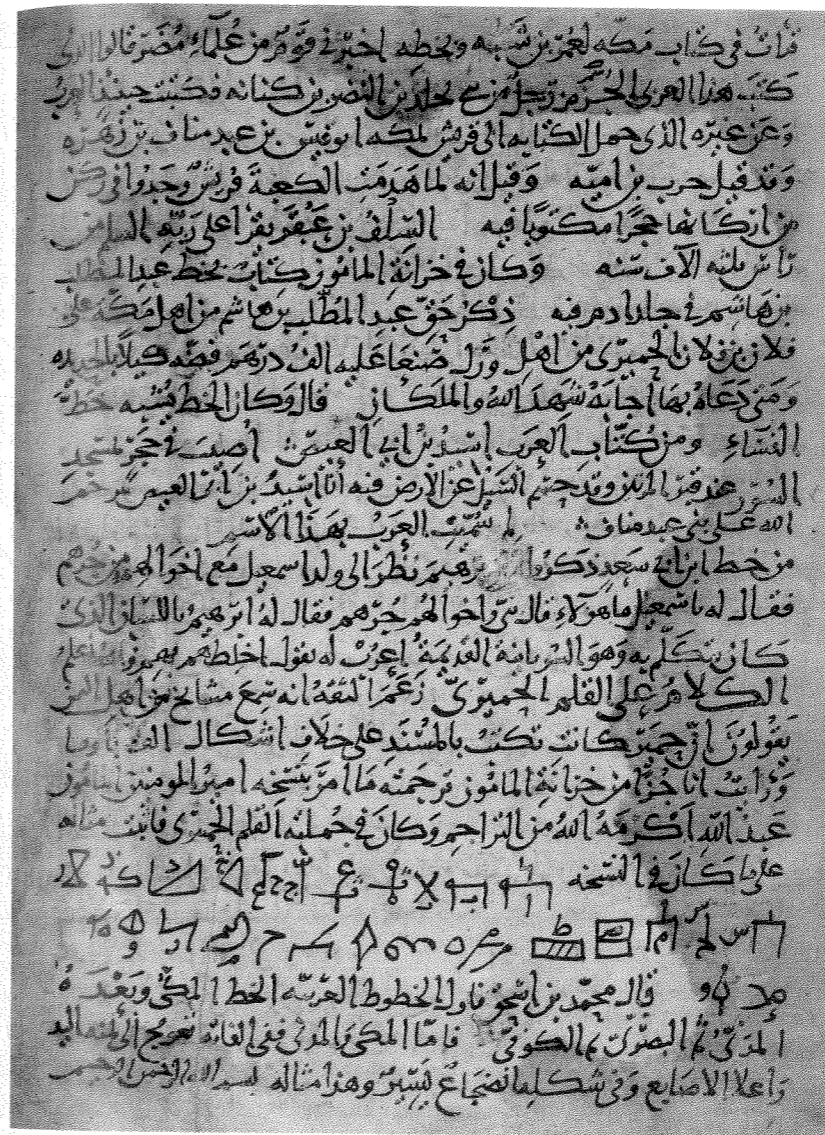


Figure 4.3 Example of Meccan/Medinan script from Ibn al-Nadim's Fihrist.

This copy of Ibn al-Nadim's *Fihrist*, one of our earliest sources on calligraphy, was made soon after the author's death in 980 and compared with the original draft. The text, which describes the first of the Arab scripts from Mecca and Medina, whose *alifs* turn to the right and have tall ascenders and whose forms are slightly inclined, includes this calligraphic specimen (see detail).



Figure 4.3a

select six letter forms (independent and final *alif*, medial 'ayn/ghayn, final *mim*, final *nun*, and medial *ha'*) as criteria. He also took into account several general considerations such as the overall appearance of the script, the connections between letters, and the relationship between thick and thin strokes.

The paleographic method presents problems as well. Nowhere is it demonstrated that the criteria chosen reveal significant differences in scripts, not just variations of an individual hand. The lack of clarity in defining styles is clear from the high number enumerated: Déroche identified at least nineteen variants among the seventy examples of what he called early 'Abbasid scripts in the Khalili Collection, with

some manuscripts identified as a combination of styles.⁴³ By focusing on isolated forms, this method also overlooks one of the peculiarities of Arabic script: the changing forms of the letters, which can assume different shapes and heights depending on the other letters in a word. It also excludes the information supplied by other features of the written page, ranging from the *mise-en-page*, or layout of the page, to the decoration, the relation between text and display scripts, and the overall aspect. In many ways, the paleographic method seems to have raised more questions than it has answered.

The problems with using such a method are compounded when the categories so designated become the basis for further arguments. In his groundbreaking catalogue of the fragments from early Koran manuscripts in the Bibliothèque Nationale, Déroche separated the manuscripts into groups, but by the time he catalogued similar folios in the Khalili Collection a decade later, he had assigned dates to these groups, which he assumed to be ordered chronologically.⁴⁴ The group he had designated as *hijazi*, he suggested, dated to the seventh and early eighth centuries on the basis of Ibn al-Nadim's brief description and the similarities to monumental inscriptions from sixth century Syria.⁴⁵ According to this argument, the *hijazi* style therefore predated his other groups (A-D), which he designated as early 'Abbasid. Déroche then took these dates as firmly established and assumed that the differences in letter shapes in different groups could be taken as an indication of chronological evolution. In later works he fitted individual letter shapes and the evidence from physical testing into this chronological framework. His methodology thus favors linear development over regional variation, though the means of transmission of a single style across wide distances is not specified.

The third method that has been used to classify early manuscripts of the Koran – and the one that I think holds the most promise – is art historical. Its main proponent is Whelan, who used traditional art-historical methods to distinguish two groups of early Koran manuscripts written in angular script.⁴⁶ She began by noting that in these early manuscripts the text is not written in words and phrases like modern Arabic, but rather in groups of connected letters that are separated by spaces (see Figure 1.5 for an example). These spaces form the basic skeleton of the page.

Five other features underscore the importance of this skeleton. First, the letters and connecting lines are written in broad uniform strokes. This arrangement allows for certain flexibility in writing connecting lines and horizontal letters such as *dal* and *sad*. Third, this flexibility lends itself more to extension than to contraction. Fourth, words (but never connected groups of letters) are freely divided between lines, regardless of pronunciation or sense. Finally, as Whelan pointed out, the letters can assume different shapes in different positions or combinations. By analyzing letter bodies alone, the main feature of the paleographic method, these relations between letters are overlooked.

Whelan then enumerated several of these important relations between letters. The letter *alif* sets the upper limit of each line, but the other letters can vary depending on which letters they are connected with. Looped letters are generally designed in proportion to *alif*. An additional method for fitting the text to the page involves the letter *ya'*, which could have a long tail extending to the right. When a word ended in final *ya'*, the calligrapher often left a wider space between groups of letters so that the tail of the *ya'* could extend backwards across the gap.

To test her theory, Whelan distinguished two groups of manuscripts with opposite characteristics, using a typical manuscript with an established provenance to exemplify each group.⁴⁷ Her Group 1 (Figure 4.4) is exemplified by a manuscript with five lines per page (average dimensions 13 × 22.5 cm) that is divided between several institutions, some of which have held the pages since 1655.⁴⁸ Group 2 (Figure 4.5) is exemplified by a large manuscript with twenty lines per page (average dimensions 40 × 31 cm) that is known to have been in the Egyptian delta before 1905 and is now in the Chester Beatty Library.⁴⁹ It bears an eighteenth century note saying it was considered to have been written by the third caliph 'Uthman, making it one of a handful of manuscripts spuriously attributed to his hand.⁵⁰

Whelan also enumerated other manuscripts with similar characteristics that belonged to the two groups. Group 1, for example, includes another manuscript with nine lines to that page and an endowment notice saying that the thirty-part codex was given to the Great Mosque of Damascus in Dhu'l-Qa'da 298/July 911 by 'Abd al-Mun'im ibn Ahmad.⁵¹ Her criteria show that the Koran endowed by Amajur (Figure 4.2) also belongs to this group. Group 2 includes a fragmentary manuscript discovered in San'a that has an extraordinary double frontispiece showing an architectural scene.⁵²

These two groups differed, first of all, in format and layout. Manuscripts in Group 1 (Figure 4.4) are horizontal (landscape) and relatively small, with an odd number of lines per page, whereas those in Group 2 (Figure 4.5) are vertical (portrait) and relatively large, typically with an even number of lines per page. Those in Group 1 are divided into parts (*ajza'*) and have liturgical divisions and regular markers for verses or groups of verses. On the page illustrated here (Figure 4.4), for example, a gold rosette marks the end of single verses, as in the last verse of Sura 31 at the end of line two. On other pages, a gold *ha'*, the alphanumeric for five, marks the end of five verses; and a large gold circle, representing zero, marks the end of every ten verses. Manuscripts in Group 2 do not have such divisions. Rather, individual verses are marked by groups of four or five very thin diagonal strokes written in the same ink as the text. Groups of five and ten verses were sometimes marked by crude circles, as in the red-orange circle marking verse fifty on line six of the page illustrated here (Figure 4.5). These circles were clearly added after the text was transcribed, but we do not know when.⁵³

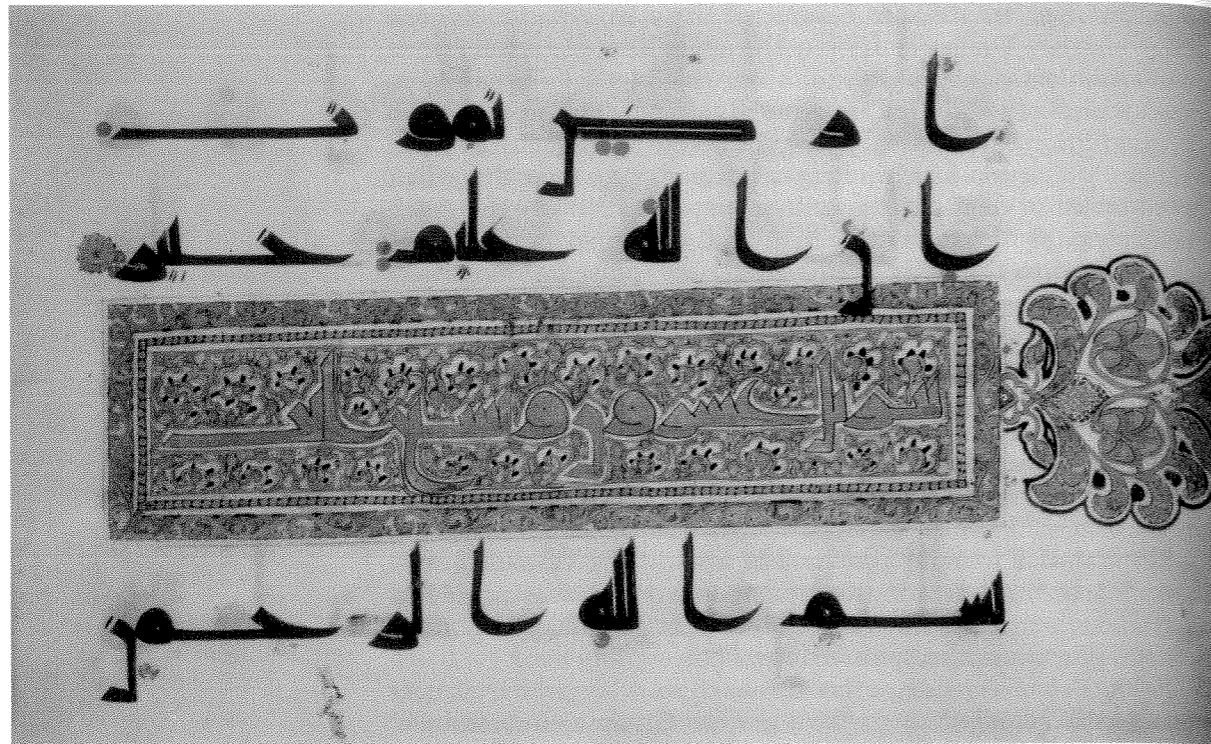


Figure 4.4 Page containing Sura 31:34–32:1 from a parchment Koran manuscript with five lines per page. The horizontal format, odd number of lines, wide spacing, attenuated and elongated letters, elaborate chapter heading, and uniform strokes make this folio the classic example of Whelan's Group 1. Such chapter headings are always added in a different script or color from that used to pen the text to show that the headings are not part of the original revelation. Folios from this manuscript in the Bodleian Library were examined by Yasin Dutton, who showed that the red dots were used for vocalization and green dots for variant readings.

The chapters are also separated in different ways. Manuscripts in Group 1 have chapter headings painted in gold, sepia, and dark brown, with occasional touches of green, and titles in gold with reserved contours. The one illustrated here (Figure 4.4), a gold rectangular band with palmette projecting into the margin, is typical. Instead of openings or titles, manuscripts in Group 2 have polychrome decoration without gold at the end of the chapters, as the one marking the end of Sura 34 painted in blue, green, red, white, and yellow in the middle of this page (Figure 4.5). These are often squeezed into the text so that they impinge on the very bottom or surround a word or two of the last line of text. In both cases, however, the chapter separators are drawn with a dry point, although the text is written freehand.

The interrelation among letters is also distinct in each group of manuscripts. Manuscripts in Group 1 have taller vertical letters and fairly wide spacing between lines, whereas those in Group 2 have squatter vertical letters and tighter line spacing in which ascenders

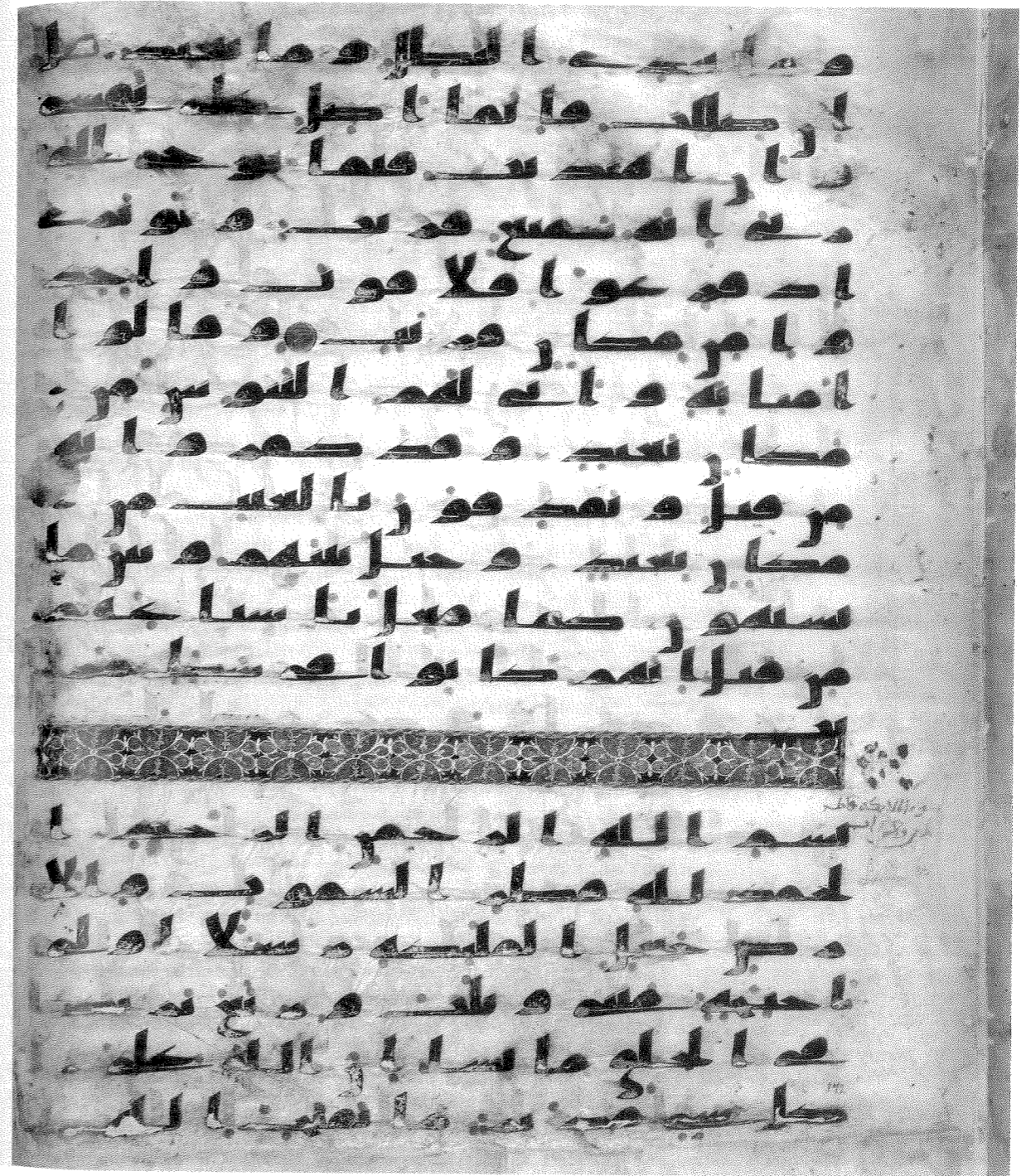


Figure 4.5 Page containing Suras 34:49–35:2 from a parchment Koran manuscript with twenty lines per page. The vertical format, even number of lines, tight spacing, squat letters, lack of divisions, and illuminated chapter ending made this folio the classic example of Whelan's Group 2.



Figure 4.4a



Figure 4.4b

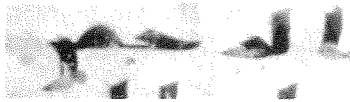


Figure 4.5a



Figure 4.5b



Figure 4.5c

and descenders sometimes impinge on another line, forcing frequent adjustments to the spacing, as in line ten, where the calligrapher had to put an extra long connector before the *lam* in *wa-hila* to avoid touching the descending *nun* of *wa-yaqdhifuna* from the line above. In Group 1 manuscripts (Figure 4.4a), the strokes and connectors are uniform in width. In Group 2 manuscripts, however, the stroke used for the baseline is thinner than the one used for the bodies of the letters, as in the connector between *ha'* and *mim* in the word *al-rahman* (Figure 4.5a).

Whelan also distinguished different forms of individual letters. For example, the tails of *qaf* and *ya'* differ. In Group 1 manuscripts, the tail of *qaf* is shaped like a small *dal* (Figure 4.4b), and *ya'* can have any of three tails: a *dal*-shaped tail like the one used for *qaf*, a deep angular tail like the final *nun* in a word such as *al-rahman*, or a longer stroke that returns to the right. By contrast, in Group 2 manuscripts the tail of *qaf* is shaped like a sickle (Figure 4.5b) and *ya'* can have only one of two tails, occasionally like the one on final *nun*, but typically one that returns to the right, as in the last two words in lines two and three on the page (Figure 4.5). The upper stroke of *jim* is curved in Group 1 manuscripts, but straight in Group 2. Compare the *ha'* in *al-rahman* from the basmala in the last line of (Figure 4.4a) with the same phrase on the top line of (Figure 4.5a). In both groups, connecting letters preceding *jim* are raised on a secondary baseline. This was always the case in Group 1 manuscripts, but in Group 2 manuscripts the letters are sometimes connected differently to maintain a uniform baseline that is bisected by the descending diagonal stroke for *jim*, as in the word *ajnihatin* from the third line up from the bottom (Figure 4.5c).

Based on her findings, summarized in a table (Figure 4.6), Whelan concluded that both groups were made by professional copyists for use in mosques. Manuscripts in Group 1, with their division into parts and liturgical aids, were meant for recitation; manuscripts in Group 2, of monumental size, were designed to be set on the large reading stands known as *kursis*. Both groups were thus to be distinguished from other Koran manuscripts, notably those written on paper in so-called broken cursive, which she connected with the chancery tradition (see Chapter 5).

The differences between two groups of Koran manuscripts, she further argued, were more consonant with geographic rather than chronological divisions. In other words, she argued, these two groups were produced not at different times but in different centers. She connected Group 1, with its interest in such liturgical matters as dividing the text into sections (*ajza'*) and prominently marking the ends of verses, with the Hijaz or Iraq, particularly the latter, the two areas where these subjects were of greatest concern. Group 2, she felt, reflected a school of copyists who were not as interested in the same set of textual and liturgical issues.

To resolve the problem of attribution, Whelan wanted to turn to an examination of the decoration used in the two groups of manuscripts.

Distinguishing Features of Two Groups of "Kūfic" Qur'ān Manuscripts

group 1	group 2
horizontal format	vertical format
relatively small format	large format
divided into <i>ajza'</i>	not divided into <i>ajza'</i>
illuminated <i>sūrah</i> openings in gold, sepia, and dark brown (occasionally with the addition of green), with titles in gold with reserved contours	polychrome ornamental <i>sūrah</i> endings without gold and with no titles; some gold in frontispieces and borders of opening pages of Qur'ān (one surviving example)
liturgical divisions and verse groups marked	liturgical divisions and verse groups not marked
odd number of lines per page	even numbers of lines per page
fairly wide line spacing and taller vertical letters	tighter line spacing and squatter vertical letters
generally uniform stroke for letter bodies and connecting lines	base-line stroke slightly thinner than stroke for letter bodies
tail of <i>qāf</i> in form of small <i>dāl/dhāl</i>	tail of <i>qāf</i> sickle-shaped
<i>yā'</i> with any of three tails	<i>yā'</i> with either of two tails
upper stroke of <i>jīm/hā'/khā'</i> curved; preceding connected letters always raised on secondary base line	upper stroke of <i>jīm/hā'/khā'</i> straight

Unfortunately, she had only begun the second part of her article before her untimely death, so we do not know what evidence she had adduced about ornament and what center(s) she proposed for her Group 2 manuscripts.⁵⁴ In the brief introduction, however, she already brought to light some chronological considerations by comparing the scripts used in the manuscripts of her Groups 1 (Figure 4.4) and 2 (Figure 4.5) with the script used in the mosaic inscription at the Dome of the Rock (Figure 3.7). All three share many features. They all have the same aspect, with a uniform broad stroke for letter bodies, approximately uniform spaces between groups of connected letters, flexibility (usually expansion) of the baseline between letters, short thin strokes for diacriticals, varying heights of toothed letters, and standard dimensions for looped letters. They also share certain letter forms, including *alif* with right-turning foot; final *mim* with a horizontal rather than a vertical tail; medial *ayn* as an open V on the baseline; *ha'* as a single loop in isolated or final position, but a teardrop bisected by a diagonal line in initial or medial position; *dāl* with an upper stroke that is hairline-thin and diagonal; and isolated *ba'* that begins with a slightly curved stroke. Internal relations are the same as well: the tails of *sin* and *sād*, for example, are identical to those of final *nun* within each tradition.

Nevertheless, she noted several differences between the script used at the Dome of the Rock and that found in early Koran manuscripts. In the Dome of the Rock inscription, *mim* is a circle centered on the baseline, whereas in early Koran manuscripts the loop of *mim* sits on the baseline (see Figures 4.4a and 4.5a). Furthermore, the inscription on the Dome of the Rock maintains a single baseline, which is

Figure 4.6 Table of Whelan's Group 1 and 2.

This table summarizes the differences in the two styles of early Koran manuscript distinguished by Estelle Whelan.

bisected by the straight stroke for *jim*. This is sometimes the case in Group 2 manuscripts (Figure 4.5c), but more often the letters preceding *jim* are raised to a secondary baseline, the situation that always pertains in Group 1 manuscripts. Furthermore, in the Dome of the Rock, final *ya'* has only one tail: in all thirty-five cases, it returns to the right. While this tail is typical of Group 2 manuscripts, the tail of final *ya'* there can also end like final *nun*,⁵⁵ and in Group 1 manuscripts, final *ya'* can also have a third tail shaped like a *dal*. The Dome of the Rock inscription also uses the sickle-shaped tail on *qaf* found in Group 2 manuscripts (Figure 4.5b) rather than the *dal*-shaped tail found in Group 1 manuscripts (Figure 4.4b). Whelan therefore argued that the Koran manuscripts of both Groups 1 and 2 belong to the same calligraphic tradition as that represented by the mosaic inscription in the Dome of the Rock, but show a greater evolution within the type as attested by features such as the secondary baseline and the multiple tails, found especially in Group 1 manuscripts.

Considerations for further study

Even without knowing Whelan's final conclusions about the localization of manuscripts in her two groups, it is clear that she has brought out many significant points for studying these early Koran manuscripts. Most importantly, she showed that the manuscripts themselves have much information to yield. In this sense, art-historical investigation runs parallel to (and often incorporates) paleographic analysis. In contrast, textual sources are not very helpful in studying early Koran manuscripts.⁵⁶ The texts were manuals drawn up to provide clerks or secretaries *kuttāb* (sing. *katīb*) in the 'Abbasid chancery with a set of rules for the practical details of their profession. In his handbook for secretaries, the tenth-century *littérateur* al-Sulī specifically cautions secretaries to take a middle course, avoiding the extremes represented on the one hand by the careless work of commercial copyists and on the other by the artistry of professional calligraphers who used their skill to adorn Koran manuscripts, special state documents, and royal correspondence.⁵⁷ These manuals do not, therefore, have much bearing on early Koran manuscripts.

Whelan used several examples from the *Kitāb al-Kuttāb* by the grammarian Ibn Durustwayh (850–947) to drive home the point that these secretarial treatises do not apply to Koran manuscripts penned in angular script.⁵⁸ Ibn Durustwayh expressly exempts Koran copying from the principles of orthography and writing that he sets forth in his manual. He notes that letters were given different shapes in the scripts used by copyists of Koran manuscripts (*masahif*), other copyists (*al-warraqun*), and secretaries (*al-kuttāb*). Whelan gave the example of final *ya'*. Ibn Durustwayh says that its tail should not extend backwards beyond the limit of the letter group to which it belongs. This principle was clearly violated when copying the Koran. Ibn Durustwayh must have known about such examples; otherwise

he would not have condemned such usages. The grammarian also cautions secretaries not to break words between lines, and his compatriot Abu Hayyan al-Tawhīdī (d. after 1009–10) warns them not to use tannin-based brownish ink, both features standard in parchment Koran manuscripts.⁵⁹ Thus, Whelan proved that these scribal manuals, used extensively by Nabia Abbott and other advocates of the textual approach, will not provide much information about Koran manuscripts.

While textual sources are not much help in dating and localizing these early Koran codices, several features of the manuscripts themselves may be. One is codicology. Although Déroche found that among the early parchment manuscripts in the Bibliothèque Nationale, the typical manuscript is composed of quinions,⁶⁰ some manuscripts had different sorts of quires. One manuscript in the Bibliothèque Nationale (ms. Arabe 328a), for example, had quaternions (quires with four bifolios), in which the order of the hair and skin sides varied.⁶¹ Since Déroche considered this manuscript was in *hijazi* script and therefore datable to the late seventh or early eighth century, he concluded that in this early period the composition of the quire varied.⁶² More study might determine whether quire composition was a distinctive feature of certain groups of manuscripts made at particular times or places. Quaternions also occur, for example, in the type manuscript for Whelan's Group 1 (Figure 4.4) and in a large fragment from a horizontal-format Koran manuscript with seven lines in the National Museum in Tehran.⁶³ In later times, the arrangements of quires also differed in different places. The ternion, for example, was particularly popular for Koran manuscripts made later in the Maghrib.⁶⁴

Another avenue of investigation that might be pursued in the manuscripts themselves is decoration. Some preliminary attempts have been made to analyze the decoration of individual manuscripts, particularly the trove found in San'a, including the large one that has an architectural frontispiece.⁶⁵ In general, however, the methodology for these analyses is weak, for the range of comparative material is limited to the Umayyad period to which the manuscripts are *a priori* thought to belong. No comparative material is taken from a broader chronological or geographical range to establish that different motifs were used at other times or places.

Whelan examined one element of decoration – the wording of verse numbers given in *sura* headings often used in Group 1 manuscripts, and her analysis showed how revolutionary such information can be. The number of verses is always written out in words, but in Group 1 manuscripts the count is given in an unusual descending sequence of hundreds, tens, and units. The chapter heading from the page illustrated here (Figure 4.4) gives simply *tanzil* (revelation) rather than given the usual name *Sajda* (Prostration; Sura 32), followed by the information that it contains twenty and nine verses (*'ashrun wa tisa' ayat*).⁶⁶ Such a descending numerical sequence is contrary to standard Arabic usage, in which numbers are given in ascending order of

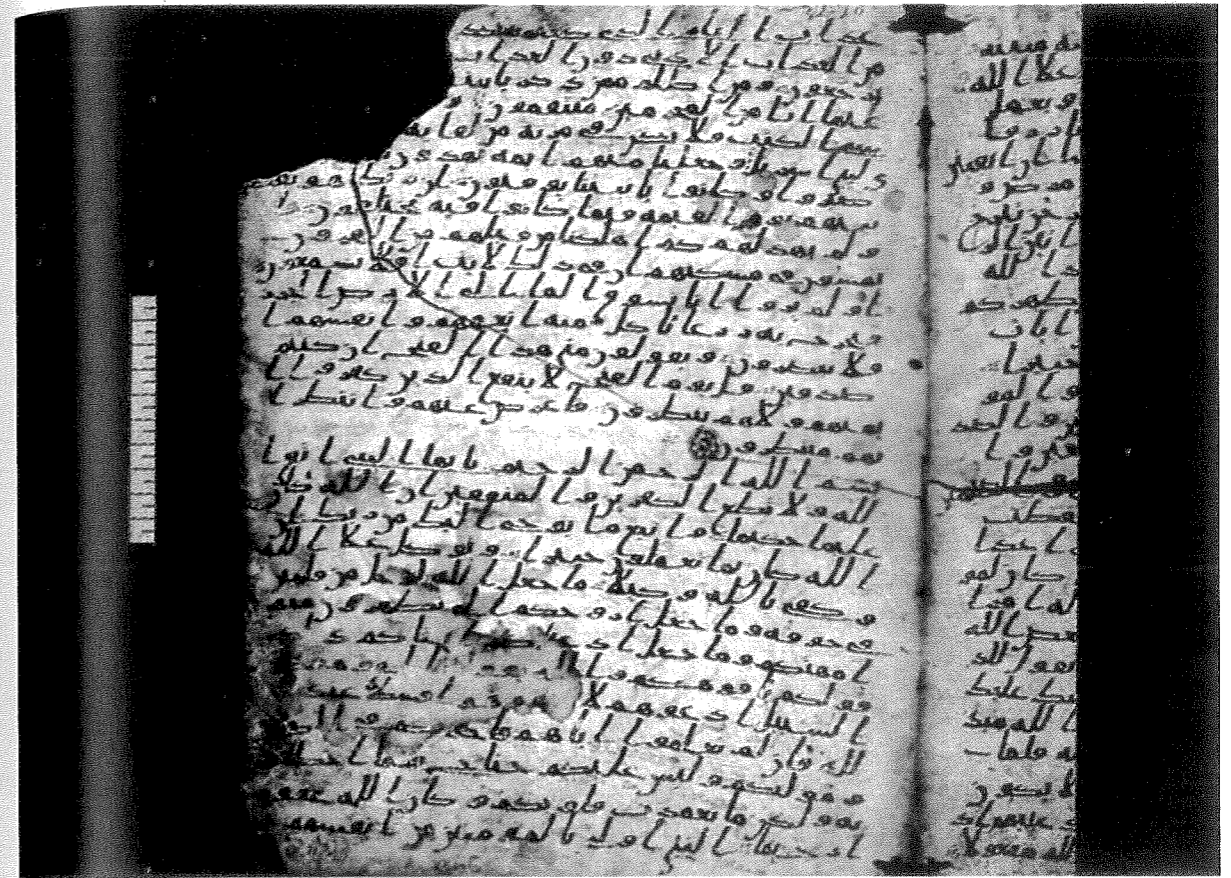
units, tens, and hundreds. This unusual sequence of numbering was, however, standard in most Semitic languages spoken in Arabia and was probably used before the codification of Arabic grammar in the ninth and tenth centuries. Whelan pointed out that it would have been difficult to revive an archaic system once it had died out. Rather, she argued, such an archaic system must have been in continuous use, and therefore the manuscripts in Group 1 with *sura* headings and verse counts given in an unusual sequence of numbers might represent some of the oldest.⁶⁷

Whelan's analysis of the numbering system used in chapter headings thus reversed the traditional chronological arrangement of Koran manuscripts based on decoration that had been established by Adolf Grohmann and others in the early twentieth century.⁶⁸ According to this arrangement, which has been generally but uncritically accepted,⁶⁹ manuscripts lacking ornamental divisions between *suras* were considered the earliest. These were assumed to have been followed by Koran manuscripts with purely ornamental divisions at the ends of the *suras* and then later by Koran manuscripts with ornamental headings containing the written titles of the *suras*.

This new ordering of manuscripts, in which those with ornamental bands may be among the earliest, finds support in one of the fragmentary manuscripts discovered in San'a (Figure 4.7).⁷⁰ The fragment is a palimpsest, a parchment from which the writing has been scraped to make room for another text. The recto of the folio illustrated shows twenty-nine lines of tall, slanted script written on very tall sheets of parchment measuring 37 × 28 cm. A rosette in the middle of the page marks the end of Sura 32 (*Sajda*, Prostration). The introductory basmala of the next *sura* begins at the extreme right of the following line, without any space for an ornament.

The text in dark-brown ink has been written on top of another text in light-brown ink, which is partially visible at the bottom of the folio. Although difficult to decipher, the earlier text has also been identified as Koranic. It is written in a similar style of script, but the letters are more strongly inclined and have deeper curves. What is interesting for us is that the earlier text contains an ornamental band, faintly visible at the bottom of the page between lines 26 and 27 of the later text. The palimpsest proves that manuscripts with decoration between *suras* could pre-date those without. We have no idea of how much time elapsed between the transcription of the two texts, but it could have been quite a while: the Codex Arabicus in the Monastery of St Catherine at Mt Sinai was reused four times over a period of some five centuries.⁷¹

Both codicology and decoration of manuscripts are areas of investigation that can be pursued by art historians, but other topics require the expertise of different specialists, particularly scholars of the Koran and the rise of the Arabic language. One potentially fruitful avenue of investigation is the thorny question of vocalization and variant readings, a topic of fierce debate from the first centuries of



Islam to the present.⁷² Ibn al-Nadim listed eleven different works on the disagreement among codices (*ikhtilaf al-masahif*). In attempt to put an end to these arguments, Ibn Mujahid (d. 936), a Baghdadi scholar who was renowned for his study of the subject, composed a book on the seven accepted readings – one each from Medina, Mecca, Damascus, and Basra, and three from Kufa. Although widely cited, his treatise did not end the discussion. Other readings were also accepted, and scholars began to speak of the 'three after seven' and then 'four after ten.'

The Koran manuscripts in kufic bear witness to the variant readings and the struggle for uniformity in this early period.⁷³ Like the inscription in the Dome of the Rock, the manuscripts are written in the so-called *scriptio defectiva*, in which only consonants are written, and many are vocalized with dots, primarily red, green, yellow, and blue. Yasin Dutton, one of the few scholars to have studied these dots, found eight different patterns, ranging in complexity from no dots to dots of four colors.⁷⁴ For example, the folios he examined in Bodleian Marsh 178, the manuscript that Whelan had used to exemplify her Group 1 (Figure 4.4), had, as did half of the manuscripts that he considered,

Figure 4.7 Page containing Suras 32:20–33:6 from a parchment Koran manuscript with twenty-nine lines per page found in the Great Mosque at San'a.

The page is a palimpsest: the ornamental band and letters of the earlier text are visible in the bottom left. This page shows therefore that Koran manuscripts decorated with ornamental bands could pre-date those without such bands, thereby upsetting the common assumption of chronological development from plain manuscripts to those with ornamental bands for chapter headings.

both red and green dots. Red was used for normal purposes, that is, for short final vowels, *tanwin*, *hamzas*, and certain initial and/or medial vowels. Green dots were used for variant readings, either the seven or ten accepted readings or the four further 'irregular' (*shadhdh*) readings, and for other grammatical reasons.⁷⁵ In addition, red and green dashes were used for consonantal variants (e.g., *ya'* instead of *ta'*).

Dutton concluded that in early Koran manuscripts red dots were used for three major purposes – to mark vowels, *hamza*, and *shadda* – and occasionally for other purposes, such as *imala*. Green dots were used in two main, usually exclusive, ways: to mark *hamzat al-qat'* (disjunctive *hamza*) or for variant readings. Yellow dots were used to mark variants, either all variants when green dots were used for *hamza* or secondary variants when green dots were used to indicate variants within the accepted seven or ten. The yellow dot used to mark *hamza* – a feature that al-Dani (d. 1052), a lawyer and Koran reader born at Córdoba, notes as typical of Medina and the Maghrib – did not occur in Dutton's sample from the Bodleian, although he did find it in other published manuscripts such as BL Or. 11562A and the fragmentary Vatican 1605. Typical of later Koran manuscripts from the Maghrib, this feature also occurs in one copied in Palermo in 372/982–3 (Figure 5.4). Blue dots marked yet more variant readings: used in combination with green and yellow dots, they mark a third set of variants. Blue dots used to mark *hamzat al-wasl*, another feature mentioned by al-Dani as common among the vocalizers of al-Andalus, did not occur in Dutton's sample, though he found them too in the Palermo Koran as well as later manuscripts from the Maghrib.

Although based on a small sample, Dutton's study led to several preliminary observations. The differently colored dots were used to highlight variant readings. These dots indicated that irregular variants were treated as seriously as canonical readings, suggesting therefore that these manuscripts may date from the time before the seven, ten, or fourteen readings were fixed. Dutton was also able to identify several different readings. The reading of the Damascene Ibn 'Amir, for example, was used in a large vertical-format manuscript that is often reckoned to be one of the earliest copies to survive and a prime example of the 'hijazi' script.⁷⁶ The most popular reading was the one by the Basran Abu 'Amr. Now common in Africa,⁷⁷ it was widespread in medieval times, as in the famous copy penned by Ibn al-Bawwab at Baghdad in 391/1000–1 (Figure 5.8). Abu 'Amr's reading was used in three of the manuscripts Dutton examined, all of which shared several other features, such as the use of green dots used for *hamza* and the Basran numbering system of verses. Finding such a cluster of features may be the basis for establishing distinct traditions of Koran readings, if not places or dates of manuscript production. These studies of vocalization and readings need to be combined with art-historical analyses of the kind begun by Whelan.

Space allows us here to examine just two examples to show how the pointing and vocalization systems used in these early copies of

the Koran can help localize manuscripts, in this case to the Maghrib. These examples give a good idea of the kind of information that can be derived from such study and show how this information can be combined with other methodologies to group these early and undated Koran manuscripts. It may well be possible to extend these kinds of analyses to other areas and other groups of manuscripts, but further work, combining the expertises of different types of scholars, is clearly needed.⁷⁸

Manuscripts made in the Maghrib are said to have orange dots to mark disjunctive *hamza* and green dots for connective *hamza*. The eleventh-century expert al-Dani reports that vocalizers in al-Andalus commonly mark *hamzat al-wasl* by putting either a green or a blue dot near the *alif*.⁷⁹ This system was already in operation by the ninth century, for al-Dani notes that he himself had seen a Koran manuscript transcribed in 227/842 by Hakim ibn 'Imran al-Naqit, a vocalizer from al-Andalus, that had red dots for vowels, green dots for connective *hamza*, and a thin red line for vowels of liaison, *sukun*, and *shadda*.

This system of dotting is found on pages (Figure 4.8) from a dispersed Koran manuscript transcribed in dark-brown ink on parchment with three lines per page.⁸⁰ The text is penned in a distinctive stately hand in which the elongated bodies of the letters contrast

Figure 4.8 Page containing Sura 23:49–51 from a parchment Koran manuscript with three lines per page.

This manuscript may be attributed to the Maghrib because it uses a distinctive system of vocalization, with orange dots used for disjunctive *hamza* and green dots for connective *hamza*. Certain stylistic features, such as the exaggerated and hair-thin tail, also foreshadow later traits found in manuscripts made in that region.

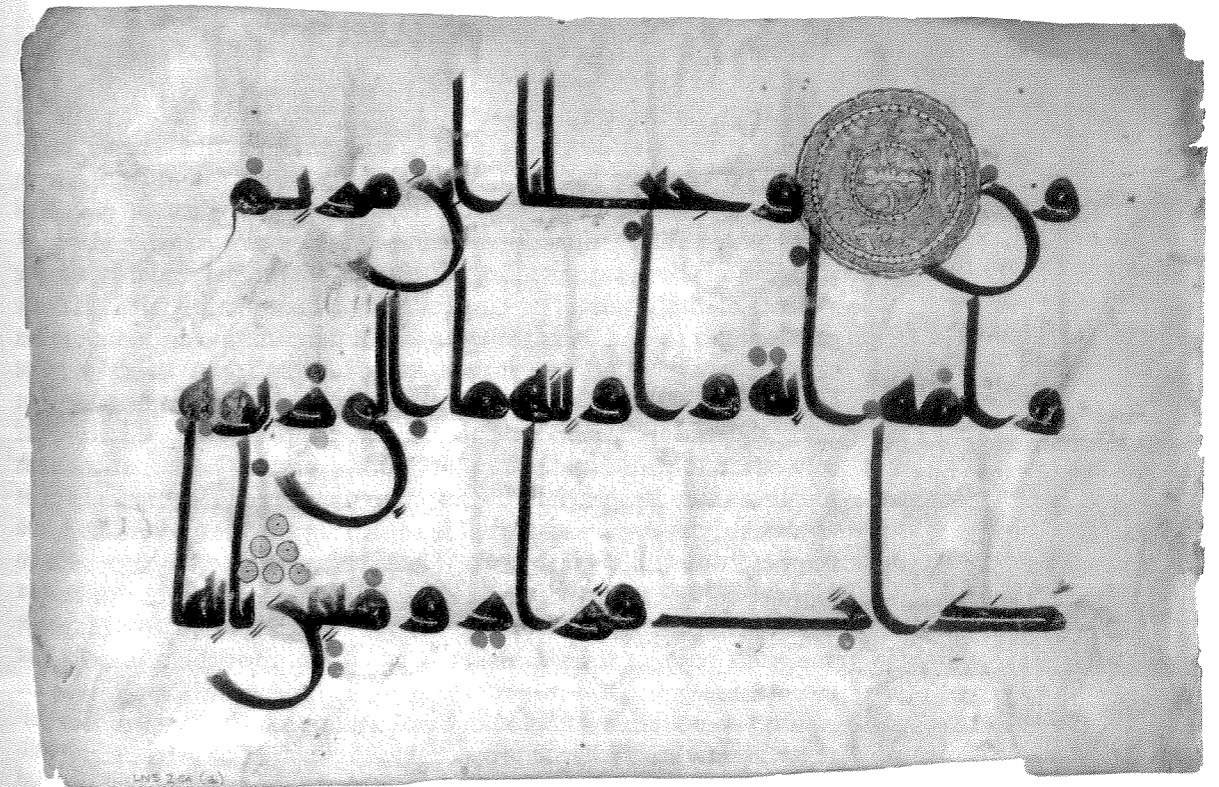




Figure 4.8a



Figure 4.8b

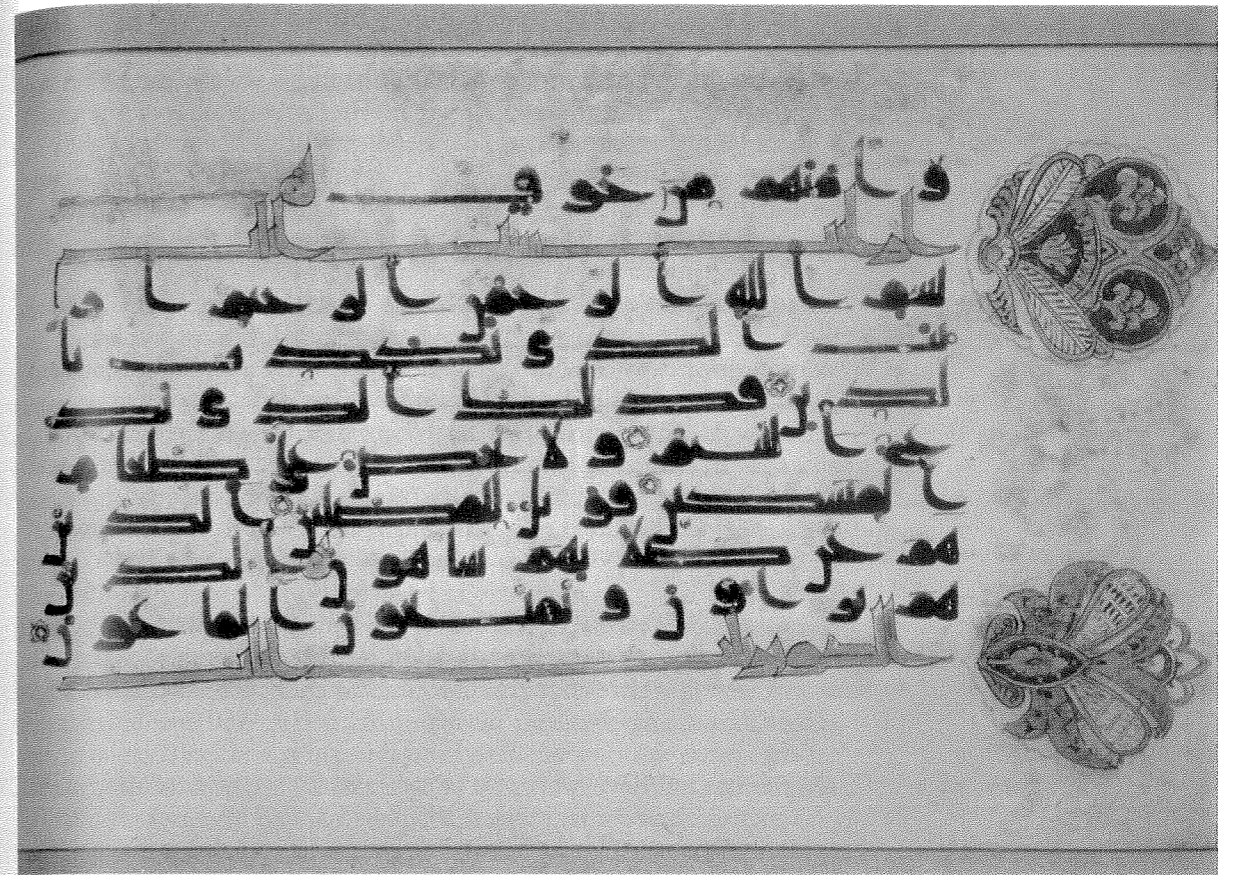


Figure 4.8c

sharply with the large rounded bowls of the tails that descend beneath the baseline. There is an equally stark contrast between the thick strokes of the letters and the hair-like lines used for pointing. Verses are marked with six gold balls arranged in a triangle, and groups of five are marked with a gold circle inscribed with the number of the verse (here *khamsun*, fifty).

Certain stylistic features of the script in this three-line copy of the Koran, such as the hair-thin tail of the *mim* in *miryam* at the left of the upper line (Figure 4.8a) and the swooping tails of final *nun* (Figure 4.8b) and *ya'* (Figure 4.8c), foreshadow the later *maghribi* style. The Nurse's Koran (Figure 5.5), transcribed for the nurse of the Zirid amir al-Mu'izz ibn Badis at Kairouan in 410/1020, for example, has a similar thin tail to *mim* and other letters. The swooping tail became a hallmark of the later *maghribi* style (see Chapter 6). Such stylistic similarities bear out the attribution of this three-line Koran manuscript to the Maghrib. This manuscript is one of the few kufic copies of the Koran with so few lines per page, and hence such a profligate use of parchment. Like the Amajur Koran (Figure 4.2), it must have been an expensive presentation copy. Assuming the attribution to the Maghrib to be correct, then the manuscript was probably made for one of the major mosques in the region, such as the Great Mosques of Córdoba or Kairouan or the like. Verifying this attribution is important, as the same style of lettering and decoration is found in other manuscripts, such as a larger (34 × 49 cm) Koran manuscript with seven lines per page.⁸¹

A second example of how to use vocalization to localize a group of Koran manuscripts to the Maghrib follows a slightly different methodology, in this case working from a manuscript with an established provenance and comparing features in that manuscript to an undated fragment. The identification of several features typical of later *maghribi* manuscripts then reinforces the suggested provenance and allows the delineation of a set of coincident features typical of the group. The earliest Koran manuscript with a secure provenance in the Maghrib is a parchment manuscript in broken cursive made at Palermo in 372/982-3 (Figure 5.4). In addition to yellow dots for *hamzat al-qat'* and blue dots for *hamzat al-wasl*, it uses a distinct system of vocalization, with a thin red slash for unwritten long *alif* and a hemicircle for *shadda*. The same system is used on an undated Koran fragment on parchment (Figure 4.9).⁸² The eleven folios, each with ten lines to the page, are now bound in a jumbled order, but contain the last twenty-two *suras* of the Koran (93-114). This corresponds to the last sixtieth (*hizb*) of the text, a division found in other Koran manuscripts made in the Maghrib, such as a copy done at Valencia in 596/1199-1200 (Figure 6.16). The elongated letters are penned in brownish black ink. Chapter titles are written in gold ink outlined in black and marked with stunning palmettes drawn in red and green.⁸³ The first and last pages have full-page decoration with an oblong field. On the first, the field is divided



into two squares, each filled with a circular boss.⁸⁴ On the last, the field is filled so that it resembles a checkerboard. On the basis of this polychrome ornament, Rice attributed this manuscript to the Maghrib.⁸⁵

Along with the unusual system of pointing and exuberant decoration, other features of this Koran manuscript reinforce the attribution to the Maghrib. The chapter headings, for example, do not always follow the usual system of names, but offer variants, often the first word of the *sura*. For example, *Sura* 96, usually deemed the first *sura* of the Koran to be revealed, is not named *al-'Alaq* (The Blood Clot), but *Iqra'* (Read), the opening word of the *sura*. Similarly, *Sura* 107 (Figure 4.9) is not called *al-Ma'un* (Charity), but *Ara'ayta* (Did you see?). Furthermore, the titles do not use the *scriptio defectiva* standard for transcribing the Koranic text in these early manuscripts, but write out long *alif*. Thus, in the title on the second line the word *ara'ayta* is written out with long *alif* in the middle, but in the text this *alif* is not written and its place indicated by a red slash. Writing out long *alif* is another characteristic of *maghribi* script, where words such as *hadha* (this) are often written with long *alif*.⁸⁶

Figure 4.9 Page containing *Sura* 107:4-108 from a parchment Koran manuscript with ten lines to the page.

This manuscript too may be attributed to the Maghrib because it uses a distinctive system of pointing, with a thin red slash for unwritten long *alif* and a round hook for *shadda*.

Accepting the attribution to the Maghrib, it may then be possible to use other unusual features of this manuscript to connect it with others and localize a group of manuscripts to that region. Unusual verse counts, for example, offer yet another avenue of investigation.⁸⁷ The ones in this fragmentary Koran manuscript differ from those in standard editions. On this page (Figure 4.9), Sura 107 has six verses, rather than the standard seven given in the Standard Egyptian and Flügel editions of the text. Different systems were often used to divide and number the verses within any given *sura*, particularly a long one that does not have a strict internal rhyme. Following the Indian tradition, used by Pickthall in his translation of the Koran, for example, *suras* 6, 18, and 36 have one more verse division than they do in the Standard Egyptian version.⁸⁸ Even if one accepts the usual divisions, the numbering can vary depending on whether the basmala and the mysterious letters at the beginning of several *suras* are counted as verses. Publication of a fragmentary manuscript from this early period, then, should include information about the verse counts.

The avenues of investigation suggested so far – ranging from codicology and decoration to systems of recording numbers, vocalization, readings, and verse counts – are all visual and require only close examination of the folios themselves, but there are other methods of scientific testing that can also help in dating and localizing early parchment manuscripts. The best known is radiocarbon analysis. The method of dating organic substances by analysis of the relative presence of carbon isotopes was developed in the late 1940s and applied almost immediately to verify the age of works of art. The early method for measuring radiocarbon used a liquid-scintillation counter that required large samples of the work to be consumed, but in the late 1970s scientists had developed a new method using an accelerator mass spectrometer that required far smaller samples (less than one-thousandth of the material required by the older counter methods). Such new methods have been used persuasively to date medieval textiles, including the shroud of Turin.⁸⁹

These scientific methods must be used with an established protocol and a consistent methodology, and the radiocarbon testing on the troublesome Persian silks once attributed to tenth century Iran brought to light some of the pitfalls in using such analysis to date works of medieval Islamic art.⁹⁰ Radiocarbon analysis requires clean samples that are as free as possible from visible contaminants. Cleaning the silks caused its own problems, and the first tests produced unexpectedly (and historically unacceptable) early dates. When the textiles were cleaned in a different way, the radiocarbon analysis produced later (and historically more acceptable) dates. Only by applying the same technique to a sample with an established date was it possible to determine that the first tests were inaccurate and that an alternative treatment had to be used to prepare the samples for testing. Therefore, to accept the validity of radiocarbon testing on

a particular manuscript, it is essential to know that the method is accurate and acceptable for a securely dated example, such as the Amajur Koran, whose *terminus ad quem* of 262/876 is established by the endowment notice.

Radiocarbon dating also produces a chronological range, for fluctuations in radiocarbon age can intersect the calibration curve at several different points.⁹¹ Almost any date within the range is, from a scientific perspective, equally possible.⁹² Recent testing of a very large (53 × 34 cm) parchment manuscript divided between several collections in Russia and Central Asia, for example, produced a 220-year range (775 to 995 CE) at the 95 per cent confidence level.⁹³ Radiocarbon analysis of another manuscript, the so-called Samarkand Koran, produced a similar range of 260 years, from 595 to 855 CE.⁹⁴ These ranges are consistently longer than the thirty-three years (657–90) reported for the pages from the manuscript in San'a with the architectural frontispiece.⁹⁵ As Susan Whitfield pointed out in discussing the application of various kinds of scientific testing including radiocarbon analysis to manuscripts from Dunhuang in Central Asia, both the testing and the interpretation of the results is an art as well as a science.⁹⁶ This is not at all to say that such testing should not be carried out on early Koran manuscripts nor that it is without validity, but rather that such testing must be performed with a coherent and standard protocol.

A final point that emerges from the work of Whelan and others is that the kufic style was used virtually exclusively for calligraphing Koran manuscripts (*masahif*). From the thirteen hundred manuscripts or fragments written in kufic, only one or two do not belong to Koran manuscripts.⁹⁷ Kufic is therefore to be distinguished from the round script that was used by scribes since early Islamic times for correspondence and transcribing non-Koranic texts and since the late ninth or early tenth century for copying the Koran (see Chapter 5).

The usual explanation for the difference between the two styles is chronological, with kufic said to have given way to a new style in the tenth century. Whelan, however, proposed a different explanation, suggesting instead that copyists of the Koran worked in different milieux: religious scholars penned Koran manuscripts in kufic on parchment, whereas secretaries wrote in cursive hands on paper. These two types of calligraphers came from different social groups and had different professional interests. Copyists who penned kufic Koran manuscripts were members of the ulema, whereas secretaries were not devout scholars. Copyists, perhaps as a sign of devotion, did not often sign their work.⁹⁸

Since the styles used for transcribing Koran manuscripts might be simultaneous rather than successive, Whelan argued that manuscripts in kufic could have been produced later than the tenth or eleventh century, the time limit usually cited. One example is the so-called Blue Koran (Figure 4.10), one of the most sumptuous Koran manuscripts known.⁹⁹ The text is transcribed on large sheets of parchment, many trimmed, but measuring on average c. 30 × 35 cm.

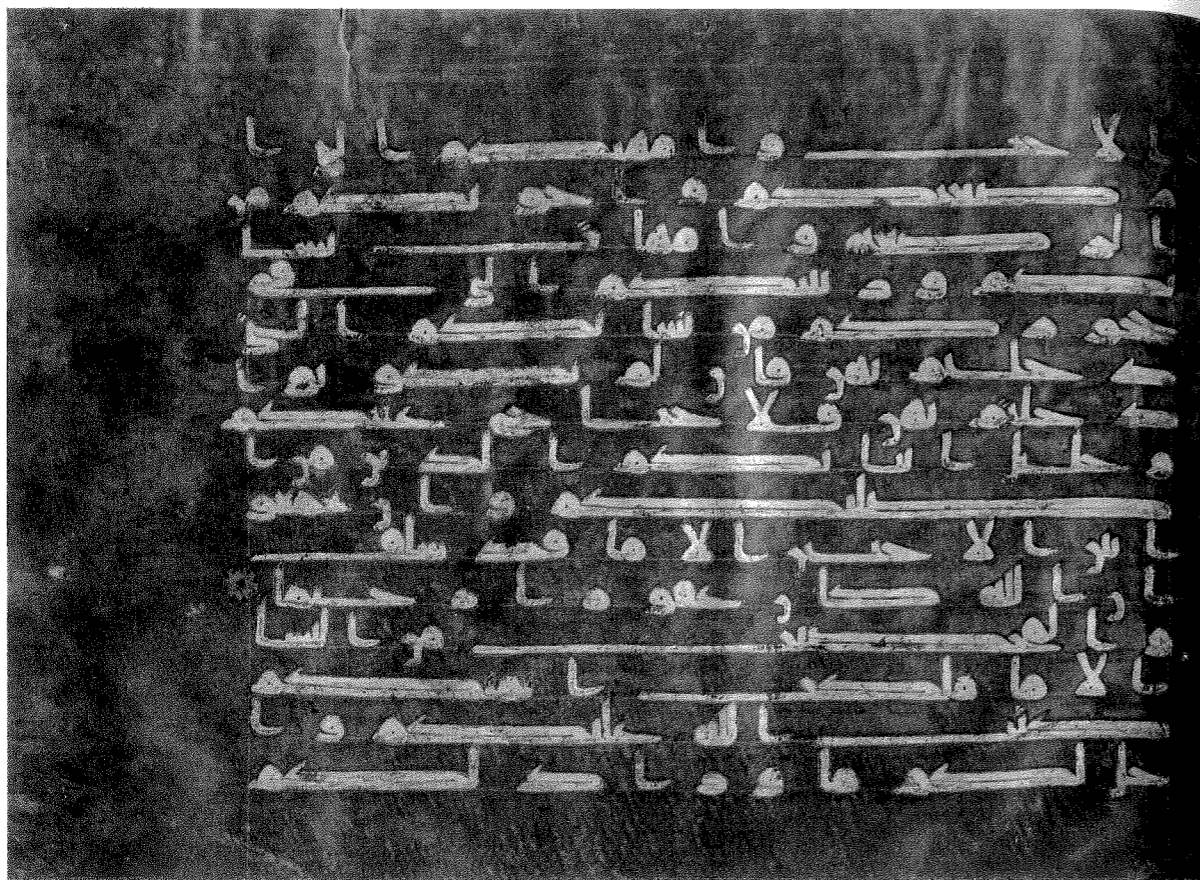


Figure 4.10 Page containing *Sura 4:23-4* from a seven-part Koran manuscript on parchment dyed blue with fifteen lines per page.

This is one of the most sumptuous Koran manuscripts ever produced, with gold lettering and silver markings that contrast with the blue parchment. Historical considerations, particularly the idea of a blue-dyed support as an imitation of the Byzantine practice of purple-dyed parchment that was unavailable in Islamic lands, suggest a dating in the mid-tenth century and an attribution to north Africa.

Dyed a deep blue with indigo, the support forms a bold contrast to the writing, which is transcribed in fifteen lines of gold ink outlined in black. Pages are further embellished with occasional pointing in gold along with vocalization, verse markers, and *sura* headings added in silver that has often tarnished, as in the verse marker at the end of line 11.

The expense of materials shows that the Blue Koran was a very special codex, and its singularity has led to singular explanations for it. The earliest, put forward by F. R. Martin in 1912, was that the manuscript had been commissioned by the 'Abbasid caliph al-Ma'mun (r. 813-33) for the tomb of his father, Harun al-Rashid, at Mashhad in north-eastern Iran because blue was the color of mourning.¹⁰⁰ There is, however, little evidence for this fantasy, which may have been created to conceal the way that Martin had acquired the leaves in Istanbul or to add a hint of intrigue and bolster the selling price.

Jonathan Bloom used the evidence of the manuscript itself to argue more persuasively for an attribution to the Maghrib.¹⁰¹ As in most Koran manuscripts transcribed in kufic, verses are counted using the alphanumeric system known as *abjad*, in which each letter of the

alphabet stands for a different numerical value. The letters are arranged in the sequence of older Semitic alphabets, and the word *abjad* an acronym formed from the first four letters – *alif*, *ba'*, *jim*, and *dal* (a, b, j, and d). For the sake of pronunciation and memorization, the letters in this system are grouped into pronounceable but meaningless words. The traditional system is *'abjad hawwaz huttiy sa'fad qarashat thakhhadh dazagh*. In the Maghrib, however, another system is used: the fifth, sixth, and eighth groups are arranged differently and the letters grouped *'abajid hawaz hutiy kalamam sa'fad qurizat thakhudh zagsh*.¹⁰² This latter system is the one used in the Blue Koran.¹⁰³

On the basis of historical evidence, Bloom then localized the manuscript of the Blue Koran to mid-tenth century Tunisia.¹⁰⁴ The manuscript was there in late medieval times, for it figured as the first item on an inventory of manuscripts in the library of the Great Mosque of Kairouan compiled in 693/1293, where it was described as a Koran manuscript in seven sections contained in an aloeswood case decorated with copper inlaid with gold.¹⁰⁵ Bloom suggested that this sumptuous manuscript had been made in imitation of imperial Byzantine manuscripts, known to have been written in gold on parchment dyed purple with murex. Lacking access to this gastropod, Muslims imitated the color with indigo, producing a harmonious combination used in monumental inscriptions since Umayyad times (Figures 3.5 and 3.7). This probably happened, Bloom concluded, after the Fatimids had received embassies from the Byzantines and begun to imitate Byzantine royal objects, producing such unfamiliar wares as ivory boxes.¹⁰⁶ Examination of the folios from the Blue Koran confirms a later dating. Unlike most kufic Koran manuscripts attributed to the ninth century or earlier, the folios of the Blue Koran are ruled with a dry point.

Checking the *abjad* numbering may provide yet another avenue of localizing these early Koran manuscripts. One example is a well-preserved fragment of 260 folios in the Gulistan Palace Library in Tehran, with the first three parts (Suras 1-3:78), written out with six lines of kufic per page.¹⁰⁷ A stack of three gold balls marks the end of each verse, and a gold rosette with an *abjad* letter marks the end of every ten verses. On folio 251, verse sixty is marked with a *sad*, the letter used in the *maghribi* system rather than the *sin* used in the standard system.¹⁰⁸ Using the *abjad* system to assign the kufic fragment in the Gulistan Palace Library to the Western Islamic lands lends weight to other criteria that might suggest a *maghribi* provenance, such as the arrangement of the folios in ternions, the marking of sevenths (folio 192 is marked as the half of the first seventh), the occasional green dot to indicate connective *alif* (*hamzat al-wasl*), and perhaps even the horizontal format with an even number of lines per page.

Art-historical evidence can also help in assigning a later date to some of these undated fragments, such as an isolated folio from a kufic

Koran manuscript in the Khalili Collection.¹⁰⁹ The medium-sized folio (18 × 25 cm) is inscribed with twelve lines of text. Marks at the end of each line may indicate that some sort of ruling was employed, although it was not the same type of dry point used in the Blue Koran. The script is a compact kufic with some idiosyncratic letters, such as a long *nun* that descends and touches the letters in the line below. What is most distinctive, however, is the heading for *Sura al-Nisa'* (Women, Chapter 4). The verse count is given in the archaic system of numbering with hundreds, units, and tens (*mi'a wa sitta wa saba'in*). It is also written in a distinctive foliated script that calls to mind architectural inscriptions rather than penmanship. Such foliated script could hardly be earlier than the mid-tenth century.¹¹⁰

These other avenues of investigation – ranging from paleography, codicology, vocalization and variant readings, *sura* titles, verse counts, and *abjad* numbering to radiocarbon testing – may give us new information in dating and localizing the large corpus of parchment Koran manuscripts made in early Islamic times. But we must use all these methods coherently and in conjunction with each other, the corroborative approach recently advocated to distinguish authentic documents from Dunhuang from later fakes and forgeries.¹¹¹ Until we obtain and coordinate such information, we must conclude, as Whelan did, that as yet we have no external evidence – no colophon, endowment notice, or other securely datable element – to date any Koran manuscript before the late eighth or early ninth century. Koran manuscripts were definitely made in early Islamic times,¹¹² and some of them may well survive among the leaves already published and known to scholars, but we still do not have convincing means of identifying them as such. Similarly, Koran manuscripts copied on parchment in kufic continued to be made into the tenth century, and possibly the eleventh or twelfth, and we still need to do more work to identify which ones they are.

Notes

1. Adolf Grohmann, 'The Problem of Dating Early Qur'ans,' *Der Islam* 33 (1958): 213–31, discusses several fragments of Koranic text on papyrus, but they are the exception rather than the rule.
2. A few folios have also been reused in bindings. Ursula Dreihholz, 'Some Aspects of Early Islamic Bookbindings from the Great Mosque of Sana'a, Yemen,' in *Scribes et manuscrits du Moyen-Orient*, ed. François Déroche and Francis Richard (Paris, 1997), 15–34, for example, found an old parchment leaf glued to the inside of a small horizontal back cover preserved at San'a (C 11). The binding itself is one of the oldest known, and the fragmentary page contained a text written in 'small kufic' and identified as Koranic.

In the West, too, pieces from earlier written documents were often reused, and their serendipitous discovery sometimes provides the earliest examples of a particular genre. When searching through fifteenth-century printed books in the library of the University of California, Los

Angeles, Richard Rouse, 'Roll and Codex: The Transmission of the Works of Reinmar von Zweter,' in *Authentic Witnesses: Approaches to Medieval Texts and Manuscripts*, ed. Mary A. Rouse and Richard H. Rouse (Notre Dame, IN, 1982), 107–23, for example, found two parchment fragments containing the songs of Minnesinger Reinmar von Zweter that had been reused as flyleaves in a copy of St Thomas' *Summae theologiae*. The fragments belonged to a singer's or poet's roll, an ephemeral genre that was usually discarded. They can be dated to the mid-thirteenth century, thereby pre-dating any known manuscripts of Reinmar's songs.

3. *Maṣā'ihif ṣan'ā'* (Kuwait, 1985); Hans-Caspar Graf von Bothmer, 'Meisterwerke islamischer Buchkunst: koranische Kalligraphie und Illumination im Handschriftenfund aus der Großen Moschee von Sanaa,' in *Jemen*, ed. Werner Daum (Innsbruck-Frankfurt/Main, 1988), 177–80; Ursula Dreihholz, *Frühe Koranfragmente aus der Grossen Moschee in Sanaa/Early Quran Fragments from the Great Mosque in Sanaa*, Hefte zur Kulturgeschichte des Jemen, 2 (Sanaa, 2003).
4. Nearly three hundred thousand examples, dating mainly from the mid-tenth century to the mid-thirteenth, were discovered at the end of the nineteenth century in a storeroom (known in Hebrew as a *geniza*) of the Palestinian Synagogue in Fustat, or Old Cairo. See, most recently, Jonathan M. Bloom, *Paper before Print: The History and Impact of Paper in the Islamic World* (New Haven, 2001), 74–8. The Cairo Geniza included trousseau lists, commercial documents, and personal letters relating to the Jewish community. The San'a trove, in contrast, was almost exclusively Koranic. Of the fifteen thousand fragments on parchment, fewer than one hundred and fifty belonged to other texts, mainly hadith or other religious works in addition to some medical works and a few ownership documents and letters. Dreihholz, *Quran Fragments*, 21.
5. François Déroche, 'À propos d'une série de manuscrits coraniques anciens,' in *Les Manuscrits du moyen-orient: essais de codicologie et paléographie*, ed. François Déroche (Istanbul/Paris, 1989), 101–11.
6. Some of these were published by Bernhard Moritz, *Arabic palaeography: A Collection of Arabic Texts from the First Century of the Hidjra till the Year 1000* (Cairo, 1905), an album that, like the collection, is relatively inaccessible today. WorldCat lists sixteen copies worldwide.
7. See, for example, François Déroche, *The Abbasid Tradition: Qur'ans of the 8th to the 10th Centuries AD*, ed. Julian Raby, The Nasser D. Khalili Collection of Islamic Art (London, 1992), *Manuel de codicologie des manuscrits en écriture arabe* (Paris, 2000), 70–109, and his article 'Manuscripts of the Qur'an' in *EQ*, 3:254–75.
8. Khader Salameh, *The Qur'an Manuscripts in the al-Haram al-Sharif Islamic Museum, Jerusalem* (Reading, 2001). These manuscripts, which came not only from the Dome of the Rock but also from other mosques, madrasas, and shrines in the city, range in date over the last ten centuries (the oldest, no. 5, is a parchment copy attributed in a later hand, clearly erroneously, to 'Ali's grandson, but probably made in the ninth century), in format from single to thirty-volume copies (which the author calls *rab'a*, pl. *rab'at*), and in size from small to huge (a two-volume copy made in the fifteenth century, no. 1, measures over a meter high). They not only tell us about Koranic calligraphy and its collection in Jerusalem, but also help to chart the religious and political history of the city and its major buildings. Two-thirds of the

- manuscripts date to the Ottoman period, including four donated by Sultan Sulayman, who restored the Dome of the Rock. Using their endowment deeds, court records, and other historical sources, the museum director and compiler of the splendid new catalogue, Khader Salameh, estimated that the Dome of the Rock, like the Aqsa Mosque, had at least fifty multi-volume copies of the Koran.
9. Some are on display in the new Islamic galleries. The best are illustrated in the catalogue *Gulchīnī az qur'ānhā-yi khattī-yi mūza-yi dawrān-i islāmī* [A Selection of Koran Manuscripts in the Museum of the Islamic Eras] (Tehran, 1375/1997). See also Mahdī Bahramī, *Rāhnamā-yi ganjīnah-yi qur'ān* (Tehran, 1328/1940).
 10. Ahmad Gulchīn-i Ma'ānī, *Rāhnamā-yi ganjīnah-yi qur'ān* (Mashhad, 1347/1969); Muḥammad Āṣif Fikrit, *Fihrist-i nusakh-i khattī-yi qur'ānhā-yi mutarajjam* (Mashhad, 1363); Ramaẓān-'alī Shakir, *Ganj-i hizār sāla-yi kitābkhāna-yi markazī-yi āstān-i quds-i rizāvī qabl wa ba'd az inqalāb* (Mashhad, 1367/1989); *Elr*, 'Āstān-e Qods-e Raẓawī.'
 11. Mashhad, Astan-i Quds, no. 6; for references, see Chapter 1, note 26.
 12. Charles Melville, 'The Pilgrimage to Mashhad in 1601,' in *Safavid Persia*, vol. 4, ed. Charles Melville, Pembroke Papers (London, 1996), 191–229. Gulchīn-i Ma'ānī, *Rahnama*, *jam*, gives a list of the Koran manuscripts that 'Abbas endowed to the shrine.
 13. Several medieval sources describe the codex penned by 'Uthman that was reportedly kept in the Mosque of Damascus as well as others kept elsewhere in Syria. See Josef W. Meri, *The Cult of Saints among Muslims and Jews in Medieval Syria*, Oxford Oriental Monographs (Oxford, 2002), 114–16. By the twelfth century, four pages of it were reportedly preserved in the Great Mosque of Córdoba, presumably used there to bolster the connection between the Umayyads of Spain and their forebears in Syria. See Jonathan M. Bloom, 'The Revival of Early Islamic Architecture by the Umayyads of Spain,' in *The Medieval Mediterranean: Cross-Cultural Contacts*, ed. Marilyn J. Chiat and Kathryn L. Reyerson (St Cloud, MN, 1988), 40.
The most famous surviving example of an 'Uthmanic' manuscript is the so-called Samarkand Koran (now in the Religious Administration of Muslims in Tashkent). A large-format manuscript, it contains about one-third of the entire text. On the basis of its orthography as seen in the facsimile published in 1905, Arthur Jeffery and A. Mendelsohn, 'The Orthography of the Samarqand Qur'ān Codex,' *Journal of the American Oriental Society* 62 (1942): 175–95, assigned it to early ninth century Iraq. François Déroche, 'Note sur les fragments coraniques anciens de Katta Langar (Ouzbékistan),' in *Patrimoine manuscrit et vie intellectuelle de l'Asie centrale islamique*, ed. Ashirbek Muminov, Francis Richard, and Maria Szuppe (Tashkent and Aix-en-Provence, 1999), 65, thought it earlier, assigning it to the second half of the eighth century. Based on recent radiocarbon testing of other pages that produced a date between 595 and 855 CE at the 95 per cent confidence level, Efim A. Rezvan, 'On the Dating of an "Uthmanic Qur'ān" from St Petersburg,' *Manuscripta Orientalia* 6, no. 3 (September 2000): 19, assigned it to the turn of the eighth to ninth century.
 14. See Chapter 2 for details about the types of skin and preparation of the parchment. A few, giant manuscripts (e.g., BN ms. arabe 324; 48 × 53 cm) were made of individual folios, each of which comprised the hide of a single animal.
 15. Déroche, 'À propos d'une série de manuscrits coraniques anciens.'

16. The Byzantines followed the same practice. The bifolio used in imperial manuscripts there measured on the order of 41 × 54 cm. The splendid Bible made at Byzantium c. 940 for the treasurer Leo Skallarios (Vatican ms. Reg. gr. 1), for example, is full-folio size, measuring 41 × 27 cm. The Trebizond Gospels, made in Armenia in the mid-eleventh century and now in the Congregazione Armenia Mechitarista in Venice (ms. 1925), one of the grandest works produced within the Byzantine sphere of influence, is made up of 633 bifolios and measures 46 × 37 cm, giving an even larger bifolio size of 46 × 74 cm. See Helen C. Evans and William D. Wixom, *The Glory of Byzantium: Art and Culture of the Middle Byzantine Era, AD 843–1261*, exhibition catalogue (New York, 1997), nos. 42 and 240.
17. Déroche has done an extraordinary job studying the composition of the quires used in these early manuscripts. See, in particular, François Déroche, 'L'emploi du parchemin dans les manuscrits islamiques: Quelques remarques préliminaires,' in *The Codicology of Islamic Manuscripts: Proceedings of the Second Conference of al-Furqān Islamic Heritage Foundation, 4–5 December 1993*, ed. Yasin Dutton (London, 1995), 17–57.
18. This drawing was prepared for Déroche's fine catalogue of the early fragments in the Khalili Collection: Déroche, *Abbasid Tradition*, fig. 2.
19. The contrast between flesh and hair sides is another peculiarity of manuscripts made in the Islamic lands. In manuscripts made in the West, by contrast, it is often impossible to distinguish the two. See Chapter 2, note 8, and Dreiholz, *Quran Fragments*, 45.
20. Estelle Whelan, 'Writing the Word of God: Some Early Qur'ān Manuscripts and their Milieux, Part I,' *Ars Orientalis* 20 (1990): 115. There are, of course, a few exceptions to this rule. Some of the vertical format pages with slanted script have dry-point rulings on the back of the folio. See, for example, François Déroche, *Les Manuscrits du coran, aux origines de la calligraphie coranique*, Bibliothèque Nationale, Département des Manuscrits, Catalogue des Manuscrits Arabes (Paris, 1983), nos. 1 and 2; Mikhail B. Piotrovsky (gen. ed.), *Heavenly Art, Earthly Beauty* (Amsterdam, 1999), no. 35.
21. The term kufic was already current by the tenth century. The chronicler Ibn al-Nadīm (*The Fihrist of al-Nadīm: A Tenth-Century Survey of Muslim Culture*, ed. and trans. Bayard Dodge [New York and London, 1970], 12), the main textual source for much of our information about books in the early Islamic period, uses the term to designate the script used by a group of Koran copyists in the time of the 'Abbasid caliph al-Mu'tasim (r. 833–42) – Abu Juday, and following him, Ibn Umm Shayban, al-Mashur, Abu Khamira, Ibn Humayra – and in his (that is, Ibn al-Nadīm's) own day Abu'l-Faraj. Only the last name crops up elsewhere in Ibn al-Nadīm's text: the chronicler describes him (p. 85) as a Koran reader and a friend of Ibn Shanabudh, a Baghdadi scholar who was flogged seven times for introducing erroneous readings of the Koran and probably died in prison in 939 (p. 1098). In the following paragraph, Ibn al-Nadīm mentions that manuscripts of the Koran were also transcribed in *muhāqqāq*, *mashq*, and similar scripts.
The term kufic was popular in medieval times. It is used, for example, in a thirteenth-century inventory of manuscripts in the library of the Great Mosque at Qayrawan to refer to a manuscript written in gold on blue (*akhal*) parchment, presumably the famous 'Blue Koran.' For the inventory and its association with this manuscript, see Ibrāhīm Shabbūh, 'Sijill qadīm li-maktaba jāmi' al-qayrawān [An old register of

the library of the Great Mosque of Kairouan,' *Revue de l'Institut des Manuscrits Arabes* 2, no. 2 (1956): 339-72; Jonathan M. Bloom, 'Al-Ma'mun's Blue Koran?' *Revue des Études Islamiques* 54 (1986): 61-5; Jonathan M. Bloom, 'The Blue Koran: An Early Fatimid kufic Manuscript from the Maghrib,' in *Les Manuscrits du moyen-orient: essais de codicologie et paléographie*, ed. François Déroche (Istanbul/Paris, 1989), 95-9; E. Voguet, 'L'inventaire des manuscrits de la bibliothèque de la Grande Mosquée de Kairouan (693/1293-4),' *Arabica* 50, no. 4 (2003): 532-44; for a page from the manuscript, see Figure 4.10.

By the later middle period, Persian authors used kufic to refer to an angular script that had one-sixth round strokes and fifth-sixths flat. This description is given, for example, by the calligrapher and commentator on calligraphy Qadi Ahmad, who contrasts it to the completely straight *ma'qili* (said to be named for the Ma'qil Canal near Basra); see Mir Munshī Qummī Qādi Aḥmad, *Gulistān-i hunar*, ed. Aḥmad Suhaylī-Khānsārī (Tehran, 1352/1974), 12; Qādi Aḥmad, *Calligraphers and Painters: A Treatise by Qādi Aḥmad, Son of Mir-Munshī* (Circa AH 1015/AD 1606), trans. V. Minorsky, Occasional Papers (Washington, DC, 1959), 53-4. The same two terms are used by many other authors in the prefaces to albums composed at this time, see, for example, Dust Muhammad's preface to the album he prepared for Bahram Mirza in 951/1544 (Wheeler M. Thackston, *Album Prefaces and Other Documents on the History of Calligraphers and Painters*, Studies and Sources in Islamic Art and Architecture, Supplements to Muqarnas [Leiden, 2001], 7). The terms kufic and *ma'qili*, also known as square kufic or *banna'i* (builder's [script]), became standard in Mughal India as well (for their use by Akbar's chronicler Abu'l-Fadl, see Chapter 12).

22. François Déroche, 'Les manuscrits arabes datés du IIIe/IXe siècle,' *Revue des Études Islamiques* 55-7 (1987-89): 343-79.
23. Déroche, *Manuel*, 272-327.
24. In addition to a handful surviving in the Great Mosque of Damascus (Déroche, 'Les manuscrits arabes datés') and elsewhere, two major collections of early bindings have survived in Kairouan and San'a. The library of the Great Mosque of Kairouan in Tunisia preserved a group of some one hundred and fifty examples. Louis Poinssot discovered half of them jumbled in a room to the north of the court that served as a store and dove-cote, and seventy-six more were found in a box in the library there. These bindings have been well known to scholars since the publication of Georges Marçais and Louis Poinssot, *Objets Kairouanais IXe au XIIIe siècle* (Tunis, 1948). The other group of bindings from the early Islamic period was discovered equally fortuitously, but more recently, in 1972, in the Great Mosque at San'a in the Yemen. Along with the extraordinary collection of Koran folios, ninety-five fragments of book covers were found. See Dreiholz, 'Early Islamic Bookbindings.'
25. *Dirāsāt fī tārikh al-khatt al-'arabī* (Beirut, 1972) See also the volume of essays recently published in his honor, *Essays in Honour of Salāh al-Dīn al-Munajjid* (London, 1423/2002).
26. To his first list (Déroche, 'Les manuscrits arabes datés'), Déroche has recently added another Koran manuscript in St Petersburg: see François Déroche, 'Un fragmento coránico datado en el siglo III/IX,' in Γραφείο: *Códices, Manuscritos e Imágenes: Estudios Filológicos e Históricos*, ed. Juan Pedro Monferrer Sala and Manuel Marcos Aldón (Córdoba, 2003), 127-39.

27. François Déroche, 'The Qur'an of Amāgūr,' *Manuscripts of the Middle East* 5 (1990-1): 59-66; Alain Fouad George, 'The Geometry of the Qur'an of Amajur: A Preliminary Study of Proportion in Early Arabic Calligraphy,' *Muqarnas* 20 (2003): 1-16. In addition to a handful of folios scattered in different collections such as Cambridge University Library (ms. add. 11,116), the bulk of the manuscript, 242 folios including this one, is in the Museum of Turkish and Islamic Art in Istanbul.
28. The sum of the height (13 cm) and width (20 cm) of a folio is thus 33 cm, thereby conforming to Déroche's standard (see above p. 103 and note 15)
29. I reached this estimate by dividing the number of letters in the Koran (321,015), given in the frontispieces to many later manuscripts such as the one penned by Ibn al-Bawwab (see Chapter 5), by the number of letters on a single page in this manuscript (an average of twenty-six, as on the page illustrated here [Figure 4.2]). This division yields 12,840 pages or 6,420 folios, or 214 per volume in a thirty-volume set.
30. To reach this figure, I assumed that the thirty-volume manuscript was comprised of some six thousand bifolios, each measuring 40 × 12 cm (or .048 square meters) and that ten of these bifolios could be cut from a hide measuring 80 × 60 cm, or .48 square meters (the largest parchment to survive from Islamic times, a marriage contract dated 461/1069, measures 85 × 82 cm; see Chapter 2, note 12). This estimate for the number of hides needed to make the Amajur Koran is conservative, for it assumes no cropping at the edges and no blemishes on any skin. Nevertheless, the Amajur Koran was by no means the most largest (by that I mean the biggest consumer of sheep) in its time. Déroche (*EQ*, 'Manuscripts of the Qur'an,' 3:261) noted that several large Koran manuscripts (e.g., BN, ms. arabe 324) had folios measuring 68 × 53 cm (or .3604 square meters), each of which would have required the hide of a single animal, and that six hundred folios (and therefore sheep) would have been required for these copies.
31. The text between the two notices comprises more than one-third of the Koran, and a single copyist working at this rate would have taken about six months to transcribe the entire text. Déroche, 'Qur'an of Amajur', felt, however, that the two-month interval was too short for transcribing such a large chunk of text and suggested that the two endowment notices, which both fall near illuminated double pages, were not in the hand of the calligrapher, but rather done by an illuminator who was responsible not only for the decoration but also for the line of text in the middle of the illuminated pages. As evidence, Déroche cited the shape of the final *nun* and the *alif*, whose upper shaft bent slightly to the left, features he found different from the script in most of the text but the same as the script used on the illuminated pages. He therefore suggested that the endowment notices were added by the illuminator after he had finished his work when the manuscript was ready for donation to the foundation in Tyre.

From the limited number of published pages, it is impossible to verify Déroche's conclusion. The endowment deed dated Sha'ban (his plate II) is in a sloppier and more crowded hand than the meticulous one used for the text, but copyists typically used a different script for colophons in order to distinguish this mundane information from divine revelation, so the difference may be a matter of choice, not hands. Similarly, the notes added along the top margin saying that the manuscript was endowed by Amajur are written using two different wordings – pages from parts 1 to 7 are inscribed *awqafaha amajur*

- (Amajur caused it to be endowed), whereas all the later folios are inscribed *waqafaha amajur* (Amajur endowed it) – and two different styles (the notes on the two fragments remaining from part 24 are in a more rounded script). Lacking secure evidence to the contrary, it is simpler to assume that the endowment deeds reflect the date of copying and that the copyist and the illuminator were the same person.
32. Most recently in his article 'Manuscripts of the Qur'an,' *EQ*, 3:256–7.
 33. Al-Nadim, *Fihrist*. Dodge's introduction gives details about Ibn al-Nadim's life; see also *El*/2, 'Ibn al-Nadim.'
 34. Al-Nadim, *Fihrist*, 6–46.
 35. The text reads *fa-fi alfatihī ta'wījūn bi-yamnati al-yadi wa a'la al-asabi' wa-fi shaklihi indija'un yasir*. I have taken my translation from Estelle Whelan's unpublished article, 'The Phantom of Hijazi Script: A Note on Paleographic Method'. Dodge's translation (p. 10) reads 'a turning of the hand to the right and lengthening of the strokes, one form having a slight slant,' but Whelan's interpretation of *a'la al-asabi'* (literally, raising of the fingers) as tall ascenders makes sense. She also notes that the third criterion of slant has sometimes been taken to apply, like the first two, only to the *alifs* in this script, but that the masculine singular pronoun *hu* attached to *shakl* (form) is clearly parallel to the one attached to *alifat* and refers to the same pair.
 36. Amari's notes were first published by H. Derenbourg, 'Bibliographie primitive du Coran par Michele Amari,' in *Centenario della nascita di M. Amari*, ed. E. Basta (Palermo, 1910), 15–22, cited in Whelan, 'Phantom,' n. 13. Amari, apparently unaware of Silvestre de Sacy's citation and translation of the complete passage from a manuscript of the *Fihrist*, based his identification of Meccan script on the abridged version of Ibn al-Nadim given by the seventeenth-century chronicler Hajji Khalifa.
 37. Al-Nadim, *Fihrist*, 11.
 38. François Déroche, 'Collections de manuscrits anciens du Coran à Istanbul. Rapport préliminaire,' in *Études médiévales et patrimoine turc*, ed. Janine Sourdel-Thomine (Paris, 1983), 35–6; *Abbasid Tradition*, 27–33; 'Les manuscrits du Coran en caractères Higâzî,' *Quinterni* 1 (n.d.): 2–19; and 'Manuscripts of the Qur'an,' *EQ*, 3:256–7, where he suggests that the name 'hijazi' does not imply that these manuscripts were transcribed in the Hijaz.
 39. Whelan, 'Phantom' For further details on this article, see Chapter 3, note 17.
 40. Dublin, CBL, ms. 3315, fol. 3v; al-Nadim, *Fihrist*, 10, example 2.
 41. The culmination of this approach can be seen in the catalogue for an exhibition held at the Islamic Art Gallery of the King Faisal Center for Research and Islamic Studies, *Arabic Calligraphy in Manuscripts* (Riyadh, 1406/1986), cited in François Déroche, 'Les études de paléographie des écritures livresques arabes: quelques observations,' *Al-Qanṭara* 19 (1998): n. 12, which lists 137 names, mixing ones found in sources with modern ones, most of which are not identifiable.
 42. Déroche, *Abbasid Tradition*.
 43. Similarly, the three folios in 'hijazi' belonged to two groups, Hijazi I and IV.
 44. Déroche, *Manuscrits du coran I*; Déroche, *Abbasid Tradition*.
 45. His latest article on the subject is François Déroche, 'New Evidence about Umayyad Book Hands,' in *Essays in Honour of Ṣalāḥ al-Dīn al-Munajjid* (London, 1423/2002), 611–42. See also his comments in

- François Déroche, *Le Livre manuscrit arabe: préludes à une histoire* (Paris, 2004), 16–18. For Déroche, the three essential characteristics of *hijazi* are shafts that bend to the right, a lower hook on *alif*, and lengthened strokes. The text in *hijazi* Koran manuscripts is written in a *scriptio defectiva*, and individual manuscripts (or parts thereof) show a wide diversity of hands, as well as different numbers of lines per page. Unlike other early fragments, none of these pages in *hijazi* script bears an attribution to 'Uthman or 'Ali. The difficulty with the *hijazi* group is the enormous variety with a very limited number of specimens. In his 2002 article, for example, Déroche enumerated six different styles.
46. Whelan, 'Writing the Word of God.'
 47. Déroche, 'Les études de paléographie,' 372 and n. 31, countered that Whelan had not explained her choices of the type manuscripts and that the one representing her Group 2 was unique. His arguments do not seem to me significant, as she used established provenance and representativeness of a broad juxtaposition as sufficient reasons. His argument that Group 1 dates to the ninth century and Group 2 is earlier may well be valid alongside hers of different locales.
 48. Dublin, CBL, 1407; Paris, BN, 350a; Istanbul, TKS, EH 26 and Aya Sophia Library; Copenhagen, Royal Library XL and XLII; Washington, DC, FGA 37.6; etc. A fragment in Wolfenbüttel (Herzog August Bibliothek Aug. 2°) had been the gift of the noted Orientalist Jacobus Golius (Jacob Gool) in 1655 or 1656, and another in the Bodleian (March 178) was also in Golius' possession as early as 1656.
 49. Dublin, CBL, ms. no. 1404; Arthur J. Arberry, *The Koran Illuminated: A Handlist of Korans in the Chester Beatty Library* (Dublin, 1967), no. 31. Whelan's close examination showed that the manuscript was copied on bifolios produced by folding the skins down the middle. She estimated that the thirty-volume manuscript comprised nearly three thousand folios, with four gatherings of quaternions per section (*juz*).
 50. The note was added in 1140/1727 by Amir Muhammad Jurbaji, member of a prominent family of merchants. Whelan, 'Writing the Word of God,' 119 and n. 65, identifies the later owner.
 51. The manuscript is divided among at least five collections: Dublin, CBL, 1421; New York, Pierpont Morgan Library, M712; Istanbul, TKS, EH 16 and TIEM, ms. 47; and Damascus, National Museum A.338.
 52. San'a, Dar al-Makhtutat ms. 20–33; see *Masa'hif san'a*, 45; Hans-Caspar Graf von Bothmer, 'Architekturbilder im Koran: Eine Prachthandschrift der Umayyadenzeit aus dem Yemen,' *Bruckmanns Pantheon* 45 (1987): 4–20; Bothmer, 'Meisterwerke,' fig. 11; Dreiholz, *Quran Fragments*, 38–9. Déroche ('Manuscripts of the Qur'an,' *EQ*, 3:259) estimated that this large manuscript (51 × 47 cm) once contained about 520 folios; the manuscript is also one of the very few to have preserved the opening page with the Fatiha (Sura 1); see *EQ*, vol. 2, pl. 1; Dreiholz, *Quran Fragments*, 43.
 53. Other pages do not have such markers; see for example, fol. 20b, with Sura 7:104–15, illustrated in Whelan, 'Writing the Word of God,' fig. 21.
 54. Before her death, she generously shared the opening three pages of the draft with me.
 55. A feature also found in the copper inscriptions from the Dome of the Rock.
 56. On this point, see also François Déroche, 'La paléographie des écritures livresques dans le domaine arabe,' *Gazette du Livre Médiéval* 28 (Spring 1996): 1–8.

57. Al-Suli, *Adab al-kuttāb*, 50 and 57, cited in Nabia Abbott, *Studies in Arabic Literary Papyri*, University of Chicago, Oriental Institute Publications (Chicago and London, 1972), 17 and n. 3.
58. Ibn Durustwayh, *Kitāb al-kuttāb*, ed. Louis Cheikho (Beirut, 1927).
59. Franz Rosenthal, 'Abū Ḥaiyān al-Tawḥīdī on Penmanship,' *Ars Islamica* 13-14 (1948): 1-30.
60. See above, note 17.
61. Déroche, *Manuscripts du coran I*, no. 2; one page is illustrated in his article 'Manuscripts of the Qur'an,' *EQ*, 3, pl. 1.
62. Déroche, 'Umayyad Book Hands,' 628.
63. Tehran, National Museum, no. 4293; Bahramī, *Rahnama*, no. 2; *Gulchīni*, 22-3. This fragment came from Ardabil. The 77-folio text comprises the twenty-ninth part (*juz'*) of the Koran (Suras 67-77) and ends with a spurious colophon that attributes the work, both writing and illumination, to 'Ali ibn Abi Talib, in the year 7/628-9. Bahramī dated the manuscript to the tenth century. The quires are arranged in the standard way, with two flesh sides in the center and two hair sides on the outside, but they are quaternions, rather than the usual quinions.
64. Paola Orsatti, 'Le manuscrit islamique: caractéristiques matérielles et typologie,' in *Ancient and Medieval Book Materials and Techniques*, ed. Marilena Maniaci and Paola F. Munafò, Studi e Testi (Vatican City, 1993), 297; Déroche, *Manuel*, 86-91. These ternions generally followed Gregory's rule so that open double pages have facing sides of the same condition (that is, hair faces hair, or flesh faces flesh).
65. *Masa'hif san'a'*, 19-23; Bothmer, 'Architekturbilder.'
66. Such a descending system was also used to count verses. A small, horizontal manuscript in the Chester Beatty Library (ms. 1416), for example, has a gold rosette with 2:280 numbered as *mi'atayn wa thamanun* (folio 22a).
67. Alternatively, this archaic usage could have survived in one area, but not in another. Verse numberings using the archaic descending system were added, for example, to a 'vertical' format manuscript, most of which is in St Petersburg (E20), for which see Efim Rezvan, 'The Qur'an and its World: VI. Emergence of the Canon: The Struggle for Uniformity,' *Manuscripta Orientalia* 4, no. 2 (June 1998): 13-54; Déroche, 'Katta Langar;' Efim A. Rezvan, 'Yet Another "Uthmānic Qur'an"' (On the History of Manuscript E20 from the St Petersburg Branch of the Institute of Oriental Studies), *Manuscripta Orientalia* 6, no. 1 (March 2000): 49-68; Efim A. Rezvan, 'Uthmanic Qur'an' On the basis of stylistic and radiocarbon analysis (for which, see below), Rezvan dated this manuscript to the last quarter of the eighth century; Déroche assigned it to his group B Ib. The titles with their verse counts seem to be latter additions, which Rezvan estimated could have been done fifty or one hundred years after the original copying. The descending system of hundreds, tens, and units was also used in the Ibn al-Bawwab Koran made at Baghdad in 391/1000-1 (see Chapter 5 and Figure 5.8). Such a descending order is standard in Persian, an Indo-European language.
68. Grohmann, 'Early Qur'ans.'
69. E.g., Jonathan Bloom and Sheila Blair, *Islamic Arts, Art and Ideas* (London, 1997), 76.
70. San'a, Dar al-makhtutat, Inv. Nr. 01.27.1; *Masa'hif san'a'*, no. 4; Bothmer, 'Meisterwerke,' pl. 1. With its shafts that bend to the right, lower hook on *alif*, and lengthened strokes, it meets the criteria given by Déroche for *hijazi* script.

71. A. S. Atiya, *The Arabic Manuscripts of Mount Sinai* (Baltimore, 1955); see also Chapter 5. Similarly, in the Kudov Psalter (Evans and Wixom, *Glory of Byzantium*, no. 52), the original ninth century uncial was replaced by twelfth century minuscule.
72. Arthur Jeffery, *Materials for the History of the Text of the Qur'an* (Leiden, 1937).
73. On this point, see also Efim Rezvan, 'Qur'an VI.'
74. 'Red Dots, Green Dots, Yellow Dots and Blue: Some Reflections on the Vocalisation of Early Qur'anic Manuscripts - Part I,' *Journal of Qur'anic Studies* 1, no. 1 (1999): 115-40; 'Red Dots, Green Dots, Yellow Dots and Blue: Some Reflections on the Vocalisation of Early Qur'anic Manuscripts (Part II),' *Journal of Qur'anic Studies* 2, no. 1 (2000): 1-24. His work was based on manuscripts in the collection of the Bodleian Library, Oxford, which owns folios from twenty-one different codices now bound as part of ten different volumes. He also considered folios from other collections in the British Isles and in other publications.
75. These reasons include *imāla* (the fronting of the Arabic vowel *a* so that it is pronounced more like an *e*), *ya'at al-idafa* (pronouncing the first-person singular possessive suffix with a *fatha*, i.e., *-iya*, instead of long *i*), and *idgham* (the assimilation of certain short vowels between consonants, as in *khalqa-kum* instead of *khalāqa-kum*). He also found a single gold dot, used to indicate a third reading.
76. Paris, BN, ms. arabe 328a; Yasin Dutton, 'An Early Muṣḥaf According to the Reading of Ibn 'Āmir,' *Journal of Qur'anic Studies* 3, no. 1 (2001): 71-89.
77. Adrian Brockett, 'Aspects of the Physical Transmission of the Qur'an in nineteenth century Sudan. Script, Decoration, Binding and Paper,' *Manuscripts of the Middle East* 2 (1987): 45-67.
78. One good example, brought to my attention just as this book was going to press, is the article by Hans-Caspar Graf von Bothmer, Karl-Heinz Ohlig, and Gerd-Rüdiger Puin, 'Neue Wege der Koranforschung,' *Magazin Forschung, Universität des Saarlandes* 1 (1999): 33-46.
79. Cited in Dutton, 'Red Dots I,' 118-20.
80. Kuwait, Dar al-athar al-Islamiyya LNS2 CA(a); Marilyn Jenkins (ed.), *Islamic Art in the Kuwait National Museum: The al-Sabah Collection* (London, 1983), no. 19; for other pages from the same manuscript, see Déroche, *Abbasid Tradition*, no. 58.
81. Tunis, National Library, Rutbi no. 52; Martin Lings and Yasin Safadi, *The Qur'an* (London, 1976), no. 24.
82. Dublin, CBL, 1411; Arberry, *Koran Illuminated*, no. 10.
83. Many illustrated in black and white in F. R. Martin, *The Miniature Painting and Painters of Persia, India and Turkey from the 8th to the 18th Century* (London, 1971), pls. 233-6.
84. Arberry, *Koran Illuminated*, pl. 18.
85. D. S. Rice, *The Unique Ibn al-Bawwab Manuscript in the Chester Beatty Library* (Dublin, 1955), 29 and n. 2. One might also compare the ornament to that added in the margin of the Palermo Koran (Figure 5.4), a manuscript that was unknown to Rice.
86. W. Wright, *A Grammar of the Arabic Language Translated from the German of Caspari and Edited with Numerous Additions and Corrections*, 3rd edn, rev. W. Robertson Smith and M. J. de Goeje (Cambridge, 1971), 9-10. The use of an extra long *alif* was one of the criteria that Florence Day used to localize a group known as the 'Baghdad silks' to Spain; see Florence Day, 'The Inscription of the Boston "Baghdad" Silk: A Note on Method in Epigraphy,' *Ars Orientalis* 1 (1954): 191-4.

87. On this topic, see also Efim Rezvan, 'Qur'an VI,' esp. Table 8.
88. Marmaduke Pickthall, *The Meaning of the Glorious Koran: An Explanatory Translation* (London, 1930).
89. P. E. Damon, et al., 'Radiocarbon Dating of the Shroud of Turin,' *Nature* 337 (16 February 1989): 611-15; A. J. Timothy Jull and Douglas J. Donahue, 'Radiocarbon Dating with Accelerators: Methods and Application to Textiles,' *Orientations* 21, no. 6 (June 1990): 75-9. The shroud of Turin was subjected to a battery of scientific tests including radiography, microscopic examination, hematology, pollen analysis, and digital imaging. Such 'scientific testing' on the shroud was necessary in part because earlier 'scientific' tests - photographs made in 1898 and 1931 - had brought out the outline of a figure, taken by promoters of the shroud as as 'scientific proof' for the authenticity of the relic as the burial cloth of Christ. See John Beldon Scott, *Architecture for the Shroud: Relic and Ritual in Turin* (Chicago and London, 2003), 301 and n. 10.
90. Sheila S. Blair, Jonathan M. Bloom, and Anne E. Wardwell, 'Reevaluating the Date of the "Buyid" Silks by Epigraphic and Radiocarbon Analysis,' *Ars Orientalis* 22 (1992): 1-42. When doing radiocarbon testing, furthermore, it is useful to have the work repeated in several places, for different laboratories can produce consistently different dates. When testing both the shroud of Turin and the Buyid silks, for example, the laboratory at Oxford produced slightly older dates than those produced in the laboratories at Zurich and Tucson.
91. The amount of radiocarbon in a sample can be related to a radiocarbon age, which is usually quoted in 'years before present' (BP), with the present conventionally defined as CE 1950 when the testing and explosion of atom bombs significantly changed the radioactive carbon content of the atmosphere. If the amount of radiocarbon produced in the atmosphere were always the same, then one could use the calculated 'radiocarbon age' as the true age of the sample. However, fluctuations in the amounts of cosmic rays and other climatic and artificial effects cause the total amount of carbon dioxide in the atmosphere to change slightly. As a result, it is necessary to calibrate the radiocarbon age against the radiocarbon contents of a standard of known age. The standard typically used for this calibration is tree rings, which can be dated accurately, and a curve of radiocarbon against known-age tree rings has been established from the present to c. 7200 BCE. The calibrated ages are typically given in two forms, with either one or two standard deviations (*sigma*, or §). An error of one standard deviation (1§) means that if many measurements were made on a collection of identical samples, 68 per cent of the results would fall within the range defined by the quoted plus-or-minus standard deviation. This range is often referred to as a 68 per cent 'confidence interval.' Two standard deviations define a 95 per cent confidence interval. Thus 95 per cent of all measurements on identical samples would fall within a range of plus or minus 2§. In other words, it is fairly likely (68 per cent probable) that the date of an individual specimen falls within the range of 1§ and nearly certain (95 per cent probable) that it falls within the wider range of 2§. When giving ranges, it is also essential to cite the level of probability.
92. In the case of the Persian silks, the ranges established for the medieval pieces were on average one hundred and fifty years at one standard deviation and over two hundred years at two standard deviations.
93. The main part of the manuscript, 81 folios containing text from

- 44 *suras*, is in the Institute of Oriental Studies, St Petersburg (ms. E20); other pages are in Tashkent, Bukhara, and the shrine of the 'Ishqiyya Sufi brotherhood in Katta Langar, a remote site in Qasqa-Darya province 70 km south of Shahr-i Sabz. See Efim Rezvan, 'Qur'an VI.'; Déroche, 'Katta Langar.'; Efim A. Rezvan, 'Another 'Uthmanic Qur'an.'; Efim A. Rezvan, 'Uthmanic Qur'an.' On the basis of stylistic and radiocarbon analysis, Rezvan dated the manuscript to the last quarter of the eighth century, Déroche to his group B Ib. To muddy the waters, the manuscript has been corrected and titles added, using the 'archaic' system of numbering.
94. Efim A. Rezvan, "'Uthmanic Qur'an,' 19, n. 4, citing the results from pages from the same manuscript sold at Christies on 20 October 1992 (lots 225-225a) and on 19 October 1993 (lots 29-30).
95. Bothmer, Ohlig, and Puin, 'Koranforschung,' 45, gives these dates, though neither the testing facility nor the standard deviations (or confidence level) are given. An Umayyad date is often suggested for this manuscript, as in Déroche's article on 'Manuscripts of the Qur'an,' *EQ*, 3259.
96. Susan Whitfield (ed.), *Dunhuang Manuscript Forgeries*, British Library Studies in Conservation Science (London, 2002).
97. One exception is a fragmentary genealogical work now divided between the Bibliothèque Nationale (Arabe 2047, 13 folios) and the Staatsbibliothek, Berlin (Ms. Or. 379, two folios). Although sometimes identified as *Jamharat al-nasab*, its exact name is unclear. Another exception is a copy of the Acts of the Apostles transcribed by the monk Musa al-Rahib, probably in Palestine in the ninth century; one quire has been removed from the manuscript in the Monastery of St Catherine on Mt Sinai and is now in the Bibliothèque Nationale (ms. arabe 6725; Marie-Geneviève Guesdon and Annie Vernay-Nouri (eds), *L'Art du livre arabe: du manuscrit au livre d'artiste* [Paris, 2001], no. 13).
- Déroche, 'Les manuscrits arabes datés' showed that most manuscripts with other texts copied in kufic script cannot be considered authentic. These other manuscripts include a copy of al-Asma'i's *Ta'rikh muluk al-'arab al-awwal* in (BN, Arabe 6726; for which see François Déroche, 'À propos du manuscrit 'Arabe 6726,' Bibliothèque Nationale, Paris [Al-Asma'i, Ta'rikh muluk al-'arab al-awwal], *Revue des Études Islamiques* 58 [1990]: 135-88) and one of Hunayn ibn Ishaq's *Adab al-falasifa* (Tehran University Library, no. 2165).
98. Although no surviving Koran manuscript penned in kufic bears an authentic signature, medieval sources occasionally mention a signed colophon. Al-Dani (cited in Dutton, 'Red Dots I,' 119-20) reports, for example, that he saw a Koran manuscript from an old mosque (*mushaf jami' 'atiq*) with a colophon saying that it was written by Mughira ibn Mina in Rajab 71/October-November 728 at the beginning of the caliphate of Hisham. This may have been the exception rather than the rule, for the sources regularly refer to the hand of a famous scholar, copyist, or calligrapher simply as 'well-known' (*ma'ruf*); see Abbott, *Studies*, 12.
99. The manuscript is dispersed; this page, for example, is in Los Angeles (LACMA, M86.196a), for which see their splendid on-line display, with this page at <http://collectionsonline.lacma.org>.
100. Martin, *Miniature Painting*, 106 and 141, n. 83.
101. Bloom, 'Al-Ma'mun's Blue Koran?'; Jonathan M. Bloom, 'The Early Fatimid Blue Koran Manuscript,' *Graeco-Arabica* 4 (1991): 171-8.

102. Sheila S. Blair, *Islamic Inscriptions* (Edinburgh, 1998), 220, with further references. Astrolabes show that the two systems of *abjad* numbering were already in operation in medieval times. A tenth-century astrolabe made in Iraq by Ahmad ibn Khalif and now in the Bibliothèque Nationale uses the eastern system of alphanumerics, whereas an Andalusian example made in 472/1079 in the Germanisches Museum, Nuremberg, uses the Western system. Both are illustrated in D. and J. Sourdel, *La Civilisation de l'Islam Classique* (Paris, 1968), nos. 203 and 205, respectively.
103. Folio 1b in the Chester Beatty Library, Dublin (ms. 1405), for example, shows verse sixty of Sura 2 (al-Baqara, The Cow) marked with a *sad*.
104. A Spanish provenance has also been suggested (*The Qur'an and Calligraphy: A Selection of Fine Manuscript Material*, Bernard Quaritch Catalogue 1213 [London, 1995], 7–15), but is not convincing as it is based mainly on negative evidence.
105. See above, note 21.
106. The only ivory assigned to Fatimid North Africa, for example, is a painted ivory box made for the caliph al-Mu'izz at al-Mansuriyya, his capital in North Africa until 972. See *The Arts of Islam*, exhibition catalogue, Hayward Gallery (London, 1976), no. 145. Its technique, which makes little of the medium's qualities such as translucence and luster, shows that the Fatimids were producing an unfamiliar item. See further Sheila S. Blair, 'What the Inscriptions Tell us: Text and Message on the Ivories from al-Andalus,' *Journal of the David Collection* 2 (2005): fig. 5.
107. Gulistan Palace Library, no. 1052; Badri Ātabay, *Fihrist-i qur'ānhā-yi khattī-yi kitābhāna-yi saltanātī* (Tehran, 1351/1981), no. 110. The fragment was already prized in medieval times, when someone added a colophon on folio 260 in a different ink with the signature of 'Ali ibn Abi Talib.
108. The Maghribi system was also used in other Koran manuscripts made in the region, such as a copy transcribed at Palermo in 372/982–83 (Figure 5.4).
109. London, Khalili Collection, KFQ70a. Déroche, *Abbasid Tradition*, no. 68.
110. Adolf Grohmann, 'The Origin and Early Development of Floriated Kūfic,' *Ars Orientalis* 2 (1957): 183–214.
111. Susan Whitfield, 'Introduction,' in *Dunhuang Manuscript Forgeries*, ed. Susan Whitfield (London, 2002), 1–21.
112. Just how early also remains a matter of debate. Dealers are naturally interested in making their wares as early as possible, as in the case of a parchment palimpsest recently published by Sam Fogg, *Islamic Calligraphy* (London, 2003), no. 1, and attributed to the time of the Four Orthodox caliphs as early as the 630s. Textual sources such as al-Nadim, *Fihrist*, 11, however, tell us that Khalid ibn Abi'l-Hayyaj was the first to write copies of the Koran, and he worked at the beginning of the eighth century.

Part III: The Pre-eminence of Round Scripts in the Early Middle Period

102. Sheila S. Blair, *Islamic Inscriptions* (Edinburgh, 1998), 220, with further references. Astrolabes show that the two systems of *abjad* numbering were already in operation in medieval times. A tenth-century astrolabe made in Iraq by Ahmad ibn Khalif and now in the Bibliothèque Nationale uses the eastern system of alphanumerics, whereas an Andalusian example made in 472/1079 in the Germanisches Museum, Nuremberg, uses the Western system. Both are illustrated in D. and J. Sourdel, *La Civilisation de l'Islam Classique* (Paris, 1968), nos. 203 and 205, respectively.
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Part III: The Pre-eminence of Round Scripts in the Early Middle Period

CHAPTER FIVE

The Adoption of Round Scripts

VIRTUALLY ALL KORAN manuscripts made in the ninth century or earlier were calligraphed in some variant of a rectilinear script. During the tenth and possibly even the eleventh century, copyists continued to transcribe Koran manuscripts in this style, but the major innovation of the middle period was the refinement of round scripts and their transformation from chancery hands into artistic styles suitable for calligraphing the Koran and other prestigious texts. This canonization of round scripts was part of major social changes that produced an international Islamic civilization in which power and culture were decentralized to many courts that used not only Arabic but also Persian.¹

Naming these new round scripts is a problem. The sources give many names for specific scripts, but as François Déroche pointed out, it is still (and perhaps forever will be) impossible to link these with the many manuscripts at hand, especially since most are fragmentary and incompletely catalogued.² To categorize a first group of round scripts, Déroche therefore coined the rubric New 'Abbasid Style or New Style (abbreviated NS) as a complement to his Old or Early 'Abbasid Style, his replacement for kufic. Déroche proposed a summary division of his New Style into two subgroups with numerical headings: NS I, monumental varieties in which the contrast between thick and thin was accentuated, and NS III, which incorporated more fluid lines and more rounded forms.³ Both styles, he hinted, might have been adopted from chancery scripts. Since he was concerned with the relationship of the New Style with what he considered the older angular script used for copying the Koran, he labeled the monumental style NS I, although he noted that it was introduced later than NS III for copying the Koran.⁴

Other scholars have used a plethora of different names for Déroche's NS. Many of the names linked with this distinctive script that has a marked contrast between thick and thin strokes are geographic. The script is often associated with manuscripts transcribed in the eastern Islamic lands, so it is sometimes called eastern kufic, Iranian kufic, Persian kufic, or eastern Persian kufic.⁵ At the same time, other scholars noted that the script was also used in manuscripts copied in the Maghrib, such as the Nurse's Koran made for the

nurse of the Zirid amir al-Mu'izz ibn Badis in 410/1020 (Figure 5.5), so they also called it Western kufic.⁶

These geographical names suggest that this distinctive script is derived from kufic, and other names like late or flowering kufic, bent kufic, broken kufic, and semi-kufic make this connection more explicit.⁷ In Arabic the common name for this script is *kufi murabba'* (square kufic) as distinct from *kufi mudawwar* (round kufic), the script that had been used in the earliest Koran manuscripts. Some Western scholars also noticed the connection between this distinctive script and the round script used by copyists and chose a combination name. In describing the manuscripts in the Bibliothèque Nationale, Michele Amari, for example, used *naskhi kufic*, a name repeated by Nabia Abbott as *kufic-neshki*.⁸ Another name for this distinctive script, popular with nineteenth-century Orientalists, is Qarmathian or Qarmathian kufic, though the reasons for this choice are not entirely clear.⁹

Dissatisfied with the connection to kufic, other scholars coined new names for this script that reflected its originality. Eric Schroeder proposed *badi'* (literally, new or marvellous), for the renowned copyist Ibn Muqla was reported in later sources to have invented *al-khatt al-badi'*.¹⁰ Schroeder took this phrase for the name of a new script, but Mojtaba Minovi was quick to point out that it was merely a generic expression for a new style of writing, and Schroeder thereupon retracted his suggestion.¹¹ S. M. Stern called this script rhomboid.¹² Some Iranian scholars call the script *piramuz* (or *framuz*), identifying it with the script mentioned by the tenth-century chronicler Ibn al-Nadim as invented by the Persians.¹³

Almost all of these names for this script are based on the assumption that Islamic calligraphy developed linearly from the angular kufic through this distinctive script to a fully rounded one. In other words, by the choice of names, it was tacitly (and sometimes openly) assumed that copyists who had first transcribed Koran manuscripts in kufic gradually switched to this distinctive script with its contrast between thick and thin before moving to round scripts. Estelle Whelan proposed using a different name – broken cursive – based on a different assumption, namely that this script was an independent stylization from basic rounded handwriting.¹⁴ Whelan opted for the name broken cursive as a strictly visual or descriptive one, free from the political connotations implicit in a name such as New 'Abbasid Style and more evocative than New Style (NS). The name broken cursive has the further advantage that it clearly indicates the origin of this script in the regular round hand of the chancery scribe.¹⁵ I have followed her usage as I believe her reasoning is correct.

This chapter, then, outlines the development of the new round style. From all available evidence, copyists in early Islamic times used a round script for transcribing non-Koran texts. Déroche calls it a bookish script (*écriture livresque*).¹⁶ This book script was adopted occasionally, if awkwardly, for transcribing the Koran. Copyists

gradually stylized it, developing a mannered variant, here called broken cursive.¹⁷ Secretaries then transformed this mannered script into a more flowing and elegant round style. The copyist Ibn Muqla is generally credited with regularizing broken cursive into a well-proportioned script (*al-khatt al-mansub*), and his follower Ibn al-Bawwab in turn is recognized for adding grace to the round script used for regular transcription.

Round book script

Scribes who penned official letters and correspondence in early Islamic times had used a round script, for it was faster and therefore more efficient than the stately kufic reserved for monumental inscriptions and Koran manuscripts. Legibility was essential for correspondence, and so letters were grouped in words, and important or possibly ambiguous words like proper names were pointed. Copyists in early Islamic times also used a round hand to transcribe codices containing texts other than the Koran. The second oldest dated example to survive on paper is a treatise on unusual terms in the Traditions of the Prophet entitled *Gharib al-Hadith*, dated Dhu'l-Qa'da 252/November–December 866 (Figure 5.1).¹⁸ The text was composed by the grammarian Abu 'Ubayd ibn al-Qasim ibn Sallam (d. 838),¹⁹ and this fragmentary medium-sized (28 × 17 cm) copy was transcribed a generation or so after the author's death. It is written on strong, brown paper in black ink in a round calligraphic hand. The copyist wanted to make his hand look more formal than the casual round script used in some correspondence, and so he adopted some of the conventions used in kufic Koran manuscripts. For example, he tried to adhere to a grid, with angular connectors between letters, though there is no trace of a ruling and the text is written freehand. To underscore the rectilinear aspect, he also extended such letters as *sad* and *kaf* and used long extenders, notably in the word *qala*, to signal the beginning of a new section of text (Figure 5.1a).

Despite these attempts at regularization and monumentality, the script is clearly rounded. There is a slight bend to *alif*, which begins with a serif (Arabic *tarwis*) on the left and ends in a spur in its final form. The bowls of many letters are rounded, as is the loop in 'ayn and *ha'*. Similarly, the upper strokes of *ta'za'* and *kaf* have a hook at the top. Initial 'ayn and final *qaf* are particularly large, whereas *dal* has shrunk from the large square form used in kufic Koran manuscripts to a small bar set at a 45° angle to the base stroke.

The renowned Orientalist M. J. de Goeje, who studied the Leiden manuscript extensively, noted several distinctive features of the orthography.²⁰ The copyist sometimes pointed the letter *qaf* with two dots above, the standard convention in modern times, but also (and often exclusively) used one dot below. He also put a dot beneath *ra'*, *sad*, and *ta'* to distinguish them from *za'*, *dad*, and *za'* (Figure 5.1a), and used three dots, sometimes in a straight line, beneath *sin* to

Figure 5.1 Page from a copy of Gharib al-Hadith copied, perhaps at Baghdad, in Dhu'l-Qa'da 252/ November-December 866.

The manuscript is the second-oldest known work in Arabic copied on paper. It exemplifies the the cursive book script used in 'Abbasid times, possibly called *warraqi*. As opposed to early Koran manuscripts, the scribe of this one was intent on legibility and therefore carefully pointed letters and spaced words.

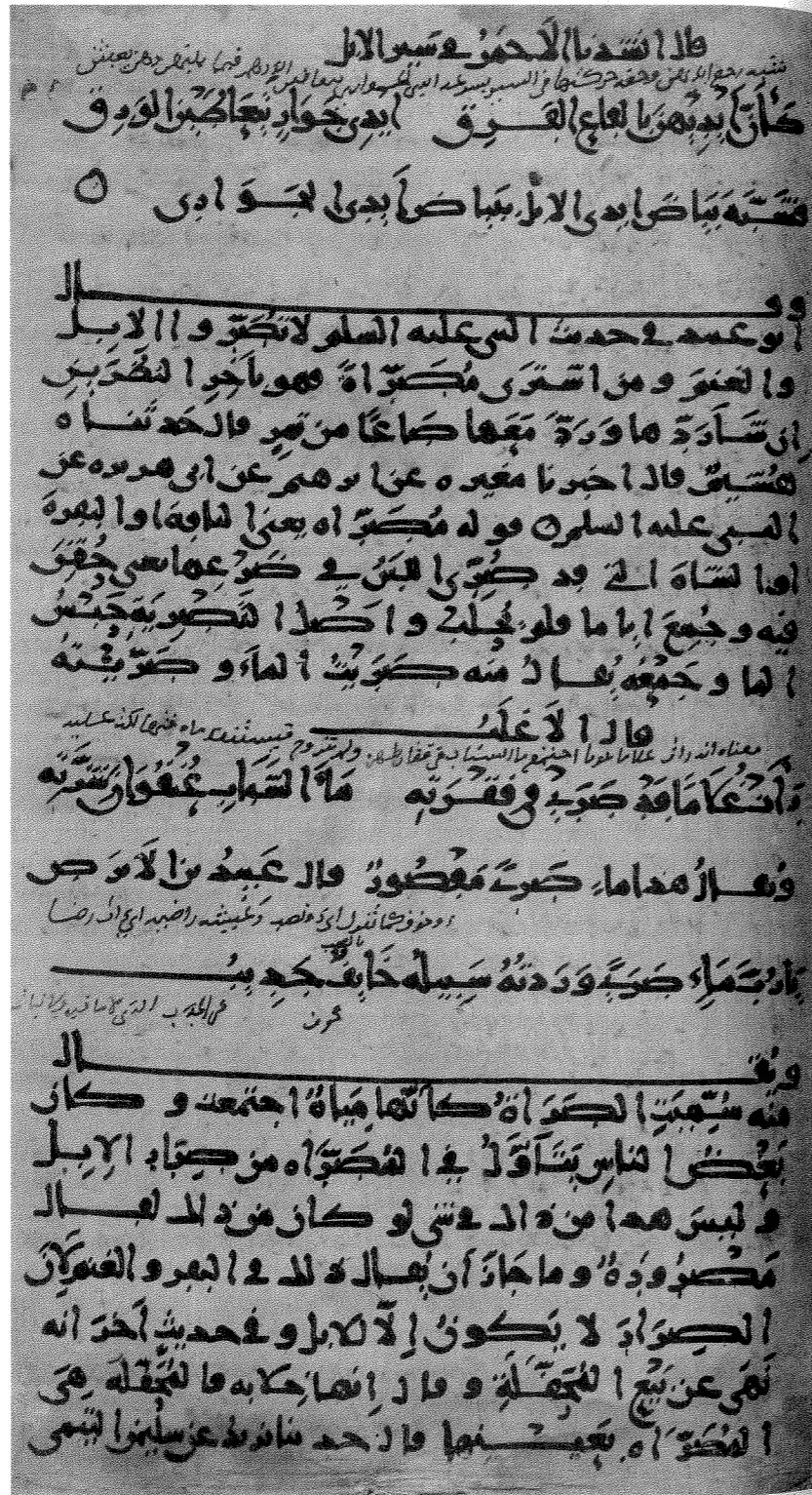


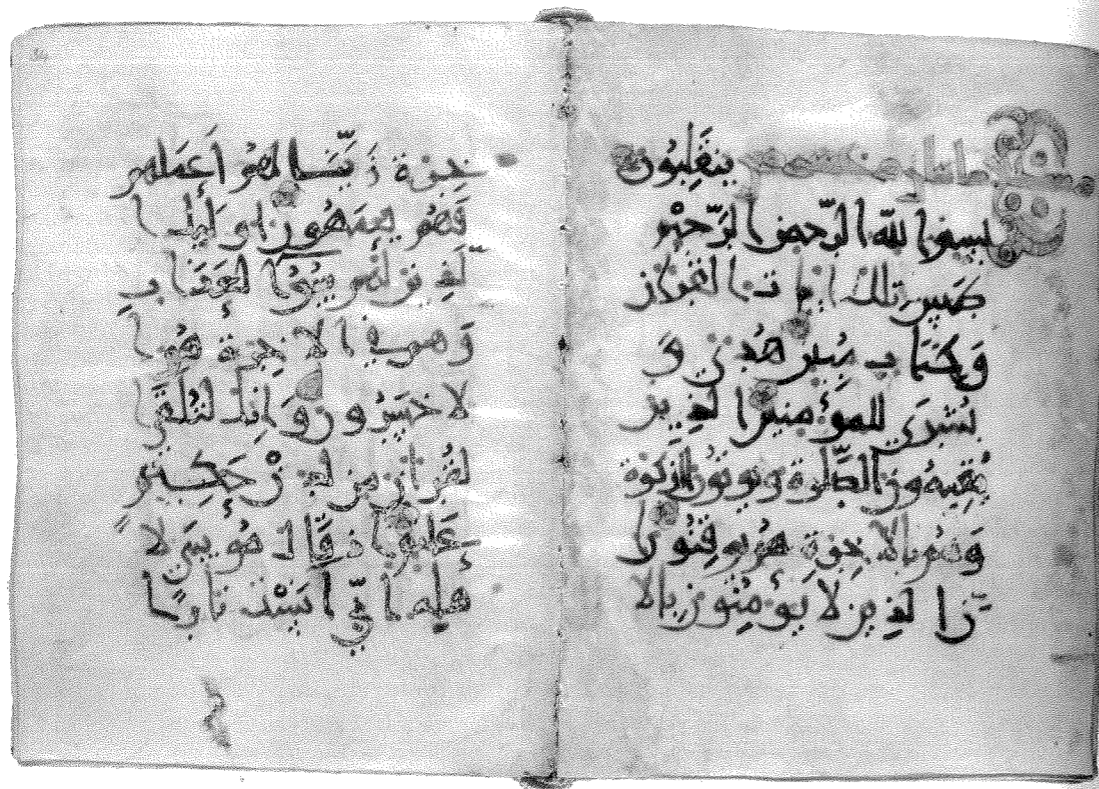
Figure 5.1a

distinguish it from *shin*. Similarly, he put a small 'ayn or *ha*' beneath the letter to distinguish it from pointed forms such as *ghayn*, *kha*, or *jim*. Such a technique of distinguishing unpointed letters (*muhmala*) from their pointed homographs (*mu'jama*) is called *ihmal*. By pointing the letters, the copyist was trying to avoid ambiguities and make the text as readable as possible. For the same reason, he grouped many of his letters by words and broke lines at the end of words. Unlike Koran codices in kufic script that were designed for recitation, this was a text meant to be read.

The round script used to copy the Leiden manuscript in 252/866 was relatively common in the ninth century for copying non-Koran texts. Déroche's list of forty dated Arabic manuscripts transcribed in the ninth century includes fourteen Muslim texts on history, Tradition, and the like and twelve Arabic-Christian texts.²¹ Several of the latter are preserved in the Monastery of St Catherine at Mt Sinai, including a copy of the Epistles of St Paul and the Acts of the Apostles dated 253/867, a complete copy of the Four Gospels dated 284/897, and the so-called Codex Arabicus, a hagiographica with eighteen miscellaneous treatises on the lives of the saints, the early martyrdoms, and possibly the oldest Arabic translation of the Book of Job.²² Datable to the late eighth or early ninth century, this last manuscript is unique in being a palimpsest with five texts (two in Arabic, one in Greek, and two in Syriac), of which the earliest may date back to the fifth century.²³ Despite the wide range in quality, the scripts used for these twenty-six non-Koran codices shows a remarkably homogeneous style, with the same letter shapes used throughout.

Both Déroche and Whelan characterized the identifying features of this book script, especially when compared to the kufic used for early Koran manuscripts.²⁴ In this round style there is relatively little spacing between letter groups. Hence the pages look crowded. The strokes vary considerably in thickness, and ascenders on tall letters are diagonal or curving. Final *alif* has a small vertical spur at the bottom, and a similar loop or hook is added to the ends of other letters, such as the top of *alif* or *lam* and the opening of initial 'ayn. *Dal* is relatively small in proportion to other letters, especially in relation to the *dal* in kufic, which is often as large as *kaf*. Ligatures are angular, as are looped letters. The body of *mim* and the head of *fa*/*qaf*, for example, are often diamond-shaped. Preceding letters are usually joined to the base stroke of *jim* and its partners. As Whelan pointed out, many of these features are also characteristic of broken cursive, the new style that came to prominence in the tenth century for copying the Koran.

From the ninth century this round script was adopted for transcribing the Koran. The earliest surviving example (Figure 5.2) is a tiny (12 x 9 cm) manuscript copied in vertical (portrait) format on parchment and now dispersed among several collections.²⁵ A note in Persian on one of the thirty sections (CBL 1417d) says that Ahmad



This early Koran manuscript in round script shares some features with early kufic copies. In addition to the regular system of pointing, the codex in round script is vocalized with the traditional Koranic system of red dots, used, for example, in the Amajur Koran (Figure 4.2). The copyist also broke lines in the middle of words. On the left page illustrated here, for example, he ended four lines with the initial *alif* of the word that continues on the next line. He did so because he knew that the reader was reciting a text that he had already committed to memory. In doing so, the copyist also created a pattern of curved lines along the left edge of the written area. Sometimes he carried this practice to extremes, even dividing a two-letter word such as *inna* between the last two lines of the right page.

Several features of format and decoration connect this Koran manuscript in round script with the kufic codices in Whelan's Group 1 (Figure 4.4) and confirm her suggested localization of that set of manuscripts to the eastern Islamic lands. Like those manuscripts, the text in this small copy is divided into verses, each one marked with a gold rosette and each five marked with a gold *ha'*. Chapter divisions, typically giving the name of the next chapter and the verse count, are also written in gold, as is the large palmette extending into the right margin.²⁷

The rubric on the right page of this double page (Figure 5.2) is peculiar and shows the copyist's unfamiliarity with transcribing the Koran. The text in regular, dark-brown ink contains the last word of Surat al-Shu'ara' (26) and the opening verses of Surat al-Naml (27). The gold rubric, however, contains the verse count of the preceding *sura* (227 verses). When writing the chapter division for the previous chapter (folio 11b), the copyist had made a mistake: instead of writing Surat al-Shu'ara' with 227 verses, the copyist had skipped a chapter and erroneously written Surat al-Naml with 95 verses, the name and verse count of the twenty-seventh chapter. When he got to the end of the chapter on this folio, he apparently realized his mistake, and instead of repeating the information in the correct place, he simply gave the verse count of the preceding *sura*.

The way of writing out the verse count is equally awkward. The copyist apparently started to write out the numbers of the verse count in the unusual sequence beginning with hundreds and working down to decades and units. He seems to have inscribed the first two numbers, two hundred and twenty (*mi'atayn wa 'ishrun*), but ran out of room and had to squeeze the last word with the units digit in the margin. By doing so, he took up part of the space for the palmette, which he then had to divide into two wings that encircle the word for the units digit, *saba'* (seven). The script he used for the heading, especially the word *'ishrun*, resembles that used for the heading in the typical Group 1 manuscript (Figure 4.4). Note, however, the angular bend in the *'ayn*, a hint of the stylized broken cursive script that would come to the fore in the tenth century.

That the copyist of CBL 1417 was experimenting with new ways

Figure 5.2 Double page containing the last word of Sura 26 and Sura 27:1-7 (the opening of juz' 19) from a dispersed Koran manuscript copied on parchment with eight lines per page.

A note in Persian says that the manuscript was corrected in 292/905, giving a *terminus ad quem* for the manuscript. The date makes it the first surviving Koran manuscript penned in a round book hand, and the use of Persian in the note suggests that it might have been transcribed in eastern Iran.

ibn Abu'l-Qasim al-Khayqani corrected (*durust bi-kard*) this Koran manuscript (*jami'*) in Sha'ban 292/June 905. The use of Persian for the corrector's note links the manuscript with the eastern Islamic lands, and the date provides a *terminus ad quem* for its production. Although earlier scholars had put this manuscript in the category of broken cursive, Whelan correctly pointed out it was actually written in a round script.²⁶

The script shows most of the features characteristic of round book script: little spacing between letter groups, variation in the thickness of strokes, diagonal or curving ascenders, a spur at the bottom of final *alif* and the end of other letters, diagonal *dal*, and angular ligatures and looped forms for letters like *mim* and *fa'/qaf*. Many of these features are visible in the word *l-'adhabi* (Figure 5.2a). The text is fully pointed and vocalized in black after the regular fashion of early manuscripts in round book scripts, though it is possible that these black markings may have been added later. The pointing of the text shares all the characteristic features used in the copy of *Gharib al-Hadith* (Figure 5.1): *qaf* with either two dots above or one below; a dot below *ra'*, *sad*, and *ha'*; three dots below *sin*, and a small S-shaped letter to mark unpointed letters like *ha'* and *'ayn* (Figure 5.2a) as well as to mark *hamza* as in *lil-mu'minina* in the fifth line of the right page.

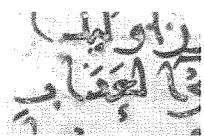


Figure 5.2a

of transcribing the Koran is clear from another manuscript in this distinctive hand.²⁸ It too is written in dark-brown ink on parchment, but in the horizontal (landscape) format. It is also much larger, with folios measuring 13.5 × 20 cm, the same size as those in the Amajur Koran (Figure 4.2). The script, however, is distinct.

Because of the corrector's note in Persian, the manuscript corrected by Ahmad al-Khayqani in 292/905 and its mate in a similar style can be connected with Iran, and contemporary coins, a distinctly conservative medium, show that a round script was accepted for official purposes in Iran and Central Asia at the same time it was adopted for transcribing the Koran. On coins from the eastern Islamic lands, the governor's name, for example, was added in round script to the standard 'Abbasid coin with angular legends.²⁹ Round traits also show up slightly later in monumental inscriptions in Iran.³⁰ Iran, however, was not the only place where copyists experimented with round scripts for copying the Koran: a small (page: 9.5 × 13 cm) bifolio copied in Misr in the year 325/936-7 shows that this style was also adopted, perhaps only occasionally, in Egypt.³¹

These Koran manuscripts copied in round scripts show that the late ninth and early tenth centuries were a time of experimentation in transcribing the scripture. In a few ways these manuscripts are traditional. They are parchment codices, whereas copyists in the ninth century had already begun to adopt paper for non-Koranic texts such as the treatise on Traditions (Figure 5.1). Like kufic copies of the Koran (e.g., Figure 4.2), these manuscripts are written in dark-brown ink that often degrades or fades. The copyists also broke words between lines, as they did in kufic Koran manuscripts. But these manuscripts in round script also show many new features that distinguish them from the kufic ones discussed in Chapter 4. Their small size suggests that many were personal copies, unlike the larger kufic Korans made for recitation or display in mosques.³² These Koran codices in round scripts are also signed by correctors or copyists, at least one of whom gives his genealogy back three generations. In contrast, all of the kufic Korans discussed in Chapter 4 are unsigned; the only names associated with them are those of the patrons who endowed them to pious foundations. As Whelan pointed out, these attributes suggest that Koran manuscripts in round scripts were made in a milieu different from the one(s) where kufic Koran manuscripts were produced.³³

Despite copyists' attempts to adapt round scripts into suitable vehicles in which to transcribe God's word, we must conclude that ultimately they were not very successful. Whelan labeled the round script used for CBL 1417 (Figure 5.2) and its mate 'rather unattractive.' The lines are wiggly. The spacing is irregular. These copies lack the grandeur of kufic Koran codices and the neatness of later ones in round scripts. Their unappealing appearance may have been one of the reasons that many other copyists chose to transform the regular round script into the new style known as broken cursive, a style emi-

nently suited for transcribing beautiful copies of the sacred text and other important works.

The canonization of broken cursive

Broken cursive came to the fore in the tenth century. We know this from two fine manuscripts dated in the third quarter of that century. The first is an autograph copy of Muhammad ibn 'Abd al-Jabbar al-Niffari's mystical reflections, *Mawaqif*, dated 344/955-6.³⁴ The second is a Koran manuscript (Figure 5.3) penned by 'Ali ibn Shadhan al-Razi al-Bayyi' in 361/972.³⁵ The latter is a landmark in many ways.³⁶ It was copied on paper and is thus our first surviving copy of the Koran on that material, which had been used at least a century earlier for non-Koranic texts (Figure 5.1). This Koran codex also includes a double-page frontispiece giving details about recension and verse count. The inclusion of these details reflects the contemporary concern with establishing the correct version of the Koran, and such pages of front matter became common among Koran manuscripts transcribed in the eastern Islamic lands in medieval times.

Several features of the paleography in these two manuscripts in broken cursive are noteworthy, especially when compared to the kufic style used in early Koran manuscripts.³⁷ The letters in broken cursive are set closely together, with little space between groups, notably in the Koran manuscript whose text appears crowded in comparison to the spaciousness of the kufic codices. As opposed to the rigidly rectilinear character of the kufic style, broken cursive is markedly diagonal. The bodies, tails, and upper strokes of many letters are pitched at a 45° angle to the ruled baseline, and the bodies of looped letters are triangular. Letters are sometimes connected by a notch or V that descends below the flat baseline. Final *alif* ends in a point, and it and many other ascenders have a small triangular serif added at the top left. Strokes vary in thickness. All in all, broken cursive is heavily stylized: note, for example, the final *ya*' that bumps backwards under the other letters in *bi' l-huda* like little wheels on a railroad car and then extends out into the right margin beyond the third line of the Koranic text (Figure 5.3a). This is a self-conscious style that represents the efforts of a secretary trying to formalize his regular round script and turn it into a vehicle worthy of Koran manuscripts and fair copies of other prestigious texts.

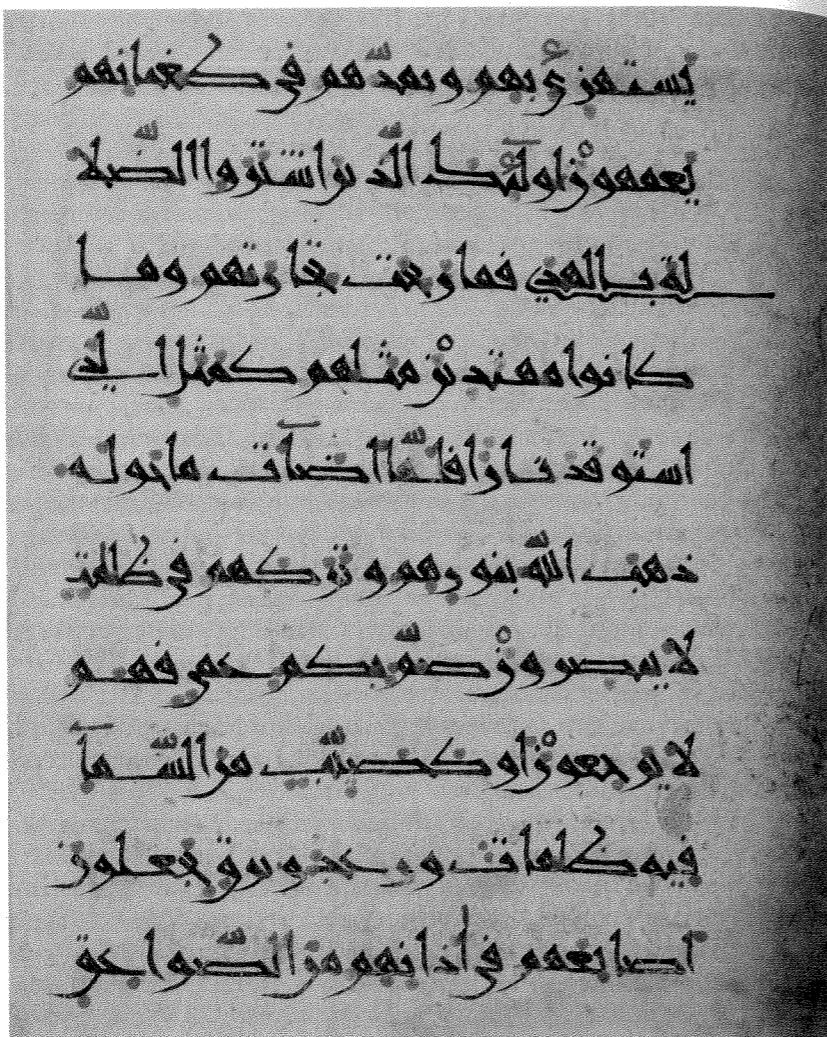
Like Koran manuscripts in round script, manuscripts in broken cursive are often signed, and the copyists' names connect this distinctive script with the eastern Islamic lands and show what kinds of people used it. Al-Niffari (d. 965) was a mystic from Niffar (ancient Nippur) in Iraq who was interested in the mystical symbolism of letters.³⁸ 'Ali ibn Shadhan al-Razi was a copyist and transmitter of hadith whose *nisba* connects him to the city of Rayy in central Iran.³⁹ In addition to the Koran manuscript (Figure 5.3), he also left a copy of al-Sirafi's treatise on the Basran school of grammarians transcribed



Figure 5.3a

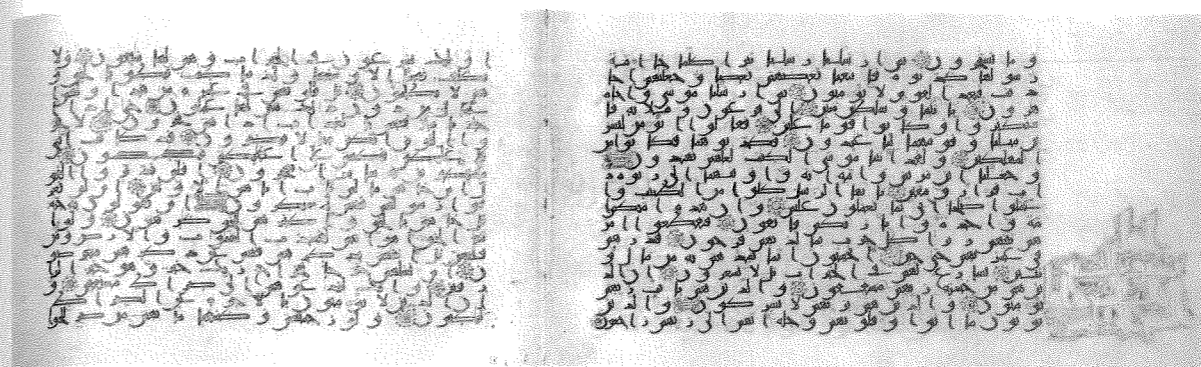
Figure 5.3 Page containing Sura 2:15-19 from a Koran manuscript with ten lines per page copied by 'Ali ibn Shadhan al-Razi al-Bayyi' in 361/972.

This manuscript is a landmark in two ways: it is the earliest surviving copy of the Koran transcribed on paper and the earliest surviving copy in broken cursive. The individual letters are angular and markedly diagonal.



sixteen years later in the same distinctive script.⁴⁰ Signatures and endowment notices in other Koran manuscripts in broken cursive, several preserved in the shrine library at Mashhad, confirm the connection of this script to the eastern Islamic lands.⁴¹ So do dated codices of other texts.⁴²

These manuscripts show that broken cursive was well established by the second half of the tenth century. They are too polished to have been the first ever written in broken cursive, and other evidence shows that this script had been used since the beginning of the century. Traces of this style are already apparent in the brief endowment notes added to kufic Koran manuscripts from Whelan's Group 1.⁴³ The one added at the top of the recto on folios from the Koran manuscript endowed by Amajur (Figure 4.2), perhaps penned when the text was repaired in 314/926-7, attempts to imitate the kufic script used for the



text, but shows traces of roundness. At the beginning of the tenth century, copyists of Koran manuscripts were already trying to grapple with the problem of regulating rectilinear and round scripts.

Inscriptions in several other media also document the use of broken cursive in the eastern Islamic lands from the late ninth or early tenth century.⁴⁴ One of the most distinctive is *tiraz*, textiles inscribed with the ruler's name.⁴⁵ *Tiraz* made of *mulham*, a type of fabric with silk warps and cotton wefts, were a specialty of the city of Merv (now in Turkmenistan), and inscriptions on pieces woven there in the late ninth century show experiments with various features of broken cursive, such as rising tails, triangular endings to the extenders, and triangular bodies of letters such as medial *fa'* and *'ayn*.⁴⁶ We should not be surprised to find the same script used in *tiraz* inscriptions and manuscripts, for the texts for *tiraz* inscriptions were drawn up in the chancery. A similar style of script can also be seen on contemporary ceramics, particularly the slip-painted wares associated with Nishapur in Khurasan and Afrasiyab (old Samarqand) in Transoxiana.⁴⁷ Broken cursive was thus not only an official but also a popular script in north-eastern Iran in the late ninth and tenth centuries.

Probably adopted first in the east for copying the Koran and other prestigious texts, broken cursive quickly spread throughout the Islamic lands, as attested by a series of codices. The earliest manuscript known from the Maghrib, a copy of Abu Mus'ab ibn Abi Bakr al-Zuhri's treatise on religious law, *al-Mukhtasar*, transcribed by Husayn ibn Yusuf for the neo-Umayyad caliph al-Hakam in Sha'ban 359/June-July 970, is written in broken cursive.⁴⁸ More impressive is a dispersed Koran codex (Figure 5.4) transcribed at Palermo in 372/982-3.⁴⁹ Like many manuscripts made in the Maghrib, the Palermo Koran is copied on parchment, which remained the favored support there for a longer time than it did in the east. The difference between the hair and flesh sides is clearly visible in this double page, where the ink adheres better to the hair side on the right. The seventeen lines of text are penned in black ink in *scriptio defectiva*, in which long *alif* is often omitted and added in red ink. The letters are not pointed, but some have distinctive shapes. Note particularly the

Figure 5.4 Double page containing Sura 23:43-75 from a parchment Koran manuscript with seventeen lines per page copied at Madinat Siqilliyya (i.e., Palermo) in 372/982-3.

This manuscript shows that that the style of broken cursive quickly became popular throughout the Islamic lands, including the Maghrib. Gold rosettes mark the end of every verse, gold heart-shapes the end of every five verses, and gold quadrangles the end of every ten verses. Verse 60, at the bottom of the right-hand page is marked with a *sad*, the *abjad* system used in the Islamic west.



Figure 5.4a



Figure 5.4b



Figure 5.4c

angular bowl-shaped tails to many letters, especially *mim*, *nun*, and *waw*. Medial *fa'* and *'ayn* are diamond-shaped, and final *alif* ends with a spur or point at the bottom (Figure 5.4a). The upper strokes of *ha'* and *kaf* are diagonal, and letters are connected along a flat baseline with a V or notch. *Kaf* and *sad* are elongated and set above the baseline in patterns of parallel bars when incorporated into longer words, as in *tankisuna*, the last word of the seventh line on the left page (Figure 5.4b). The vocalization is distinct as well. Red dots indicate vowels, a yellow dot disjunctive *hamza*, and blue dots connective *hamza*. A red semi-circle open at the bottom indicates *sukun*.

In addition to *sura* titles in gold, the Palermo Koran has individual verses marked with a gold rosette and groups of five verses with a gold *ha'*. Both of these markers are well-known types, but the gold looped quadrangle marking ten verses is more distinctive. Inscribed inside or above it is a small black letter indicating the verse count using the alphanumeric (*abjad*) system followed in the Maghrib and used in the Blue Koran (Figure 4.10).⁵⁰ Thus, the quadrangle near the bottom left of the right page of the Palermo Koran (Figure 5.4c) has a *sad* to indicate sixty, rather than the *sin* used in the eastern system.

The Palermo Koran also has many distinctive marginal markers painted in reserve within polychrome decoration, mainly red and green. These markers indicate not only the standard divisions into sixtieths (*ahzab*) and thirtieths (*ajza'*), but also tenths, ninths, sevenths, and fifths. The right-hand page illustrated here, for example, bears a marginal marker saying, somewhat unusually, that this is the first half of the seventh ninth and the beginning of the fifth seventh.

The text of the Palermo Koran is also distinct. It follows the reading of the Madinan Nafi' (d. 785), traditionally cited as the first of the seven canonical readings of the Koranic text, as transmitted by his student Warsh (d. 812). Warsh's transmission (*riwaya*) became standard in the Maghrib in the ninth century.⁵¹ The manuscript reflects a traditional theological position, for the palmette on the frontispiece contains the statement that the Koran is the word of God and was not created (*wa laysa bi'l-makhlūq*). This was a sharp rebuke to the Mu'tazilites, whose views about the createdness of the Koran had split the Muslim community in the previous century. Clearly, this controversy still occupied the minds of many in the Western Islamic lands in the tenth century.⁵²

Altogether, then, many features – from parchment support to text and frontispiece, script, vocalization, division into various parts, and *abjad* numbering system – all support the statement given in the signed frontispiece that this manuscript was made in the Maghrib. More importantly, they confirm the multi-pronged approach necessary to localize early Koran manuscripts.

The most famous Koran manuscript transcribed in broken cursive in the Maghrib (Figure 5.5) is the Nurse's Koran, so-called because two notes in a contracted round hand report that Fatima, the former nurse (*al-hadina*) of the Zirid prince al-Mu'izz ibn Badis, endowed it

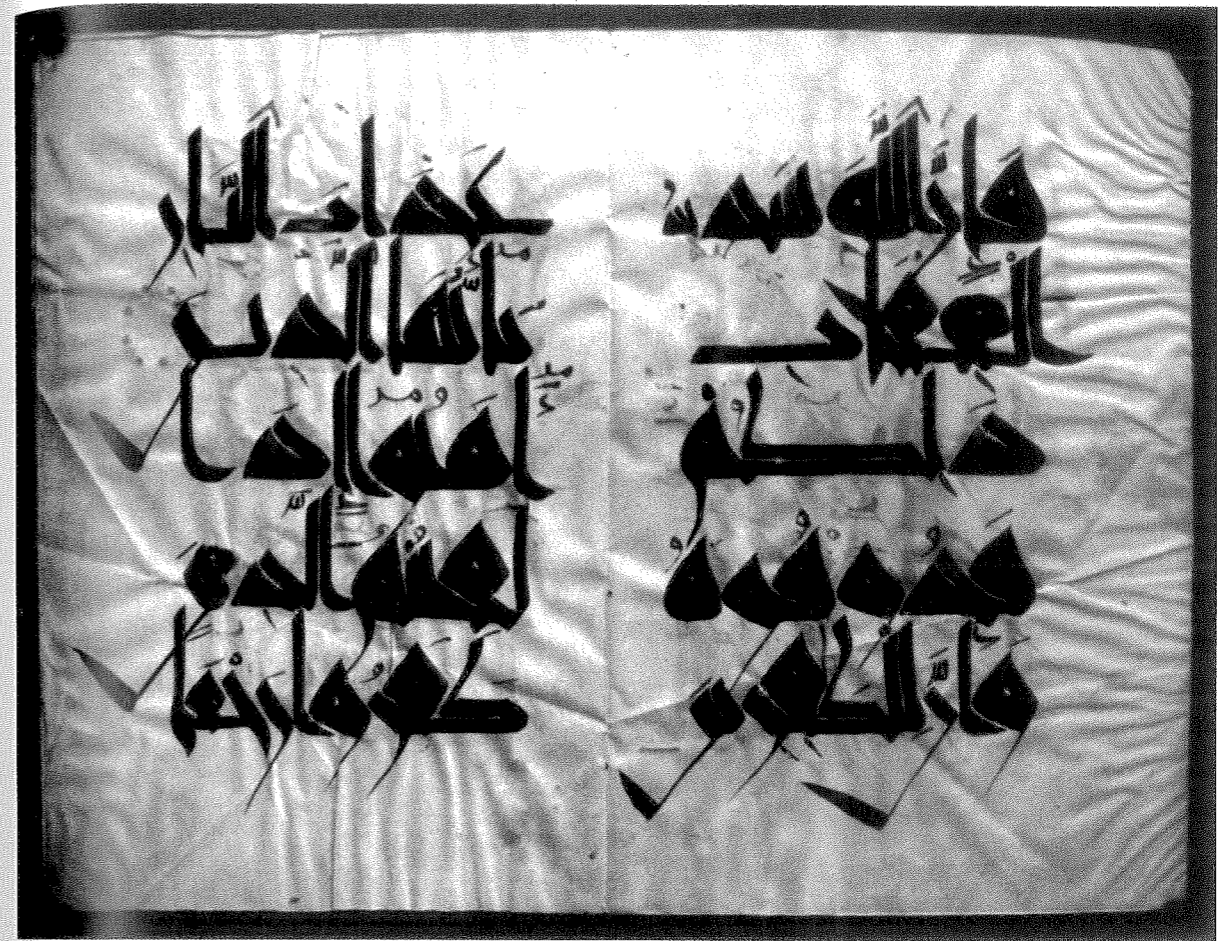


Figure 5.5 Double page containing Sura 8:13–14 from a parchment Koran manuscript with five lines per page copied and illuminated by 'Ali ibn Ahmad al-warraq (the bookseller or copyist).

This famous manuscript is known as the Nurse's Koran because it bears a notice saying that the nurse (*al-hadina*) of the Zirid prince al-Mu'izz ibn Badis endowed it to the Great Mosque of Kairouan in Ramadan 410/January 1020. The colophon states that 'Ali ibn Ahmad *al-warraq* was responsible for its entire production, from transcription to binding. The script is an exaggerated example of broken cursive in which the contrast between thick and thin strokes is extreme.

to the Great Mosque of Kairouan in Ramadan 410/January 1020 and that that 'Ali ibn Ahmad *al-warraq* (the bookseller or copyist) wrote (*kataba*), voweled (*shakala*), marked (*rasama*), gilded (*dhahhaba*), and bound (*jallada*) this Koran manuscript (*mushaf*) for the exalted nurse under the supervision of Durra, the female secretary (*al-katiba*).⁵³ The text is copied in brown ink on very large (45 × 30 cm) parchment folios in a vertical format with five lines of broken cursive per page. The text is not pointed, but vowels are marked in red, *sukun* and *shadda* in blue, and *hamza* and *madda* in light green.

The broken cursive used for the Nurse's Koran is remarkable for its

mannerism. Note, for example, the extreme contrast between the thick strokes of most letters and the thin ones used for tails and descenders. This contrast is particularly striking in final *nun*, used twice in the bottom line of the right page and twice at the end of the second and fourth lines of the left page. The round bowl of *nun* has been transformed into a diagonal hair connected at right angles to a thick blade so that the letter looks like a hockey stick or an upsidedown pennant. Other pages show equally stylized features. The tail of final *ya*, for example, sometimes reverses back under the word with bumps, the same kind of final *ya* that 'Ali ibn Shadhan had used in his copy of the Koran transcribed some fifty years earlier (Figure 5.3a).⁵⁴

In the Maghrib broken cursive was not limited to Koran manuscripts, but used also for Arab-Christian manuscripts, such as a bilingual Greek-Arab copy of the Gospels that once belonged to the Church of the Holy Sepulchre in Jerusalem.⁵⁵ Nevertheless, its use there was sporadic, and the style was particularly popular in Iran and the eastern Islamic lands, to judge from the many surviving copies of the Koran and other texts transcribed there. Colophons in Koran manuscripts mention such cities as Isfahan⁵⁶ and Rayy.⁵⁷ In other cases, the copyist's *nisba* connects the manuscript to Iran and the east. Such *nisbas* include al-Saffar,⁵⁸ al-Rudhbari,⁵⁹ and al-Balkhi.⁶⁰

Broken cursive was used in Iran and adjacent areas during this period for a series of Koran manuscripts. The typical copy is medium-sized, on the order of 20 × 17 cm, with a compact script and many lines per page (up to twenty-five). Verses are separated by gold rosettes; groups of five are marked with a large *ha*, the alphanumeric (*abjad*) number for five, and groups of ten with a gold circle, with roundels in the margin reiterating this last piece of information. *Sura* titles are given in gold or white on gold, typically with a palmette extending into the margin. The basmala is often decorated and extended, and knotted or interlaced letters are also typical. Al-Rudhbari, for example, transformed the typical diamond-shaped *mim* in *al-rahman* into a knot and braided the horizontal strokes of the *ta* in the heading for *Sura Ta-Ha* (20).⁶¹

These Koran manuscripts in broken cursive share several textual features with the one copied by 'Ali ibn Shadhan al-Razi al-Bayyī in 361/972 (Figure 5.3). Most of them use the new system of orthography and vocalization. The large round dots used in kufic Korans were reduced in size or eliminated, and new markings introduced such as strokes for *fatha* and *kasra*, *waw* for *damma*, and a circle for *sukun*. This is the system still used today. Most of these small Koran manuscripts also have extra illuminated pages detailing the particular reading of the Koran they contain and the number of verses in the text. Both the small size and the detailed markings and numberings show that these Koran codices in broken cursive were intended for a different audience than the large-format ones in kufic: personal reading and

study rather than oral recitation by scholars who had already committed the text to memory.

Broken cursive and Ibn Muqla

The style of broken cursive used in these copies of the Koran and other texts is often associated with the star calligrapher Abu 'Ali Muhammad ibn 'Ali, known as Ibn Muqla.⁶² Born in Baghdad in 885, he became a secretary in the 'Abbasid administration and served as vizier three times between 928 and 936. With the economic and financial crisis under the caliph al-Radi (r. 934-40), Ibn Muqla was deposed, his possessions confiscated, and his hand amputated. He died, neglected, in prison on 10 Shawwal 328/20 July 940.

Despite his ignominious end, Ibn Muqla was revered for his calligraphy. The chronicler Ibn al-Nadim, writing some fifty years after Ibn Muqla's death, mentions him several times in the *Fihrist*. The best known occurs in the opening chapter on language and calligraphy.⁶³ There, Ibn al-Nadim lists Ibn Muqla as one of three viziers and secretaries in office in the early tenth century who wrote in black ink (*midad*). Ibn al-Nadim continues that Muhammad's brother Hasan wrote in brown ink (*hibr*), adding that the like of these two brothers had not been known in the past or even as late as his own time (the late tenth century). Ibn al-Nadim also notes that both wrote according to the calligraphy of their grandfather Muqla, whose real name was 'Ali ibn al-Hasan ibn 'Abdallah. Later in the section on government officials who wrote books, Ibn al-Nadim adds that he had read something written in Ibn Muqla's hand. Ibn al-Nadim transcribed the four-page account according to the order and wording used by the author and included it in his treatise.⁶⁴ By the end of the tenth century when Ibn al-Nadim was writing, it seems that Ibn Muqla's distinctive hand was already recognizable.⁶⁵

We get more secure information about Ibn Muqla and his hand from the small treatise on calligraphy by the philosopher, man of letters, and professional copyist, Abu Hayyan al-Tawhidi (d. 1023), who wrote a generation after Ibn al-Nadim.⁶⁶ Abu Hayyan reports that he had attended a salon crowded with copyists and penmen, each of whom revealed his own secret advice about calligraphy. Abu Hayyan's short epistle contains ninety-five such pieces of advice, all presumably heard first-hand by the author.

Abu Hayyan opens with four different authorities describing the reed pen (*qalam*). The first three are anonymous; the fourth is Ibn Muqla, who is described as the noble vizier and expert penman/secretary (*katib*). Ibn Muqla's advice is to lengthen the nib (*jilfa*), make it good, and trim the point obliquely to the right, for the point determines the handwriting. His advice is generic, and it is anachronistic to imagine that these texts will serve as how-to manuals explaining the art of calligraphy to outsiders.

The metaphoric nature of the written sources is confirmed by the next passage describing what an expert penman should do. Abu Hayyan does not specify whether this long passage also records the words of Ibn Muqla, but since all other reports begin by citing the authority and since no new authority is mentioned here, we can logically ascribe it to him.⁶⁷ According to the heading, a penman needs seven things, though the passage actually enumerates ten qualifications of good handwriting, each designated by a rhyming verbal noun (*masdar*), which is then explained. The ten basic principles of writing are: (1) (plain) through *tahqiq* (precision), thereby giving the individual letters distinct shapes; (2) *tahdiq* (making eyeballs), leaving space in the middle of round letters; (3) *tahwiq* (encircling), rounding the front, middle and tail of *waw*, *fa'*, and similar letters; (4) *takhriq* (piercing), keeping the loops of *ha'*, *'ayn* and similar letters open; (5) *ta'riq* (causing to take root?; distillation), lengthening final *nun*, *ya'*, and similar letters in such words as *min* or *fi* as if spun on a single loom; (6) *tashqiq* (splitting), enveloping (perhaps elongating?) *sad*, *kaf*, and *ha'* for proportion and equilibrium; (7) *tanmiq* (embellishing), writing all letters neatly; (8) *tawfiq* (arranging suitably), keeping the lines straight; (9) *tadqiq* (exactness), making the tails of the letters with broad flowing strokes written with the edge of the reed pen; and (10) *tafriq* (division), keeping the letters separate so that they do not encroach upon each other. The characteristics define a balanced rounded script with open letters and extended tails written with the edge of the pen.

Abu Hayyan mentions Ibn Muqla three other times in his short treatise. All three references underscore the vizier's calligraphic skills. In section 15, for example, the secretary Abu 'Abdallah al-Zanji reports that the best handwriting was the one used by his colleagues in Iran. When Abu Hayyan inquired about Ibn Muqla's handwriting, al-Zanji replied that Ibn Muqla was a prophet in the field of handwriting; it was poured upon his hand, even as it was revealed to the bees to make their honey cells hexagonal. In this passage al-Zanji is referring to Koran 16:68, in which God is said to have taught the secrets of nature, such as showing the bee how to build its hive.

Within a century of his death, then, Ibn Muqla was famed for his distinctive hand. His reputation only increased in later times. The thirteenth-century biographer Ibn Khallikan, for example, credits Ibn Muqla with the new writing or the writing of present times, and the seventeenth-century encyclopedist Hajji Khalifa calls this writing *al-khatt al-badi'* (the marvellous script).⁶⁸ Since later scripts were round, later scholars wrongly inferred that Ibn Muqla had invented round scripts.

This new style was later canonized as *al-khatt al-mansub*, an expression that Nabia Abbott took to mean proportioned writing.⁶⁹ Using later authors as a guide, notably al-Qalqashandi (d. 1418), a secretary in the Mamluk chancery and author of the voluminous encyclopedia entitled *Subh al-a'sha* (Dawn for the Night-blind), and the

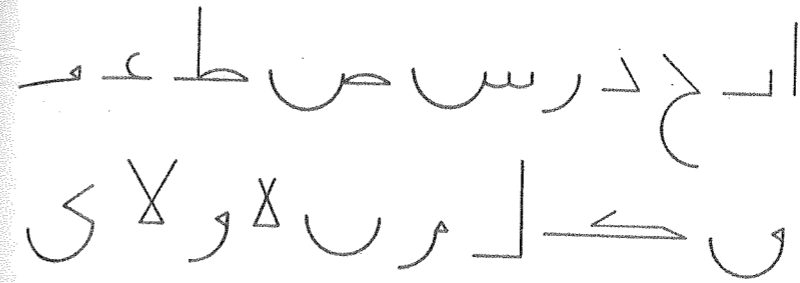


Figure 5.6 Nabia Abbott's reconstruction of Ibn Muqla's proportioned script.

Using the system of dots attributed to the tenth-century calligrapher Ibn Muqla, Nabia Abbott worked out a tentative reconstruction of the basic proportioned forms of the letters in Ibn Muqla's proportioned script (*al-khatt al-mansub*). Her reconstruction, however, is based on much later sources and shows only one of several possibilities.

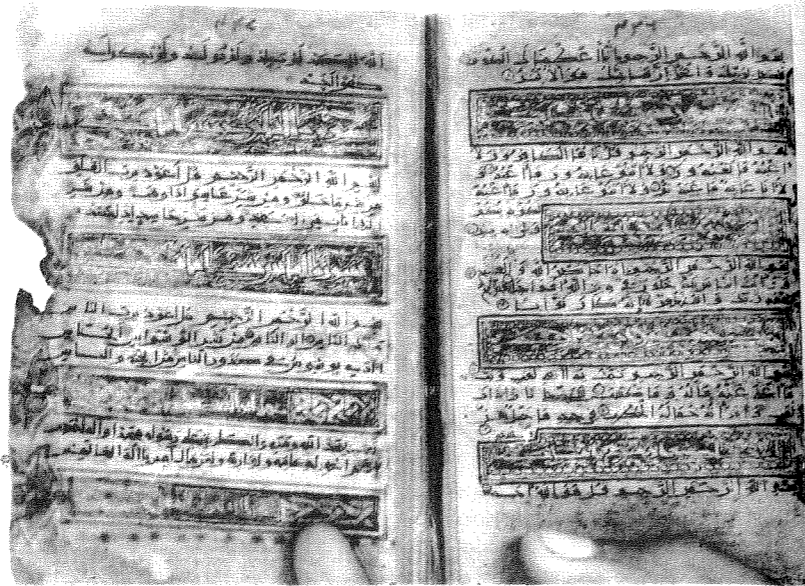
anonymous Ibn 'Abd al-Salam, she worked out a system starting with a diamond-shaped point made by the pen when pressed heavily on the paper. The length of the sides of the rhombus depended on the width of the nib. Several dots placed vertex to vertex determined the height of the *alif*. All other letters were then related (*nusiba*) to this basic measure. As she noted, later sources spelled out the basic idea for the system, but not the exact proportion. The letter *ba'*, for example, is made of two strokes, one vertical, the other horizontal. The sum of the two is equal to the height of the *alif*, but the sources do not tell us the ratio of horizontal to vertical, which could vary from 1:1 to 1:5. By choosing one of several possibilities, Abbott reconstructed a hypothetical model for the proportioned script (Figure 5.6). It is essential to remember, however, that her model is based on much later sources (al-Qalqashandi, for example, was writing some five hundred years after Ibn Muqla) and is based on a series of personal choices.⁷⁰ A mistake in any one of those choices results in an error that distorts the whole schema.

If it is impossible to identify Ibn Muqla's hand from literary descriptions, it is only slightly less difficult to do so from surviving specimens. Like any hero, Ibn Muqla was idolized and his name added to multiple works. Many libraries contain pages or manuscripts with later marginal ascriptions attributing the transcription to Ibn Muqla.⁷¹ Even if not all are authentic, at least they give an idea of what people in medieval times (and later) thought Ibn Muqla's hand looked like. One example (Figure 5.7) is a tiny (12 × 9 cm) vertical-format Koran manuscript in the Raza Library in Rampur with twenty-three lines of broken cursive on each of the 215 vertical folios.⁷² Most of the large rectangular boxes contain chapter headings, but the two damaged ones on the bottom left sandwiching two lines of script contain the colophon, written in a different hand than the rest of the text.⁷³

The script, as with other pages attributed to Ibn Muqla, is a good example of broken cursive. Letters are set closely together on a flat baseline, occasionally with a notch or V between connected letters. The elongated bodies of *sad*, *kaf*, and *ha'* emphasize the horizontality. This is countered by the straight vertical line of *alif*, which has a short downstroke or spur at the bottom in final position. The tails of final *nun*, *ra'*, and similar letters are large and sweeping. Initial *'ayn* is large and open. Final *ya'* can turn backwards under the preceding word with

Figure 5.7 Closing double page containing Suras 108-14 from a parchment Koran manuscript with twenty-three lines per page signed by Ibn Muqla and dated 321/912

This manuscript is signed and dated in the boxes at the bottom of the left page that appear to be in a slightly different hand than that used for the rest of the text. Nevertheless, the manuscript is the best possible candidate for an authentic example of this renowned calligrapher's hand. The script is angular, spacious, and well proportioned. It represents the regularization of broken cursive.



bumps under the other letters, as in the word *sayasla* from Sura 111 on the bottom left (Figure 5.7a). This is the same mannerism used in the Koran manuscript penned by 'Ali ibn Shadhan (Figure 5.3a) and the one made for the Zirid nurse. Some letters have small serifs on the left.

The crisp, well-defined letters in the broken cursive assigned to Ibn Muqla enhance its legibility, a clear requisite for someone trained in the chancery. Features such as the consistent orthography and vocalization and the introductory pages with recension and verse counts also fit the chancery tradition of record-keeping. This script is clearly rooted in the round book script used since the ninth century (Figure 5.1). By the tenth century secretaries had elevated it into a well-proportioned and smooth script worthy of transcribing God's word.

The standardization of round scripts under Ibn al-Bawwab

The style of broken cursive canonized by Ibn Muqla and his circle at the beginning of the tenth century was a stiff and mannered script. Common until the thirteenth century, it became increasingly attenuated and stylized (see Chapter 6) and was soon joined and eventually supplanted by more free-flowing styles of round script. Just as the canonization of broken cursive was later associated with one historical figure, so the transformation of round script into one worthy of transcribing the scripture was later associated with a single person—Abu'l-Hasan 'Ali ibn Hilal, known occasionally as Ibn al-Sitri and more commonly as Ibn al-Bawwab. D. S. Rice collected the few details given by later chroniclers about Ibn al-Bawwab's life.⁷⁴ As his penname literally suggests, he was the son of a doorkeeper.⁷⁵ He worked first as a house decorator (*muzawwiq yusawwir al-dur*), then

illuminated books (*sawwara al-kutub*), and finally took up calligraphy, in which, according to the thirteenth-century chronicler Yaqut, he excelled all those who had preceded him and confounded all those who came after him. Ibn Khallikan gives a similar assessment, reporting that Ibn al-Bawwab revised and refined (the method of Ibn Muqla) and vested it with elegance and splendor. Medieval chroniclers report few facts about his life, beyond personal details like his long beard and his burial, following his death at Baghdad in 413/1022, near the tomb of Ahmad ibn Hanbal, one of the most revered sites of pilgrimage in the city.

As part of his interest in calligraphy, Ibn al-Bawwab composed an epistle on penmanship as well as a didactic poem in *basit* meter rhyming in *ra'*, in which he mentions the craft of writing and matters related to it.⁷⁶ Part of the poem has been preserved in various sources, including the treatise on history, *al-Muqaddima*, by the great Arab historian Ibn Khaldun (d. 1382), who judged Ibn al-Bawwab's poem one of the best things ever written on the subject.⁷⁷ The poem begins:

O you who want to write a calligraphic hand
 And desire to write and draw [the letters] well:
 If you are truly desirous of mastering the art of writing,
 Pray that your Master make [sic] it easy for you!
 Prepare a calamus that is straight
 And strong, capable of fashioning elegant writing with craft.
 If you propose to nib the calamus, aim
 At applying to it the greatest symmetry.
 Look at both ends of it, and then nib it
 At the end where it is thin and narrow.
 Give the part of the calamus that is nibbed a moderate size,
 Neither too long nor too short,
 And make the split precisely in the middle of the calamus so that
 the space nibbed
 On both sides of it will be exactly equal.
 Eventually, when you have done all this as carefully
 As the careful craftsman who knows what is wanted,
 Then, turn all your attention toward cutting the point,
 For cutting the point is the crux of the procedure.
 Do not beg me to reveal its secret.
 I am chary of its secret, a thing concealed.
 But the sum total of what I want to say is that
 The [point] should be something between oblique and round.
 Stir the [ink in the] inkstand with soot that is treated
 With vinegar or verjuice.
 Add to it red pigment that has been diluted
 With orpiment and camphor.
 Eventually, when [the ink] has fermented,
 Go to the clean, pleasant, tested paper.
 After cutting it, press it with a press, so as



Figure 5.7a

To remove all trace of crumpling and soiling.
 Then, make patient imitation your habit.
 Only a patient person achieves what he desires.
 Begin by writing on a wooden slate, wearing it out
 With a resolution kept free from haste.
 Do not be ashamed of your bad writing
 When you begin to imitate [the letters] and draw lines.
 The matter is difficult [at the beginning], and then becomes easy.
 Many a thing that is difficult [at the beginning] turns out later on
 to be easy.

Eventually, when you have achieved what you have hoped for,
 You will be filled with joy and gladness.
 Then, thank God and do His pleasure!
 God loves all those who are grateful.

Furthermore, pray that the fingers of your hand will write
 Only what is good for you to leave behind in the house of deception.
 Everything a man does, he will be confronted with on the morrow,
 When he is confronted with the written decrees [on the Day of
 Resurrection].

Somewhat generalized and couched in metaphors, Ibn al-Bawwab's poem could never be used to learn how to write like Ibn al-Bawwab did. Nevertheless, it tells us a few things about calligraphy in his time. Like his predecessor Ibn Muqla, Ibn al-Bawwab gives precedence to the correct procedure for nibbing the reed pen, but Ibn Bawwab favors a different cut. Ibn Muqla advised that the point be trimmed obliquely to the right, but Ibn al-Bawwab advocates a symmetrical nib with something between a slanted and a rounded edge. Ibn al-Bawwab's poem also assumes that copyists wrote with a black, soot-based ink on paper, supporting the paper on a wooden board.

Ibn al-Bawwab's reputation has attracted attributions just like his predecessor Ibn Muqla's did. Six manuscripts have colophons naming Ibn al-Bawwab. The most famous is the Koran codex in the Chester Beatty Library, whose long and full colophon reports that 'Ali ibn Hilal transcribed this complete copy (*jami'*) at Baghdad in 391/1000-1.⁷⁸ Now trimmed, the 286 folios of polished brownish paper originally measured some 19 × 14 cm. Each page (Figure 5.8) contains fifteen lines of round script posed firmly on a straight baseline with no sign of ruling. The text is written in the *scriptio plena* and fully vocalized, with vowels and consonants written throughout in the same ink. Unpointed (*muhmala*) letters – *ha'*, *sad* and *'ayn* – are almost always distinguished by small versions of the same letters written below; *sin* and *ra'* are marked by an inverted circumflex above. Even though the script is about twice the size of that used in the copy attributed to Ibn Muqla (the *alif* here measures about .6 cm, whereas it is .3 cm in the Rampur manuscript), this codex has a denser aspect, as words and lines are packed more closely together.⁷⁹

Despite its compactness, the text is eminently readable because of

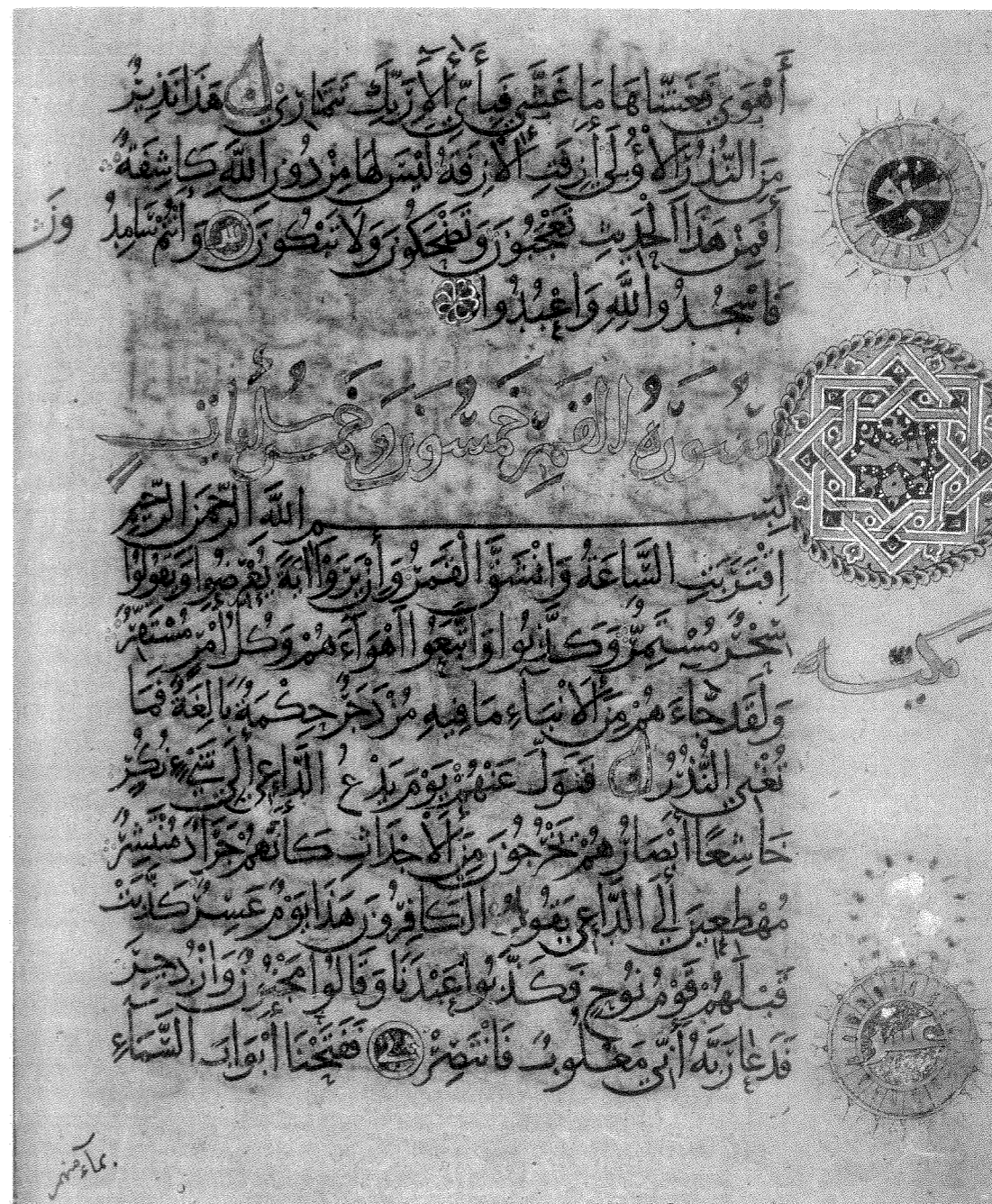


Figure 5.8 Page containing Suras 53:53-54:11 from a Koran manuscript with fifteen lines per page signed by 'Ali ibn Hilal, commonly known as Ibn al-Bawwab, at Baghdad in 391/1000-1.

This manuscript is generally reckoned to be the one authentic copy of the Koran penned by the renowned calligrapher Ibn al-Bawwab. It shows his new style of round script, remarkable for its clarity, neatness, and flow despite its modest size. This text script is juxtaposed to a more curvaceous one, used here as display script for the chapter heading. Other incidentals are added in a third script, broken cursive.



Figure 5.8a

the flowing hand. Letters are pitched just to the left of vertical, and individual words and letters like *kaf* typically slope downward from right to left, a movement echoed in the pairs of dots, which are written on the same right-to-left downward slope. The slope imparts a forward moment to the script, a flow that is enhanced by the strong sublinear rhythm created by the long swooping tails of final *nun*, *ya*, and similar letters, which extend beneath the next word and sometimes encircle other descending tails before tapering to a point (Figure 5.8a). The script swells and contracts. To make a musical analogy, if the broken cursive attributed to Ibn Muqla is staccato, Ibn al-Bawwab's round hand is legato.

The sense of flowing movement engendered by the sloping strokes and sweeping tails is enhanced by the long sweeping stroke near the beginning of the basmala at the opening of most chapters (Figure 5.8a). At least since the ninth century, copyists writing round scripts on paper had used a long extender to visually demarcate the beginning of a new section of text, as with the word *qala* in the copy of the *Gharib al-Hadith* (Figure 5.1). This long stroke takes advantage of the inherent smoothness of the support and displays the copyist's virtuosity in pushing pen across page without wavering. From the late tenth century, copyists transcribing Koran manuscripts in broken cursive on the new support adopted this mannerism, an action that confirms the origins of broken cursive in round scripts.⁸⁰ Copyists typically lengthened the basmala to fill out the first line of text by inserting a long connector between the *ha'* and the *mim* of *al-rahman*.⁸¹ The extender therefore sits in the middle of the line. Ibn al-Bawwab's copy marks a change, for he lengthened the connector between *sin* and *mim* in *bism*, near the beginning of the line. Like a paragraph marker, the swinging stroke alerts the reader to a new section and then draws the eye across the page. This asymmetrical extender in the basmala becomes part-and-parcel of manuscripts and documents written in round scripts for centuries to come (e.g., Figures 6.12, 7.1, 8.1, 9.2, 10.3, 11.2, 12.2 and 13.2). Manuscripts in *maghribi* script (e.g., Figures 6.16, 9.12, and 12.13), in contrast, continue to use the centered extender, a mannerism that suggests the origin of that style in copyists' broken cursive.

When transcribing the text, Ibn al-Bawwab left no spaces between individual verses, later inserting clusters of three blue dots set in a triangle to mark the end of a single verse.⁸² But he did leave spaces at the end of every five and ten verses, later filling these spaces with the standard gold markers (*ha'* for five verses, a gold circle for ten). He inscribed the gold circle with a letter whose *abjad* value corresponds to the appropriate decade, and added a larger roundel in the margin that repeats the information with the decade written out in words. At the top of this page (Figure 5.8), for example, a gold *ha'* on the first line marks the fifty-fifth verse of Sura 53, a gold circle with *sin* (the alphanumeric for sixty in the eastern system) marks the sixtieth verse, which is further signaled by the large roundel in the margin with the word *sittun* (sixty) written out in words in broken cursive.

This system of gold markers too becomes the standard in later manuscripts (e.g., Figure 7.1). Larger roundels in the margin marked places of prostration, as here where the larger roundel with an interlaced star is inscribed *sajda* (prostration) in the same script.

Along with the round script of the text and the broken cursive of the markers, Ibn al-Bawwab used a larger round script for display purposes such as double-page frontispieces like this one (Figure 5.9) saying that this manuscript follows the verse count of the Kufans on the authority of 'Ali ibn Abi Talib.⁸³ Chapter headings, like the one marking the beginning of Chapter 54, Surat al-Qamar (Figure 5.8),⁸⁴ are written in a similar script but in two colors of gold ink, with yellow gold used for the words and coppery gold used for vocalization and diacritical marks. Ibn al-Bawwab deliberately distinguished this information, which is not part of the revelation, not only by size and script but also by color, outlining white letters with gold and gold letters with black or white.

Ibn al-Bawwab's display script (Figure 5.9) is distinguished by its curves. Descending tails of *nun* and similar letters are rounded and often impinge upon the next word. *Alif* is almost triangular, with a thick top that is beveled or furnished with a small hook to the right. At the bottom it has a hook to the left that sometimes connects to the next word. Final *ha'* is usually a squiggle that is open at the bottom.⁸⁵ *Dal* is relatively large, as in the word *muhammad* in the compartment in the middle right. *Ra'*, *waw*, and final *mim* often, though not always, end with a small upward hook, as at the end of *al-qamar*, the second word in the *sura* heading (Figure 5.8).

In addition to the elegant and legible text and display scripts, Ibn al-Bawwab's Koran manuscript is notable for its fine illumination. Text pages are decorated in the traditional blue, gold, and sepia, and the opening and closing pages include decoration in brown, white, green, and red as well. The illuminations are clearly done by the same hand that penned the manuscript, for the contour lines around the marginal palmettes marking the *sura* headings are drawn with a reed pen, not with the brush used for the rest of the decoration. Furthermore, in two places the illuminator drew the contours not with the standard blue pigment, but with the brown-black ink used for the text. Such a mistake could have occurred only if copyist and illuminator were the same person. This diversity of talent was not unique to Ibn al-Bawwab, and many other copyists of his time were also illuminators.⁸⁶

Identifying the round scripts that Ibn al-Bawwab used to transcribe this Koran codex is a complex problem. The scripts are not labeled, and textual sources say only that the calligrapher was a master of many scripts.⁸⁷ Rice designated the text script *naskh* and the display script *thuluth*,⁸⁸ and many modern scholars have followed suit.⁸⁹ This pair of small and large scripts are the most common of the round scripts later grouped as the Six Pens. *Naskh* (literally, copying), as its name suggests, was used to transcribe a variety of texts and became the calligraphic norm for transcribing ordinary books and small



Figure 5.9 Left half of a double-page frontispiece with octagonal compartments from a Koran manuscript signed by Ibn al-Bawwab at Baghdad in 391/1000-1.

The illuminated double pages at the beginning and end of this Koran manuscript show other round scripts. The page shown here stating that this copy follows the verse count of the Kufans on the authority of 'Ali ibn Abi Talib shows how the letters in the display script begin to be linked together, as in the word *Abi* in the compartment on the upper left.

Koran manuscripts. It is generally described as neat and balanced, with an equal division between flat and round shapes and heavy and light strokes.⁹⁰ It is easy to read, especially for modern readers, since it is the basis for modern typography.

Naskh's larger counterpart is known as *thuluth* (or *thulth*), a verbal noun designating a third part or portion.⁹¹ The earliest sources about the measured script (*al-khatt al-mansub*) contain proportional names such as one-half (*nisf*), one-third (*thuluth*) and two-thirds (*thuluthayn*), and writers since medieval times have puzzled over what these names mean. The Mamluk chronicler al-Qalqashandi, for example, puts forward two hypotheses.⁹² One theory tries to apply these names to the proportion of straight lines in a particular style. Thus, *thuluth* is said to have one-third straight lines (and two-thirds curved).⁹³ According to another theory, the names relate to the size of the pen (*qalam*) used to write on the different-sized pages.⁹⁴ Other modern writers on the subject have suggested that the proportional system derived from the number of rhomoidal points made by pressing the nib of the quill pen on paper.⁹⁵ All of these theories must remain hypothetical as the information given in the early sources is unclear. Most of it is known only second-hand, and later authors clearly did not understand what earlier sources were talking about. Ibn al-Nadim makes such a hash out of what his predecessor Ibn al-Thawaba (d. 890) had said a century earlier that it is impossible to translate the passage so that the numbers and headings agree.⁹⁶

Noting the differences between the scripts that Ibn al-Bawwab penned and the versions of *naskh* and *thuluth* that we know today, other scholars, notably those who are themselves calligraphers, have designated Ibn al-Bawwab's scripts differently. Habiballah Faza'ili, for example, called Ibn al-Bawwab's text script *naskh* mixed with *rayhan* as well as traces of *thuluth*; Uğur Derman used simply *rayhan* for the text script and *tawqi'* for the display script.⁹⁷ Both are round scripts later included as two of the Six Pens.

The first of these round scripts, *rayhan* (literally, sweet basil), may go back to 'Ali ibn 'Ubayda al-Rayhani (d. 834-5), a man of letters and intimate of the 'Abbasid caliph al-Ma'mun who was described in the *Fihrist* as a master of elegant writing and style.⁹⁸ Like *naskh*, *rayhan* is a small script (its larger counterpart today is *muhaqqaq*). The modern version of *rayhan* is written with serifs on *alif* and *lam*, looped letters that are open (not filled in or blind), as well as longer tails and more rounded bowls than those used in *naskh*, all features that can be seen in Ibn al-Bawwab's hand in this Koran manuscript.⁹⁹

The second of these round scripts, *tawqi'*, is the verbal noun of the intensive form *waqqa'a* derived from the verb *waqa'a* (to sign) and designates the inditing or registering of a ruler's decree. S. M. Stern determined that in 'Abbasid times the term came to mean the ruler's official signature, written in the form of a short slogan or motto added to a decree after it had been written to verify it.¹⁰⁰ Like the protocol on a papyrus scroll (Figure 2.1), the signature was written in a

distinctive large script. We know about 'Abbasid versions of this formal signature only from textual sources,¹⁰¹ for the first surviving documents with such signatures survive only from the twelfth century (Figure 6.7). Such signatures, like handwritten signatures today, are marked by unauthorized connections between letters. For example, *alif*, which should never connect to the following letter, can be connected to *dal* in this script, and similarly *ra'* to *jim*. Final *nun* is often distended so that it can be indistinguishable from *ra'*. In the prefix *alif-lam*, the *alif* is usually connected to the preceding word and dissolves into a small horizontal stroke leading into the *lam*. Initial *ta'* is distorted into a wavy line. The fluidity shows that these were chancery scripts, in which speed was essential. This pair was then adopted for fine calligraphy, used mainly for signatures and colophons. Ibn al-Bawwab's large display script shows such unauthorized connections between letters that do not regularly join. In the frontispiece (Figure 5.9), for example, *alif* connects to *ba'* in the word *abi* in the octagonal compartment on the upper left. Similarly, in the *sura* heading (Figure 5.8), the tails of *ra'* impinge on the next word and the initial *alif* in the last word *ayat* begins with a swinging stroke.¹⁰²

The round scripts that Ibn al-Bawwab used in his Koran manuscript, then, fall between the scripts as we know them today.¹⁰³ Ibn al-Bawwab's hand in this manuscript also differs from the round script used in contemporary Koran manuscripts made in the region, which generally have shorter tails and smaller bowls, features associated with modern *naskh*.¹⁰⁴ We should not be surprised at such differences in style, for no such standardization was possible at this time. Although any single copyist may have thought that he was writing a particular type of round script, it is anachronistic to imagine that these scripts were uniform in all times and places. Styles of writing changed. Criteria varied. Those of us taught to write cursive in American schools in the 1950s and 1960s were all expected to emulate the swooping cursive written in white on green cards posted at the top of the blackboard. Such standardization through a printed text, however, is a modern phenomenon, and no such style-sheet was available in medieval times when learning was multi-centered and transmitted individually from master to pupil. The same holds for literary works. Whereas people today expect a standardized printed edition with a single date of publication, medieval texts were revised constantly. Epic poetry was recited orally, with variations possible at each recital and committed to writing long after composition. Standardization is a modern phenomenon.

We can see the variations possible in the round scripts at the this time by examining another – and quite different – manuscript signed by Ibn al-Bawwab: a luxury codex containing the collected works of the pre-Islamic poet Salama ibn Jandal as recorded in two recensions (a Basran one by al-'Asma'i and a Kufan one by Abu 'Amr al-Shaybani which was read before 'Umar) that were united in the ninth century

by Muhammad ibn al-Hasan al-Ahwal.¹⁰⁵ Pinned on large (42 × 31 cm) sheets of fine creamy paper in gold and black ink, the 34-folio manuscript contains a large gold colophon stating that it was copied in Ramadan 408/January–February 1018 by 'Ali ibn Hilal, referring to Ibn al-Bawwab (Figure 5.10). The manuscript quickly became a prized possession in eastern Iran, for an extremely elaborate but partly effaced *ex-libris* on folio 1a says that it was for Abu Sahl ibn Hibatallah al-Muwaffaq, leader of the Shafi'ite community in Khurasan and vizier who bore these titles c. 455–6/1063–4.¹⁰⁶

This copy of the poems of Salama ibn Jandal juxtaposes two round text scripts for text and commentary. On regular pages, the lines of Salama's poetry written in a large heavy script are followed by shorter lines of commentary written in a smaller and lighter one. Size and script thus distinguish text (in this case, eight poems with 136 verses) from commentary. The two distichs of Salama's poetry are too long to fit in a single line, so the line text runs off at an angle to the lower left.¹⁰⁷ This format sets the model for other poetic texts, notably copies of al-Busiri's poem on the Prophet's mantle made in Mamluk times (Figure 8.8).

On the last page with the colophon (Figure 5.10), Ibn al-Bawwab modified this logical juxtaposition of larger and smaller scripts for poem and commentary. At the top are three lines concluding the commentary on the distich found on the previous page. They are written in smaller script, followed by a circle with a dot, indicating that the text has been proofread (*muqabala*).¹⁰⁸ The indented double line below, written in the same small script, gives the concluding *qasida* by Salama ibn Jandal, the third in this collection: To whom belong the traces of encampment (*talulun*) which resemble a well-written piece of writing (*al-kitab al-munammiq*)?¹⁰⁹ The verse belongs to the well-known genre comparing the charcoal remains of a campfire in the sands to black writing on a white page, a poetic metaphor showing that the pre-Islamic Arabs knew about writing.¹¹⁰ The remaining text on the concluding page gives the chain of transmission. The name of the immediate authority – the early tenth-century grammarian Abu 'Abdallah Muhammad ibn al-'Abbas al-Yazidi – is written in the large bold script usually reserved for the words of Salama, followed by the chain of transmission back to 'Umar in the smaller lighter script.¹¹¹ Script no longer coincides with content, an indication that the juxtaposition of scripts was still a new phenomenon.¹¹²

The large bold script, typically used for Salama's poetry and here used for the name of the transmitter, can be identified as *thuluth* because of its elongated proportions (*alif* measures about seven times the height of the punctuation dot) and such features as *alif* with a hook at the top right and a foot on the bottom left, large *dal*, and open squiggly stroke for *ta'* *marbuta* that darts upward like final *ra'*. Medial *mim*, as in the name *muhammad* in the center of the line (Figure 5.10a), is written as a folded stroke rather than a circle. Words

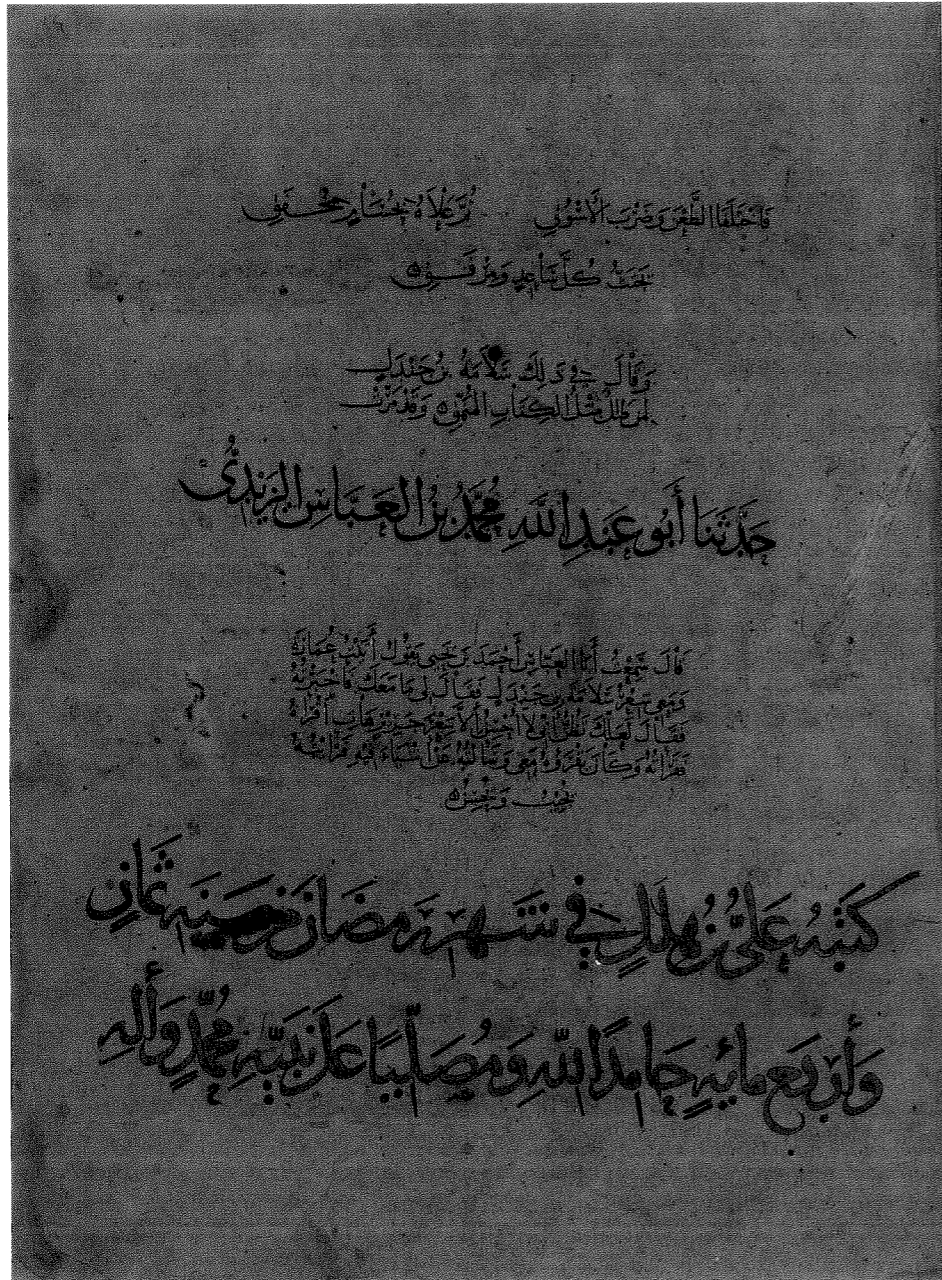


Figure 5.10 Final page from a copy of the poems of Salama ibn Jandal copied by 'Ali ibn Hilal, commonly known as Ibn al-Bawwab, in Ramadan 408/January–February 1018 and later in the collection of Abu Sahl ibn Hibatallah al-Muwaffaq, leader of the Shafi'ite community in Khurasan, c. 455–6/1063–4

This luxury manuscript is the first surviving example to show an equal juxtaposition of two text scripts. The verse by the pre-Islamic poet Salama is typically written in a bold *thuluth* with shallow bowls and pointed tails below the baseline balanced by bold strokes for pointing above it. It is juxtaposed to shorter lines in a smaller *rayhan* with similar forms. The colophon is added in *tawqi'* notable for its unauthorized connections and blind letters.

are nested inside each other, and the impulsive forward motion is emphasized by the diagonally set dots and the sloping vocalization for *fatha* and *kasra*, written with a thinner pen. The calligrapher used the same pen for the shorter lines penned in a small neat script to be identified as *rayhan* because of its sweeping curves, serifed *alif*, and *ta' marbuta* with an open eye.¹¹³

Not content with these two text scripts, Ibn al-Bawwab used several other round scripts for display. The colophon is penned written in large gold letters. They are much like the ones used for the large line in *thuluth*, but with two significant differences: the unauthorized connections, notably between the *ra*'s of *shahr* and *ramadan* in the center of the top line (Figure 5.10b), and the blind eyes of the letters that are filled with black ink. Compare, for example, the *mims* of *muhammad* at the end of the colophon in *tawqi'* (Figure 5.10c) with those in the same word in *thuluth* (Figure 5.10a).

Ibn al-Bawwab played with yet other scripts and colors on the opening page of this de luxe manuscript (Figure 5.11). The second line recording that the manuscript contains the words of Salama ibn Jandal are set off in an elegant script notable for its strokes of uniform thickness, tall straight *alifs*, rounded bowls, and open eyes. It can be identified as another of the Six Pens, *muhaqqaq*. The name derives from the root *haqqa*, meaning to be or become just, right, correct, or true.¹¹⁴ The second form *haqqaqa* has a similar but intensified meaning, and *muhaqqaq*, the past participle of the second form, was applied to speech or language to mean sound, compact, or orderly. Chroniclers used the term *muhaqqaq* in two ways: on the one hand, for well-penned and formal execution,¹¹⁵ and on the other, for a specific script that became popular for transcribing Koran manuscripts.¹¹⁶ *Muhaqqaq* is said to have been the first script systematized and geometrically defined by Ibn Muqla,¹¹⁷ but it seems to have still be evolving at this time.¹¹⁸

As compared to *naskh* and *thuluth*, the letters in *muhaqqaq* are more upright, with well-spaced ligatures and a marked horizontality. Initial *alif* sits on the baseline; it usually has a small wedge-shaped serif at the top right, but never swings out at the lower left. By contrast, in *naskh*, *alif* is a straight stroke without a hook at the top but often with a bend to the lower left. In *muhaqqaq*, final *ha'* (as in *salama*) is written as a loop that is closed at the bottom, as distinct from the same letter in *thuluth*, a squiggle open at the bottom. In *muhaqqaq*, letters such as *ra'* and *waw* generally end in straight, sharp tips that point diagonally downward without the returning upward hook used in *thuluth*. The emphasis is on the bodies and heads of the letters, as sublinear elements are reduced. Tails do not descend as far below the baseline as they do in other scripts. Rather, the bowls of descending strokes in *muhaqqaq* are shallow, elliptical, and sometimes extended to encircle the following letter, as here with the bowl of *nun* in *ibn* that encircles the opening letters of *jandal*. Because of its pointed ends and linearity,



Figure 5.10a



Figure 5.10b



Figure 5.10c

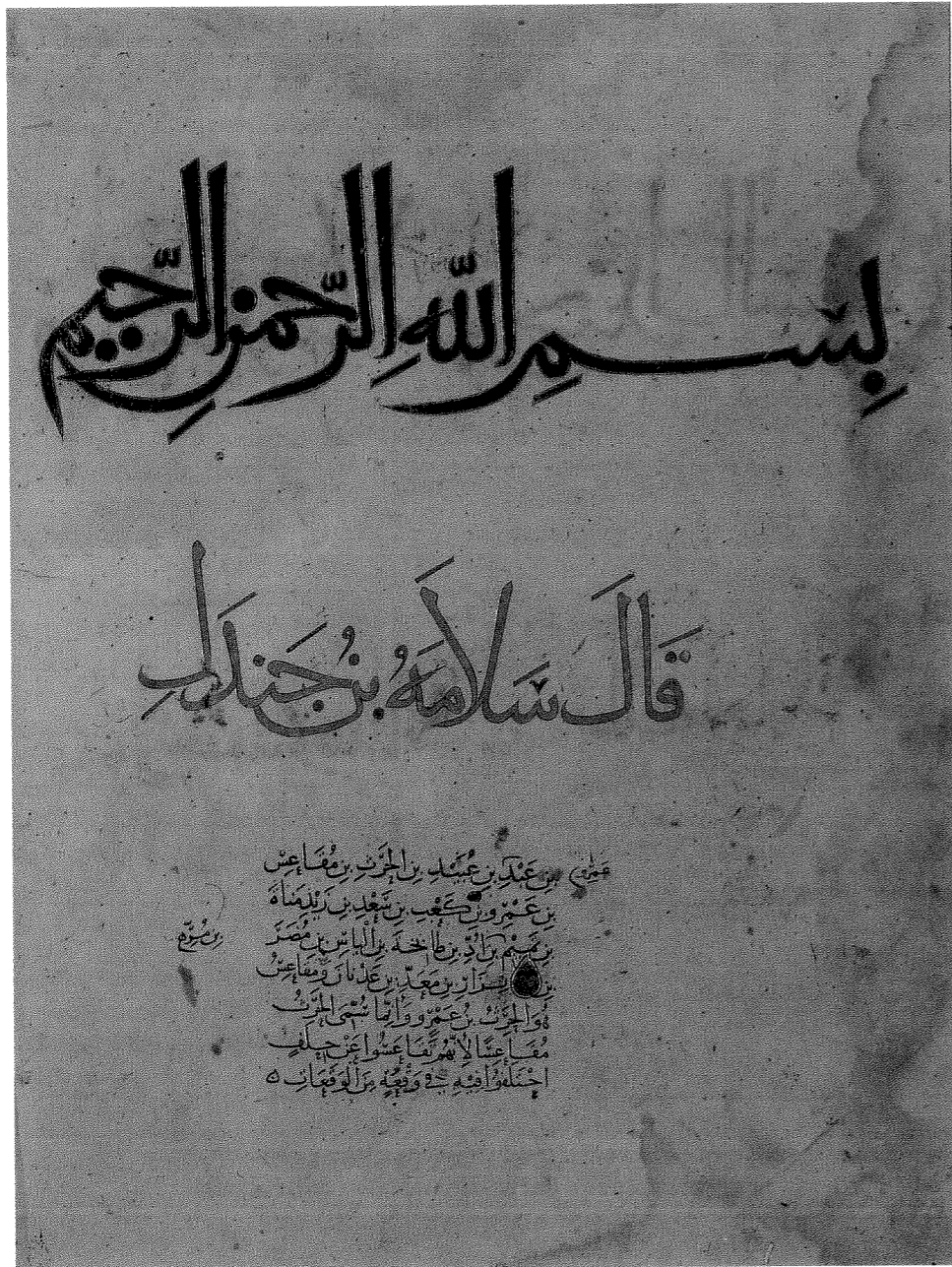


Figure 5.11 Opening page from a copy of the poems of Salama ibn Jandal copied by 'Ali ibn Hilal, commonly known as Ibn al-Bawwab, in Ramadan 418/January–February 1018 and later in the collection of Abu Sahl ibn Hibatallah al-Muwaffaq, leader of the Shafi'ite community in Khurasan, c. 455–6/1063–4

Ibn al-Bawwab used yet other round scripts on the opening page of this manuscript to set off different subjects. The invocation to God at the top is written in black outlined in gold in a firm bold script that resembles *muhaqqaq* but with unusual *alifs*. The second line announcing the author of the work, Salama ibn Jandal, is set off in gold outlined in black in a more standard *muhaqqaq*. These lines of large script are juxtaposed to a smaller *rayhan*.

muhaqqaq is sometimes called dry (*yabis*) as opposed to the wet (*murattaba*) *thuluth*.

Ibn al-Bawwab used a variant of large script for the top line with the basmala, penned in black outlined in gold. In many ways the script resembles *muhaqqaq*, although the *alifs* are bolder, almost triangular, and end with a left-turning foot, features typical of *thuluth*. Ibn al-Bawwab deliberately varied his color and style of script to set off the text with the invocation to God.

The text in smaller script at the bottom of the page contains Salama's genealogy. Two generations were inadvertently omitted on the first and third line, and so they were added in the margin, with a comma-like stroke in the text marking the place where they should be inserted. The dot in a circle at the end indicates that the text has been proofread. Compared to the script used in Ibn al-Bawwab's Koran manuscript (Figure 5.8), the letters here are set more spaciouly and have much shorter tails, a comparison that shows how the calligrapher could vary his hand to suit different types of text, as with the Koran and poetry. Yet many features of punctuation are the same. *Muhmila* letters like 'ayn, for example, are regularly marked and dots set on a slope. What is most remarkable about this fine manuscript of Salama's poetry is the virtuosity of the hand: the scripts are all clean, crisp, and unwavering, hallmarks of a master calligrapher.

In succeeding centuries the round scripts used by Ibn al-Bawwab at the turn of the tenth to eleventh century became pre-eminent for transcribing the Koran and other important texts, especially in Iraq and adjacent lands. As with Ibn Muqla and broken cursive, Ibn al-Bawwab's canonization of round scripts for both text and display was later seen as a benchmark. The question therefore arises: why did these round scripts rise to prominence at this time?

What caused the canonization of round scripts?

Scholars have put forward at least three different lines of reasoning to explain why copyists in the late ninth or early tenth century transformed the regular round scripts into calligraphic styles worthy of transcribing the Koran and other important texts. These explanations are not necessarily exclusive. Rather, they reflect the different interests of the scholars who proposed them, as well as their different approaches to the subject.

Déroche, befitting his training and erudition as a paleographer, proposed that the answer to this question may have something to do with the type of pen used for the new style of writing.¹¹⁹ He speculated that it could have been a new type of reed pen, a new method of sharpening the nib, or a new way that the pen was held, placed on the page, or moved across it. Both Ibn Muqla and Ibn al-Bawwab commented on the importance of preparing the nib correctly, since the point determines the handwriting. Such changes in pen are known in

other calligraphic situations. To write italic script, for example, one uses a special pen.

Furthermore, the canonization of round script came at a time of significant changes in the materials used in the Islamic lands to make books. This was the period when paper replaced parchment as the main medium of support.¹²⁰ Paper, which had been used in the 'Abbasid chancery since the beginning of the ninth century, was adopted for secular manuscripts at least from the mid-ninth century. The change from parchment to paper also seems to have engendered a change from dark-brown, tannin-based ink (*hibr*) to black soot ink (*midad*). Ibn al-Nadim, our earliest major source for Arabic calligraphy, first mentions Ibn Muqla as one of three viziers who used black ink. Thus, a first type of answer to the question is physical: new materials such as pen, paper, and black ink may have led to the canonization of round scripts in the tenth century. Such practical factors caused similar changes in scribal traditions elsewhere: in fourth-century China the ready availability of paper and a more supple brush caused the modification of Clerical Script (*lishu*) to the simpler Regular Script (*kaishu*);¹²¹ in fourteenth-century Russia the change from parchment to paper engendered an evolution from uncial to semi-uncial script.¹²²

Whelan, reflecting her training as an art historian, proposed a historical explanation, suggesting that the canonization of round scripts reflected the new role of the chancery secretary as copyist. Whereas kufic Koran manuscripts were transcribed by members of the ulema who did not sign their work, manuscripts in round scripts include colophons signed by people bearing the epithets *warraq* (bookseller or copyist) or *katib* (scribe or secretary). The adoption of round scripts coincided with the development of the chancery under the 'Abbasids and its central bureaucratic direction through the office of vizier.¹²³ It may have been secretaries, then, who introduced these new materials and styles. Ibn Muqla, for example, was first a member of the chancery and then a famous calligrapher.

Tabbaa, as part of his broader argument for the revival of Sunni Islam, suggested that political motivations lay behind these calligraphic innovations.¹²⁴ He argued that Ibn Muqla, as vizier of the 'Abbasid caliph al-Muqtadir, adopted the new proportioned script to represent the seven readings of the Koran collected by Ibn Mujahid. Ibn Mujahid's seven readings were made official under Ibn Muqla's auspices in 322/934 when the scholar Ibn Miqsam was forced to retract his claim that the consonantal text of the Koran could be read in any manner that was grammatically correct. The following year another Koranic scholar, Ibn Shanabudh, was similarly condemned and forced to renounce his support for the permissibility of other variant readings. In the same vein, Tabbaa argued that the second reform of Koranic script by Ibn al-Bawwab was rooted in contemporary political events, specifically the promulgation of an official Sunni theology under the 'Abbasid caliph al-Qadir (r. 991-1031). The

caliph's struggles against religious dissent culminated in the so-called Epistle of al-Qadir (*al-risala al-qadiriyya*). This text, which was read in the palace in 1018, condemned Shi'ism in all its forms as well as Mu'tazilism and even Ash'arism.

To my mind, Tabbaa's political arguments are not convincing for several reasons. One problem is the limited scope of his inquiry, which concentrates on Koran manuscripts. This unjustly truncates the field of inquiry, for round script, unlike kufic, was not exclusive to Koran manuscripts. Broken cursive, along with other styles of round script, was used for many other types of texts copied at the same time as their Koranic counterparts. These include not only religious works such as treatises on Traditions and the life and qualities of the Prophet but also Sufi manuals, grammars, histories, poetry, and even Arab-Christian texts, a diverse group whose subject matter has little to do with official theology.¹²⁵ Moreover, these diverse manuscripts were made for a variety of patrons. Some were, as wealthy men of the time, staunch Sunnis. Others were not.¹²⁶

In my opinion, such a political reading also distorts the character and impact of both calligraphers.¹²⁷ Religious tensions splintered the Islamic community in the medieval period, but there is no evidence that copyists developed or adopted styles of writing to address these issues. The names of famous calligraphers like Ibn Muqla and Ibn al-Bawwab are convenient pegs on which to hang the names of stylistic changes, but doing so reiterates the prosopographical bias of the sources, particularly biographical dictionaries.¹²⁸ Associating names with stylistic innovations also reflects our modern age of scientific discovery, in which the name of an inventor is made synonymous with the invention and the name of a designer adds caché to a dress or handbag. Artistic change, by contrast, is a continuous process.

Tabbaa's association of round scripts with Sunni Islam is also based on negative evidence. He argued that the work of Ibn Muqla and Ibn al-Bawwab had virtually no impact in Egypt during the period of rule by the Shi'ite Fatimids (969-1171), since he knew of no Koran manuscript in broken cursive or other round script made there until the beginning of the thirteenth century.¹²⁹ Arguing from negative evidence is always dangerous, since what has survived does not necessarily reflect what was made. Absence of evidence is not evidence of absence. No Koran manuscript in these scripts can be attributed to Fatimid Egypt, but as yet we have no evidence to attribute any Koran manuscript to Fatimid Egypt.¹³⁰ It is plainly wrong, however, to imagine that the Fatimids did not commission such manuscripts.

Medieval historians describe the enormous libraries in Fatimid Cairo. According to the Fatimid historian al-Musabbihi (d. 1029), whose eye-witness account has been preserved in the *Khitat*, the topography of Cairo by the Mamluk historian al-Maqrizi,¹³¹ the treasury contained a superb library based on the caliph's personal holdings. The works belonged to all categories of science and letters and were

of remarkable quality. Masterpieces written by famed calligraphers in the proportioned script (*al-khatt al-mansub*) were so numerous and so beautiful that one could be sure, the Fatimid historian adds, of never seeing the equivalent belonging to another monarch. Al-Musabbihi also describes the vast deposits of the royal library attached to the Fatimid court, which contained, among other things, twenty copies of the history by al-Tabari, a work that stretches to thirty volumes in the modern printed edition, and one hundred copies of *al-Jamhara*, the monumental dictionary by the ninth-century philologist Ibn Durayd. Even allowing for the usual hyperbole in al-Musabbihi's panegyric, it is clear that the Fatimids owned lots of books, many of them in the 'proportioned script'.¹³²

Of this richness, only two manuscripts belonging to the royal Fatimid library have been identified.¹³³ One is a unique copy of Abu 'Ali al-Hajari's commentary *al-Ta'liqat wa'l-nawadir* transcribed for al-Afdal, son of the Armenian commander Badr al-Jamali and Fatimid vizier from 1094 to 1112.¹³⁴ The title at the top is written in a legible round hand, with long swooping tails in which the width of the stroke changes, as in broken cursive. The ex-libris of the Fatimid vizier at the bottom is written in a standard round script, as is the librarian's note in the middle saying that the manuscript was added to the library of the Fatimid caliph al-Fa'iz (r. 1154-1160).

The second manuscript that belonged to the Fatimid library is also a unicum: a genealogical treatise about the Quraysh tribe transcribed by the celebrated grammarian Ishaq al-Najayrami in 355/966.¹³⁵ This manuscript was not prepared for the Fatimids, but rather transcribed at Baghdad in the tenth century. It then passed to Egypt, where it was registered in the library of the Fatimid caliph al-Zafir (r. 1149-54). Befitting its origin in 'Abbasid Baghdad, the genealogical treatise is transcribed in the broken cursive used there in the tenth century. Such a script cannot have carried any adverse political implications, for the manuscript was readily accessioned into the library of the 'Abbasids' rivals, the Fatimids.

These two manuscripts are not enough to define a Fatimid style of calligraphy,¹³⁶ especially as only the title pages have been published and moreover as one of the two manuscripts was written for the 'Abbasids, but they do tell us that Fatimid librarians in the twelfth century wrote a clear and readable round hand. The tendency to run together letters such as *dal* and final *ha'* shows the hand of a librarian who wanted to speed up his work, but the lengthening of connectors, like the one between *'ayn* and *mim* in the word *'ammaraḥi*, in the ex-libris in both manuscripts shows that the librarians were also concerned with visual effect. Sparse though the evidence is, these two manuscripts confirm textual descriptions that the Fatimids knew, appreciated, and used round scripts.

The misleading association of round script and Sunni Islam is particularly troublesome as it has led to further erroneous conclusions,

notably the association of not only round scripts but also geometry with Sunni Islam. Tabbaa raised the idea that the proportioned script was yet another of the many applications of geometric principles to Islamic art in the late tenth and eleventh centuries. He differentiated between the visible geometry of the rectilinear kufic script and the invisible geometry of Ibn al-Bawwab's proportioned script, described by the sixteenth-century Mamluk chronicler al-Tayyibi as a script without any visible external edges (*an la tura min al-khariji zawayahu*).¹³⁷ Tabbaa suggested that the proportioned script, like geometric strapwork and *muqarnas*, exemplified the assimilated geometry that pervaded a variety of artistic forms in the eleventh century.

Tabbaa ultimately rejected the idea that geometry was the primary cause in motivating the formation of the proportioned script, but his idea was enthusiastically taken up by Gülru Necipoğlu.¹³⁸ She suggested that the geometric mode, which she called *giriḥ* from the Persian word for knot, appeared first in manuscript illumination, citing the frontispiece to the Koran penned by Ibn al-Bawwab at Baghdad in 391/1000-1 (Figure 5.9) as the earliest example of the new round script and interlaced patterns composed of stars and polygons. Like geometric interlacing, round script was thus, she argued, part of the Sunni revival. She concluded that 'the geometric mode seems to have represented a new visual order projecting a shared ethos of unification around the religious authority of the Abbasid caliphate, the locus of orthodoxy and the ultimate source of legitimacy for the fragmented Sunni states'.¹³⁹

In my view, the canonization of round scripts (and also geometry) had nothing to do with religious sectarianism in the tenth century. There is no evidence to show that Ibn al-Bawwab and his associates transcribed their copies of the Koran for the ruling 'Abbasid caliphs or their court. Rather, such evidence as we have suggests that these copies were prepared for the Buyids and other Shi'ites of the time. Moreover, the same scripts were used not just for Korans, but for a variety of texts, including genealogies, histories, Sufi manuals, and many other subjects. Koran manuscripts were particularly fancy and so they tend to assume pride of place in studies of calligraphy, but it is essential to remember that the same copyists used the same scripts to transcribe other texts.

The adoption of round scripts as calligraphic scripts worthy of transcribing the Koran and many other types of texts represents the triumph of the secretarial class, scribes who had long used round script, paper, and black ink. Such changes were not grounded in theological disputes, but rather reflect social and cultural changes, in which the old guard - devout scholars who penned unsigned copies of the Koran in kufic script for public recitation or display in mosques - was gradually displaced by a professional class of secretaries who provided books to private patrons. This new class of copyists was, if anything, rather lax in its knowledge of the Koran, Traditions,

religious law, and the like.¹⁴⁰ The change in calligraphic style was not abrupt, and kufic continued to be used alongside round styles for several centuries (Figure 4.10). We associate the adoption of round scripts with the names of Ibn Muqla and Ibn al-Bawwab, but their names are only emblematic of a gradual change that took hundreds of years to effect.

Notes

1. This period corresponds to the first centuries of Hodgson's earlier middle period, his book three, 'The Establishment of an International Civilization.' See Marshall G. S. Hodgson, *The Venture of Islam* (Chicago: University of Chicago Press, 1974), 2:1-368.
2. The main proponent of using textual sources to identify individual scripts was Nabia Abbott, *The Rise of the North Arabic Script and its Qur'anic Development, with a Full Description of the Qur'an Manuscripts in the Oriental Institute*, University of Chicago, Oriental Institute Publications (Chicago: University of Chicago Press, 1939); Nabia Abbott, 'Arabic Paleography,' *Ars Islamica* 8 (1941): 65-104. Her method has been evaluated lucidly by François Déroche, 'Les écritures coraniques anciennes: bilan et perspectives,' *Revue des Études Islamiques* 48 (1980): 207-44, and summarized in François Déroche, *The Abbasid Tradition: Qur'ans of the 8th to the 10th Centuries AD*, ed. Julian Raby, The Nasser D. Khalili Collection of Islamic Art (London, 1992), 132-5.
3. In his original publication, *Les Manuscrits du coran, aux origines de la calligraphie coranique*, Bibliothèque Nationale, Département des Manuscrits, Catalogue des Manuscrits Arabes (Paris, 1983), Déroche also had an NS II, an intermediate style that shared characteristics between NS I and NS III, but this category had dropped out by the time of his next major publication, *Abbasid Tradition*.
4. In his catalogue of the fragments in the Khalili Collection (*Abbasid Tradition*), Déroche generally put the pages in his NS III style (nos. 75-7, 79, 81) before those in NS I (nos. 78, 80, 83-90, 92-8). The problem of distinguishing the two is clear from no. 82, which is described only as a miniature form of NS, and no. 91, which is said to be related to (but different from?) NS III.
5. Eastern kufic was used, for example, in Martin Lings and Yasin Safadi, *The Qur'an* (London, 1976); Iranian kufic in *Gulchīnī az qur'ānhā-yi khattī-yi mūza-yi dawrān-i islāmī* [*A Selection of Koran Manuscripts in the Museum of the Islamic Eras*] (Tehran, 1375/1997); Persian kufic in Arthur J. Arberry, *The Koran Illuminated: A Handlist of Korans in the Chester Beatty Library* (Dublin, 1967), 10-14; and eastern Persian kufic in Eric Schroeder, 'What Was the *Badi'* Script?' *Ars Islamica* 4 (1937): 232.
6. Lings and Safadi, *The Qur'an*, 24-31.
7. Both late and flowering kufic are mentioned in Schroeder, 'What Was the *Badi'* Script?'; bent kufic in Lings and Safadi, *The Qur'an*, 32; broken kufic in EI/2, 'Khatt' and semi-kufic in Yasser Tabbaa, 'The Transformation of Arabic Writing: Part 1 Qur'anic Calligraphy,' *Ars Orientalis* 21 (1991): 124 and 145, n. 33.
8. Abbott, 'Arabic Paleography,' 80.
9. Renard's designs for fonts made in 1806 for the Bibliothèque Nationale included both large (44-point) and small (14-point) Qarmathian kufic. See *Les Caractères de l'Imprimerie Nationale* (Paris, 1990), 192-3. Y. H. Safadi, *Islamic Calligraphy* (Boulder, CO, 1978), 12-13, gave two possible explanations for the origin of the term. The name, he suggested, may relate to al-Qarmati, adherents of a branch of Isma'ili Shi'ism that extended to many parts of the Islamic lands, including Khurasan, where the so-called Qarmathian script was thought to have been used. Safadi also gave a possible linguistic explanation, for the expression *qarmata fi'l-khatt* means to make the letters fine and to write the ligatures closer together.
The two explanations were already intertwined by the Saljuq period, as shown by Nizam al-Mulk's book of government or rules for kings (Nizam al-Mulk, *The Book of Government or Rules for Kings*, trans. Robert Darke [London, 1978], 208). In his chapter on the rise of the Qarmathians, the statesman explained that Muhammad, grandson of the sixth imam Ja'far al-Sadiq through his elder son Isma'il, had a *hijazi* page called Mubarak, who was a calligrapher in the fine script known as *muqarmat* and for this reason he used to be called Qarmatawayh. Mubarak disseminated the Isma'ili *dawa* around Kufa, and his adherents were called either Mubarakis or Qarmatis. Modern scholars like Heinz Halm, *The Empire of the Mahdi: The Rise of the Fatimids*, trans. Michael Bonner, *Handbuch der Orientalistik* 1:26 (Leiden, 1996), 27, n. 58, discount this explanation for the origin of the Isma'ilis, but it shows how the two derivations of the word Qarmathian were already conflated in medieval times.
10. Schroeder, 'What Was the *Badi'* Script?'
11. Mojtaba Minovi, 'The So-Called *Badi'* Script,' *Bulletin of the American Institute of Art and Archaeology* 5 (1939): 142-6; Eric Schroeder, 'The So-Called *Badi'* Script: A Mistaken Identity,' *Bulletin of the American Institute of Art and Archaeology* 5 (1939): 146-7.
12. S. M. Stern, 'A Manuscript from the Library of the Ghaznawid Amīr 'Abd al-Rashid,' in *Paintings from Islamic Lands*, ed. R. Pinder-Wilson (Columbia, SC, 1969), 18.
13. *Encyclopedia Iranica*, ed. Ehsan Yarshater (London and New York, 1985), 'Calligraphy,' citing Gulchin-i Ma'ani and others, though the author himself discounts this name, which is found in Ibn al-Nadim, *The Fihrist of al-Nadīm: A Tenth Century Survey of Muslim Culture*, ed. and trans. Bayard Dodge (New York and London, 1970), 11.
14. Estelle Whelan, 'Writing the Word of God: Some Early Qur'an Manuscripts and their Milieux, Part I,' *Ars Orientalis* 20 (1990): n. 59; Estelle Whelan, 'The Phantom of *Hijāzī* Script: A Note on Paleographic Method' (unpublished), n. 60. François Déroche, 'Collections de manuscrits anciens du Coran à Istanbul. Rapport préliminaire,' in *Études médiévales et patrimoine turc*, ed. Janine Sourdél-Thomine (Paris, 1983), 158-60, had already coined the name broken cursive for this distinctive script. Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' n. 33 objected to the adjective broken because he thought it pejorative and liable to be confused with the script known as *shikasta*, Persian for broken (see Chapter 10). Neither objection is significant. As Whelan, 'Phantom,' n. 60 noted, broken is disparaging only when the context so dictates. The term broken plural, for example, is standard in Arabic linguistics and hardly implies that Arabic grammar is unsophisticated.
15. Déroche concurs. In his latest word on the subject, his article on

- 'Manuscripts of the Qur'an' in *EQ*, 262–3, he opts for the name 'kufic naskhi,' because, as he notes, its basic shapes are closer to those used in round scripts.
16. François Déroche, 'Les manuscrits arabes datés du IIIe/IXe siècle,' *Revue des Études Islamiques* 55–7 (1987–9): 343–79.
 17. Whelan, in unpublished notes, suggested that this new script might be called *warraqi*, after the Arabic word for copyist. She made her suggestion on the basis of a passage by Ibn al-Nadim, one of our earliest sources about calligraphy (*Fihrist*, 15). The tenth-century chronicler mentions that until the early 'Abbasid period calligraphers continued to copy the Koran in kufic (traditional) script. Then there developed a script called *'iraqi*, which was the *muhawraq* (meaning the 'perfect' or polished style?) known as *warraqi*. This latter script was elaborated and improved until it reached its culmination under the caliph al-Ma'mun (r. 813–33). *Warraqi* is the term used by modern Turkish scholars like M. Uğur Derman, *The Art of Calligraphy in the Islamic Heritage*, trans. Mohamed Zakariya and Mohamed Asfour (Istanbul, 1998) for the copyist's hand, while he reserves eastern kufic for the more calligraphic variety.
 18. Leiden University; ms. Or. 298. See *Levinus Warner and his Legacy: Three Centuries Legatum Warnerianum in the Leiden University Library* (Leiden, 1970), no. 57, and the catalogue entry available at <http://ub.leidenuniv.nl/bc/olc/selec/oldestmanuscript/object1.html>. The oldest complete codex in Arabic copied on paper, a manuscript dating to 848 recently discovered in the library of Alexandria, still awaits full publication; for a brief mention of it, see Malachi Beit-Arié, 'The Oriental Arabic Paper,' *Gazette du Livre Médiéval* 28 (Spring, 1996): 9–12; Jonathan M. Bloom, *Paper before Print: The History and Impact of Paper in the Islamic World* (New Haven, 2001), 58 and 242.
 19. The author, mentioned several times in Ibn al-Nadim's *Fihrist*, was born at Herat c. 770, the son of a Greek slave. Abu 'Ubayd studied in Kufa, Basra, and Baghdad; was appointed a judge of Tarsus in Cilicia, and then returned to Baghdad, where he worked under the patronage of 'Abdallah ibn Tahir, poet, general statesman, confidant of caliphs, and later governor and almost independent ruler of Khurasan.
 20. M. J. de Goeje, 'Beschreibung einer Alten Handschrift von Abū 'Ubayd's Garīb al-Hadīth,' *ZDMG* 18 (1864): 781–807, partly reprinted in *Levinus Warner*, 75–6.
 21. Déroche, 'Les manuscrits arabes datés.' A papyrus in Heidelberg (PSR Arab 23) dated Dhu'l-Qa'da 227/July 844 with a history of David and a biography of the prophet, both by Wahb ibn Munabbih is the oldest known codex on papyrus, according to Déroche, 'Les manuscrits arabes datés,' no. 2. According to Yūsuf Rāgib, 'L'écriture des papyrus arabes aux premiers siècles de l'Islam,' in *Les Premières Écritures Islamiques* [Aix-en-Provence, 1990], n. 24, it is also the oldest Arabic manuscript with vocalization, but in a more recent publication (Marie-Geneviève Guesdon and Annie Vernay-Nouri (eds), *L'art du livre arabe: du manuscrit au livre d'artiste* [Paris, 2001], no. 11), Marie-Geneviève Guesdon points out that it has no vocalization and some pointing, a description confirmed by the two photos. For a complete facsimile of the manuscript, see the second volume of R. G. Khoury, *Wahb b. Munabbih* (Wiesbaden, 1972).
 22. A. S. Atiya, *The Arabic Manuscripts of Mount Sinai* (Baltimore, 1955), nos. 151, 72, and 514, respectively.

23. Its binding also shows the reuse of materials: it is padded with cardboard made of a bundle of papyrus inscribed in Greek.
24. Déroche, 'Les manuscrits arabes datés,' 361; Whelan, 'Writing the Word of God,' 130, n. 59.
25. Déroche, 'Les manuscrits arabes datés,' no. 36 and fig. 17; Whelan, 'Writing the Word of God,' n. 96. The largest chunk, 187 folios from six different sections (3, 5, 9, 10, 18 and 19), is in the Chester Beatty Library (ms. 1417); for which see Arberry, *Koran Illuminated*, nos. 23–6. Six other folios from other sections were given by the dealer Kirkor Minassian to the Metropolitan Museum of Art (26.161.1) and the Library of Congress (LC1–85–154.82a-aa and AL 20). To judge from photographs, the Khalili Collection (Déroche, *Abbasid Tradition*, no. 79) owns another bifolio from this manuscript (KFQ26), which Déroche puts in his NS III category. This double page is CBL, 1417, fols. 33b–34a.
26. For example, Arberry, *Koran Illuminated*, nos. 23–6, and David James, *Qur'ans and Bindings from the Chester Beatty Library: A Facsimile Exhibition*, exhibition catalogue (n.p., 1980), no. 12, put the script in the category of broken cursive. Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' 124, n. 39, followed Déroche and Whelan in designating the script as round.
27. The first line on folio 1b of the bifolio in the Khalili Collection, for example, contains the last word of Sura 70 and the gold rubric with the name of the next chapter (71; Nuh) and the verse count (thirty). The bifolio in the Metropolitan Museum of Art (26.161.3) has the verse count (165) for Sura 6 (al-An'am). Elaine Wright has confirmed for me that the pages in the Chester Beatty library are similar. The heading on folio 19a of CBL 1417a gives the name of the chapter (Al 'Imran, 3) and the verse count (200); the heading on folio 36b of CBL 1417c gives al-Anfal (8) and the verse count (76); and the heading on folio 1b of CBL 1417d gives the name of the chapter (al-Furqan, 25) and the verse count (77).
28. The Library of Congress holds 56 folios (CSM 83), also given by Minassian. The Khalili Collection (KFQ48; Déroche, *Abbasid Tradition*, no. 75), has another folio from this manuscript, which in turn is connected to twenty-three folios in the Bibliothèque Nationale (ms. arabe 382c, Déroche, *Manuscrits du coran* I, no. 259).
29. Coins issued under the 'Abbasids in the ninth century have a standard form, with legends in kufic including Koranic verses and the names of the caliph and his appointed heir. Governors with extraordinary independence were allowed, or assumed, the right to add their names as well. On coins minted in the eastern Islamic lands, these names were added in round script. A dirham minted at Balkh in 292/904–5, for example, has the name of the Banijurid governor Ahmad ibn Muhammad ibn Ahmad written in a round script (Sheila S. Blair, 'Legibility versus Decoration in Islamic Epigraphy: The Case of Interlacing,' in *World Art: Themes of Unity in Diversity; Acts of the XXVIth International Congress of the History of Art*, ed. I. Lavin [University Park and London, 1989], fig. 3). Similarly, a dinar issued at Nishapur in 305/917–18 (A. U. Pope and P. Ackerman (eds), *A Survey of Persian Art from Prehistoric Times to the Present*, repr. 1938–9 [Tehran, 1977], pl. 1480g) uses a round script for the name of the Samanid governor Nasr ibn Ahmad. Adding the governor's name in a round script was a way to distinguish his name from those of the other rulers written on the coin. Moreover, the governor's name was the part of the legend added locally to a design supplied by the central administration.

30. One example is the commemorative text carved in the name of the Buyid 'Adud al-Dawla at Persepolis in Safar 344/955. See Sheila S. Blair, *The Monumental Inscriptions from Early Islamic Iran and Transoxiana*, Supplements to Muqarnas (Leiden, 1992), no. 6. The four-line inscription is carved next to Achaemenid and Sasanian inscriptions in the palace of Darius. The text relates that 'Ali ibn al-Sari, the scribe (*al-katib*) from Karaj, read the earlier texts to 'Adud al-Dawla. The role of the scribe who drew up the inscription is also clear from its style. For the most part, the letters are square, but three traits – dots over some of the letters, the variety of body shapes, including four types of final *ya*, and the spur added to the bottom of *alif* in independent or final form – show his training as a copyist who customarily wrote in a round hand. When designing a text to be carved in stone, he tried to adopt a more angular monumental style, but features of his regular round hand show through.
31. The single bifolio survives in the Museum of Turkish and Islamic Art, Istanbul (no. 12800). See Déroche, 'Collections de manuscrits anciens du Coran à Istanbul,' no. I and pl. IVb. A note on the recto of the first page (near the beginning of the regular *juz*' 6), written in the same ink and hand as the rest of the text, contains an endowment notice set inside a gold braid which extends into the margin with a gold palmette. The text says that these parts (*ajza*) of the Koran endowed in God's path were copied by Shanbak (or Shanbal?) ibn Muhammad ibn 'Abdallah ibn Shanbak (or Shanbal?). The text is copied in a round style similar to that used in the other two manuscripts, though more attenuated and crowded. *Alif* has a hook to the left, and the tails of the letters *nun* and final *ya* are deeply curved. Shanbak also shows a tendency to slant the letters in individual words. Letters are pointed but not vocalized. Individual verses are not marked, but groups of five verses receive a gold kufic *ha*.
32. On the various functions of Koran codices, see François Déroche, *Le livre Manuscrit arabe: préludes à une histoire* (Paris, 2004), 24–35.
33. Whelan, 'Writing the Word of God.'
34. CBL, ms. 4000; Arthur J. Arberry, *The Chester Beatty Library: A Handlist of the Arabic Manuscripts* (Dublin, 1955–66), 4:86. Copied in black ink on thirty-one small folios of brown paper, the text contains seventy-seven sections of varying length, mainly apothegms touching on the main aspects of Sufi teaching. The manuscript is not a rough draft or brouillon, but the author's fair copy, with several cancellations and marginal insertions. See Arthur J. Arberry, 'The *Mawāqif* of al-Niffarī,' *Journal of the Royal Asiatic Society* (1970): 404–6.
35. A large fragment of 170 folios is in the Chester Beatty Library (ms. 1434; Arberry, *Koran Illuminated*, no. 35). Another sixteen folios, including the dated colophon, belong to Istanbul University (A6758; one double page is published in Ayman Fu'ād Sayyid, *al-Kitāb al-'arabiyya al-makḥḥūt wa 'ilm al-makḥḥūtāt* [Cairo, 1997], pl. 5). In unpublished notes, Rice also identified a fragment from the shrine at Ardabil. See Whelan, 'Writing the Word of God,' n. 97.
36. Tabbaa made this point as well in 'Transformation 1: Qur'anic Calligraphy.'
37. Déroche's chart VI (*Abbasid Tradition*, Table VI, 136–7), compares ten homographs, or letter shapes, from manuscripts in broken cursive with those in kufic codices.
38. *EI/2*, 'al-Niffarī.' He spoke of *waqfa* (standing), during which time he was addressed by God, who inspired him to write down his words.

- Al-Niffari's work is thus a replica of Muhammad's experience, symbolized by *wuquf*, the place of standing at 'Arafa and the culmination of the hajj in which the pilgrim recalls the Prophet's farewell journey. Al-Niffari considered letters a veil that the mystic must penetrate, for as long as one remains bound to the letters, he was fettered by idols. See Annemarie Schimmel, *Mystical Dimensions of Islam* (Chapel Hill, 1975), 80–2 and 411.
39. 'Ali ibn Shadhan also used the epithet al-Bayyi', presumably *al-bayyi'* (the tradesman or middleman), an unusual epithet also used by 'Umar ibn Fadl ibn Yusuf, who signed a bronze pen box made in 542/1148, probably made in north-eastern Iran (Hermitage CA-12688). The name of the copyist's father, Shadhan, was common in Iran in the eleventh and twelfth centuries (Blair, *Monumental Inscriptions*, 200).
40. Istanbul, Suleymaniye Library, Sehid Ali Pasa no. 1842; dated Jumada I 376/November 986. The *Kitab akhbar al-nahwiyyin al-basriyyin* or *Kitab tabaqat al-nuhat* was composed by the judge and grammarian Abu'l-Sa'id al-Hasan al-Sirafi (d. at Baghdad on 3 February 979). Al-Sirafi, in addition to teaching a wide range of subjects, was himself a professional copyist. Later sources describe how he copied some ten folios a day, earning ten dirhams for living expenses (*EI/2*: 'al-Sirafi'). F. Krenkow, editor of al-Sirafi's work on grammarians, identified the copyist 'Ali ibn Shadhan as a transmitter of hadith mentioned by Ibn Hajar al-'Asqalani. See Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' n. 47; Şalāh al-din al-Munajjid, *al-Kitāb al-'arabi al-makḥḥūt ilā'l-qarn al-'ashir al-hijrī* (Cairo, 1960), pl. 22; Estelle Whelan, 'Early Islam: Emerging Patterns (622–1050),' in *Islamic Art and Patronage: Treasures from Kuwait*, ed. Esin Atıl (New York, 1990), fig. 9; Derman, *Art of Calligraphy*, no. 10. Derman noted that this manuscript is the first dated example to replace the dots used for vocalization with the vowel markers that are still used today.
41. For example, an elaborately decorated fragment dated 389/998–9 (Ramazān-'alī Shākiri, *Ganj-i hizār sāla-yi kitābkhāna-yi markazī-yi āstān-i quds-i rizāvī qabl wa ba'd az inqalāb* [Mashhad, 1367/1989], 65) was penned by al-'Abbas ibn Muhammad ibn al-'Abbas *al-musahifi* (the copyist of Koran manuscripts) al-Qazvini at Rayy for the treasury of the mother of the chief commander (*amir al-umara*). The latter may well be Abu'l-Qasim 'Ali Simjuri, last of the Simjurid governors of Khurasan, who himself had made the first surviving endowment to the shrine, a fragment from a kufic Koran endowed in 363/973–4 (ms. 3004; Shākiri, *Ganj-i Hizār Sala*, 30). Another fragment in the shrine collection, containing *juz*' 13 written in four lines of broken cursive per page on 142 folios (no. 96; Ahmad Gulchīn-i Ma'āni, *Rāhnamā-yi ganjīna-yi qur'ān* [Mashhad, 1347/1969], no. 17; Shākiri, *Ganj-i Hizār Sala*, 31 and 68) was endowed there in Rabi' I 393/January–February 1003 by Abu'l-Qasim Mansur ibn Muhammad ibn Kathir, member of a well-known family from Khurasan and head of the bureaucracy there under the Ghaznavid sultan Mahmud. The date in the endowment provides a *terminus ad quem* for the manuscript, and the patron's affiliation suggests an attribution to eastern Iran. The decoration of these pages, in turn, relates to an undated fragment with *juz*' nine written in six lines of broken cursive (Paris, BN, ms. arabe 7263; Francis Richard, *Splendeurs persanes: manuscrits du XIIe au XVIIe siècle* [Paris, 1997], no. 1bis).
42. Salah al-Din Munajjid (*Al-Kitab al-'Arabi*) gives examples of several other manuscripts written in the tenth century. A few in broken

- cursive are specifically dated. One in Tehran (pl. 19) is the final page of a treatise on predestination, *Risala fi'l-hidaya wa'l-dalala*, transcribed by 'Ali ibn Tahir ibn Sa'd in 364/974. At the bottom is the attestation of the author, the Buyid vizier 'al-Sahib ibn 'Abbad, dated two years later. His broken cursive is as stately and mannered as that of the transcriber and attests to the author's training as a secretary. Another manuscript in Istanbul (TKS, Ahmad III 2366, pl. 21) is a copy of Ibn al-Nahhas's collection of pre-Islamic poems, *al-Mu'allaqat*, dated 371/981-2. It too shows the graceful broken cursive that was already standard by the end of the tenth century.
43. Whelan, 'Writing the Word of God,' 118-19. One example is the endowment note at the top of a folio from a manuscript endowed to the Great Mosque of Damascus in Dhu'l-Qa'da 298/July 911 by 'Abd al-Mun'im ibn Ahmad (figs. 15-16). Whoever added the brief note tried to imitate the kufic script used for the original text, but the letters often betray traces of a round hand. For example, the strokes in the note, unlike those used for the text, vary in thickness, with a marked contrast between thick letter and thin baseline. The tail of *sin* ends with a swooping curve. The upright strokes of the two *lams* in *allah* have little tails or serifs. In other longer notices, *alif* consists of a straight vertical stroke, without any bend to the right at the bottom.
 44. V. A. Krachkovskaya, 'Evolutsiya Kuficheskovo Pis'ma v Sredney Azii,' *Epigrafika Vostoka* 3 (1949): 3-27.
 45. They name not only the reigning caliph and sometimes the heir apparent, but also the vizier in office and the attendant in charge of the factory.
 46. Inscriptions on several *tiraz* woven for the 'Abbasid caliph al-Muktafi (r. 902-8) show a particularly distinct type of broken cursive. Florence Day, 'Dated *Tiraz* in the Collection of the University of Michigan,' *Ars Islamica* 4 (1937): 426-7, singled out the inscription on one piece dated 293/905-6 in the collection of the University of Michigan as remarkable in combining circles, sweeping curves, sharp angles, triangles set on a corner, strong tall verticals, and crisp pointed serifs.
 47. These pieces can be found in virtually every major collection of Islamic art. Among the many pieces of this slipware that survive, only one has a historical inscription, a pen box in the Hermitage (no. 1332-57) with the name Muhammad ibn Fadl (Krachkovskaya, 'Kuficheskovo Pis'ma,' fig. 4). For an analysis of the distinctive knotted kufic found on some of them, see Lisa Volov (Golombek), 'Plaited kufic on Samanid Epigraphic Pottery,' *Ars Orientalis* 6 (1966): 107-34.
 48. The manuscript is now in the Qarawiyyin Mosque Library in Fez; see David Wasserstein, 'The Library of al-Hakam II al-Mustansir and the Culture of Islamic Spain,' *Manuscripts of the Middle East* 5 (1990-1): 99 and n. 5; Jerrilynn D. Dodds (ed.), *Al-Andalus: The Art of Islamic Spain* (New York, 1992), 277, fig. 3.
 49. In addition to two quires in the Khalili Collection (QUR261 and QUR368; Déroche, *Abbasid Tradition*, no. 81), another fragment in the Nurosmaniye Library, Istanbul (MS 23) has an elaborate inscription on folio 1b stating that the manuscript was copied at Madinat al-Siqilliyya [that is, Palermo] in 372/982-3 (François Déroche, 'Tradition et innovation dans la pratique de l'écriture au Maghreb pendant les IVe/Xe siècles,' in *Afrique du Nord antique et médiévale. Numismatique, langues, écritures et arts du livre, spécificité des arts figurés [Actes du VIIe colloque internationale sur l'histoire et l'archéologie de l'Afrique du Nord]*, ed. S. Lancel [Paris, 1999], 237; François Déroche, 'Cercles et entrelacs: format et décor des Corans maghébins médié-
- vaux,' *Académie des Inscriptions and Belles lettres, Comptes Rendues*, March 2001, 593-620). Déroche put this manuscript in his NS III category, presumably because the variation between thick and thin strokes is not as marked. This double page is Khalili Collection, QUR261, fol. 8b-9a.
50. See Chapter 4 for details of the various *abjad* systems used in the east and west.
 51. Yasin Dutton, 'Red Dots, Green Dots, Yellow Dots and Blue: Some Reflections on the Vocalisation of Early Qur'anic Manuscripts (Part II),' *Journal of Qur'anic Studies* 2, no. 1 (2000): 16.
 52. Déroche, 'Cercles et entrelacs.'
 53. Several scattered folios were preserved in the library of the Great Mosque of Kairouan. See B. Roy and P. Poinssot, *Inscriptions arabes de Kairouan* (Paris, 1950-8), nos. 9b and 9c. Déroche, *Le Livre Manuscrit arabe*, 48, has suggested that an examination of the pages shows that, despite the claims in the colophon, the text is a collective work, although he does not specify why.
 54. This type of final *ya'* can be seen on the folio in the Nurse's Koran illustrated in Lings and Safadi, *The Qur'an*, no. 25.
 55. BN, Suppl. grec 911; Paul Géhin, 'Un manuscrit bilingue grec-arabe, BnF, supplément grec 911 (année 1043),' in *Scribes et manuscrits du Moyen-Orient*, ed. François Déroche and Francis Richard (Paris, 1997), 161-75. According to its two colophons, the same scribe Euphémios transcribed both texts in 1043. The particular style of Greek used, known as the 'ace of spades,' allowed Géhin to localize the small (17 × 14 cm) and provincial manuscript to southern Italy rather than the Levant, the other area where bilingual Greek-Arabic texts were copied. Various aspects of the Arabic script confirm the localization to southern Italy. Euphémios used a distinctive style of broken cursive, especially for final *nun* and *fa'/qaf*. *Nun* has a long bent tail similar to the one used in the Nurse's Koran, but of uniform thickness. Medial *fa'/qaf* resembles a diamond. Final *fa'* ends with a short horizontal tail, whereas final *qaf* has the same long tail as *nun*. The system of pointing also points to the Maghrib. The letter *fa'* is pointed with one dot below and *qaf* with one dot above, the system that remains typical in the Maghrib in later centuries.
 56. Copy transcribed by Muhammad ibn Ahmad ibn Yasin in Ramadan 383/October-November 993; TIEM 453-6; MMA 40.164.5r; Khalili Collection KFQ90; see Déroche, *Abbasid Tradition*, no. 83.
 57. In addition to the copy transcribed by al-'Abbas ibn Muhammad ibn 'Abbas in 389/998-9 (see above, note 41), there is another copied by 'Ali ibn Muhammad al-Muhaddith in Jumada I 419/May-June 1028 in the Haydariyya Shrine at Najaf. See Najji Zayn al-din, *Badā'i' al-Khaṭṭ al-'Arabī* (Baghdad, 1972), fig. 18.
 58. Borne by Muhammad ibn 'Ali ibn al-Husayn whose copy was finished in Safar 388/February 998; Istanbul, TKS H22; Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' figs. 10-11. The word *al-saffar*, meaning coppersmith, became the name of the dynasty that ruled eastern Iran from 861 to 1003 because it was the profession of the founder, Ya'qub ibn al-Layth.
 59. Borne by Abu Bakr 'Abd al-Malik ibn Zar'a ibn Muhammad whose copy was finished on 6 Dhu'l-Hijja 394/24 September 1004; Istanbul, TKS Y-752; Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' figs. 16-17. *Rudhbar*, a Persian word meaning a district lying along or bisected by a river, was a common toponym in Islamic Persia. The Rudhbar along

- the Helmand river in south-western Afghanistan was famous in early Islamic times. The most famous site of this name in medieval times was the one in Gilan province that became a center for Isma'ili activity. See *El*/2, 'Rūdhbār.'
60. Balkh, known as the 'mother of cities' and now in Afghanistan, gained fame as the entrepôt at the crossing of routes east-west from Iran to Central Asia and China and north-south from Afghanistan to India.
 61. Illustrated in Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' fig. 16.
 62. This point is often made; see, for example, Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' 124, n. 35 and *Gulchini*.
 63. Al-Nadim, *Fihrist*, 17.
 64. Al-Nadim, *Fihrist*, 273-7.
 65. Ibn Muqla is said to have set forth his rules of calligraphy in a small treatise entitled *Risalat al-khatt wa'l-qalam* (Cairo, DK, no. 4). Although sometimes accepted as his work (e.g., *Elr*: 'Calligraphy,' IV:680), the treatise has never been edited or published, and scholars like François Déroche, *Manuel de codicologie des manuscrits en écriture arabe* (Paris, 2000), 230 and n. 2 (citing a 1974 doctoral thesis at Cologne University that was unavailable to me), are skeptical of its authenticity. Until a critical edition is published and the authenticity of this treatise verified, it is difficult, if not methodologically unsound and premature, to base any arguments on it.
 66. Franz Rosenthal, 'Abū Haiyān al-Tawhīdī on Penmanship,' *Ars Islamica* 13-14 (1948): 1-30.
 67. The translator Franz Rosenthal evidently thought so too, as he included this long passage as part of the previous section.
 68. Ibn Khallikan 1:191 and Hajji Khalifa 3:151, both cited in Abbott, *Rise*, 33. Hajji Khalifa's phrase *al-khatt al-badi'* gave rise to Schoeder's misapprehension that this was the name of a new script; see above, note 10.
 69. Abbott, *Rise*, 33-6.
 70. We have at least one case in which we can compare an actual example with what a Mamluk writer, in this case Ibn Hajar al-Asqalani (1372-1449), called *mansub*: the stylized kufic used for a caption to an illustration in a copy of al-Hariri's *Maqamat* (Assemblies) penned and illustrated by Ghazi ibn 'Abd al-Rahman al-Dimishqi (BL Or. 9718; L. A. Mayer, 'A Hitherto Unknown Damascene Artist,' *Ars Islamica* 9 [1942]: 168). See further, Chapter 8, note 49.
 71. The Chester Beatty Library (ms. 1644), for example, has two folios from a Koran codex with 17 lines per page that have been mounted in an album of calligraphy, with a note in an eighteenth-century hand claiming that it was written by Ibn Muqla (James, *Qur'ans and Bindings*, no. 17). Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' n. 35, lists other examples.
 72. Rampur, Raza Library, ms. 6093D; Imtiyaz Ali Arshi, *A Catalogue of the Arabic Manuscripts in the Raza Library, Rampur* (Rampur, 1963), no. 3. This final double page (fol. 314a-315b) was published by Abbott, 'Arabic Paleography,' fig. 2, from a photograph taken by Harrie G. Moore, lecturer for the Canadian Pacific steamship line and an amateur collector of Oriental manuscripts. One page is also posted on their website: www.razalibrary.com/frame.htm.
 73. The text in the boxes, which begins with the word 'amal [work of], is written in a shorter and more crowded hand flanked by knotted ornaments not used elsewhere; the text proper is also more crowded.
 74. D. S. Rice, *The Unique Ibn al-Bawwāb Manuscript in the Chester Beatty Library* (Dublin, 1955).

75. Rice, *Ibn al-Bawwāb*, 5, citing Yaqut, *Irshad*, 5:445 and Ibn Kallikan, 1:492.
76. The introduction to the epistle on penmanship is preserved by Yaqut, *Irshad*, 5:451-2, cited in Rice, *Ibn al-Bawwāb*, 5. The beginning of the poem is also translated, in a slightly different way, in Mohamed Zakariya, *The Calligraphy of Islam: Reflections on the State of the Art* (Washington, DC, 1979), 14.
77. *The Muqaddimah: An Introduction to History*, trans. Franz Rosenthal (New York, 1967), 2:388-9. Parts of Ibn al-Bawwāb's descriptions of the scripts are also included in the treatise on calligraphy written at the beginning of the sixteenth century by the copyist al-Tayyibi for the library (*khazina*) of Qansawh al-Ghuri, last Mamluk sultan of Egypt and Syria (see Chapter 8).
78. CBL, ms. 1431. The manuscript was the subject of an admirable and exhaustive monograph by Rice, *Ibn al-Bawwāb*. In the third chapter (pp. 19-28), Rice analyzed the five other manuscripts with colophons naming Ibn al-Bawwāb, suggesting that they were all either tenth- or eleventh-century manuscripts to which Ibn al-Bawwāb's signature was added (or in one case a copy of such a manuscript) or later fakes or forgeries. The first is a copy of the poems of Salama ibn Jandal, see below. The second (TIEM 2015) is a fourteenth-century Mamluk copy of the first. The third manuscript is a small Koran codex (TIEM 449), with a colophon naming a copyist with the *kunya* Abu'l-Qasim and part of the date 400, but the colophon has been crudely altered to give the name Ibn al-Bawwāb, the place Baghdad, and the date 401/1010. Rice dismissed the fourth and fifth manuscripts - a selection of passages from al-Jahiz's *Kitab al-hawayan* (TIEM 1024) and a copy of the poems of al-Hadira (BL Add. 26,126) - as more blatant forgeries made in the fourteenth century. None of these manuscripts is modern. Rice's careful study shows that copies of Ibn al-Bawwāb's work were already treasured (and copied) by the fourteenth century.
79. One method of comparison is to count the number of lines in the two manuscripts. According to the page numbers scribbled at the top, the copy attributed to Ibn Muqla has 437 pages, each with 23 lines, giving a total of 10,051 lines. The text in the copy by Ibn al-Bawwāb begins on folio 9v and ends on folio 283a, so there are 548 pages of text, each with 15 lines, giving a total of 8,220 lines, about 82 per cent of the earlier volume. Each line in the copy by Ibn al-Bawwāb therefore contains about 18 per cent more text. Another method of comparison is to count the number of letters per line: each line in the copy attributed to Ibn Muqla contains some thirty-two letters, while the copy by Ibn al-Bawwāb has thirty-nine.
80. Such an extended basmala is rarely found in Koran codices on parchments. It is not used, for example, in the copy attributed to Ibn Muqla (Figure 5.7), nor in several undated examples in the Khalili Collection (QR286 and 305; Déroche, *Abbasid Tradition*, nos. 78 and 80. There are occasional exceptions, such as a manuscript in Istanbul (TKS R-38; Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' fig. 14).
81. Examples from the Topkapı Library include HS 22 dated 388/998 and Y-752 dated 394/1004-5 as well as the undated R-10, all illustrated in Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' figs. 10, 16, and 19. This form is also found in the manuscript made at Isfahan in Ramadan 383/October-November 993, for which see Déroche, *Abbasid Tradition*, no. 83, as well as many other undated examples in the Khalili Collection. This extender is not used in the first

- surviving example on paper copied by 'Ali ibn Shadhan in 361/972 (Figure 5.3).
82. These dots are clearest when the verse ends at the left margin, as in lines two, nine, eleven, etc. on the page illustrated here (Figure 5.8). On the third line, Ibn al-Bawwab penned the last two letters in the final word of verse 61 (*waw* and *nun*) in the margin and added the blue dots there.
83. The statement is somewhat perplexing, as the text actually follows the verse count of the Basran Abu 'Amr (Dutton, 'Red Dots II,' 17). Abu 'Amr's reading was widespread, but the discrepancy between what the frontispiece says and what the text actually contains might add weight to the suspicions of Richard Ettinghausen, the renowned scholar of Islamic art, about the authenticity of this manuscript; see Arberry, *Koran Illuminated*, xix. Nevertheless, this manuscript, like one attributed to Ibn Muqla in Rampur, remains the best surviving example of this famous calligrapher's style.
84. The chapter heading here gives the name (Surat al-Qamar; The Moon, 54) and the verse count (55 verses), with the place of revelation (Mecca) written in the same script in the margin below the roundel marking the place of prostration. The verse count is given, notably, in the archaic ordering of hundreds, tens, and units (here, *khamsun wa khamsa*, fifty and five) used in Whelan's Group 1 manuscripts (see Chapter 4). Finding it here in a manuscript made at Baghdad in 391/1000-1 adds weight to Whelan's attribution of that group to Iraq.
85. It can also assume the form of a closed circle that it has in *naskh*, as in the word *makkiyya*, the place of revelation written in gold in the margin of Figure 5.8.
86. The colophon to a small Koran manuscript in the British Library (Add. 7214; Pope and Ackerman, *Survey*, pl. 328; Rice, *Ibn al-Bawwab*, pl. XIII; Lings and Safadi, *The Qur'an*, no. 54; Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' fig. 28) says that transcription was finished in Jumada I 427/March 1036 by Abu'l-Qasim Sa'id ibn Ibrahim ibn 'Ali ibn Ibrahim ibn Salih *al-mudhahhib* (the gilder). The colophon adds that the copyist was the son of a disciple of al-Jawhari (d. c. 1009), the celebrated lexicographer of Turkistani origin who taught Arabic and particularly calligraphy in Damghan and Nishapur. Despite his epithet, the copyist did not work alone, for as Rice pointed out (p. 25), a note on one illuminated folio (2b) says that Abu Mansur Naji' ibn 'Abdallah was responsible for the illumination (*tadhhib*).
87. According to an anonymous treatise that Rice considered an early commentary on the subject, Ibn al-Bawwab was a master of many round scripts, including the six that later came to be grouped as the Six Pens as well as others such as *hawashi* (literally, glosses) and gold script (*qalam al-dhahab*). He is also said to have given distinction to textual and Koranic scripts (*mayyaza qalam al-matn wa'l-masahif*) and wrote kufic script. See Rice, *Ibn al-Bawwab*, 7, citing an anonymous treatise in Berlin (We 167, fols. 43-50). The treatise was published by W. Ahlwardt, *Verzeichniss der Arabischen Handschriften* (Berlin, 1877), 1, no. 7. Although the treatise is unsigned and undated, Rice judged the clarity and simplicity of its style signs of antiquity.
88. Rice actually used the form *naskhi*, the form used by Abbott, *Rise*, but most scholars prefer the noun *naskh*. He also wondered whether the gold script used for the chapter headings might be the *qalam al-dhahab* mentioned in the anonymous text on calligraphy.
89. See, for example, Tabbaa, 'Transformation 1: Qur'anic Calligraphy' and Solange Ory's article, 'Calligraphy' in *EQ*.

90. See, for example, the discussions in Safadi, *Islamic Calligraphy*, 62; Habiballah Faẓā'ilī, *Atlas-i khatt: taḥqīq dar khattū-i islāmī* (Tehran, 1391/1971), 284-391.
91. The root *thalatha* means to take or be a third of something; Edward William Lane, *An Arabic-English Lexicon* (London and Edinburgh, 1863), 1:346. The second, intensive form *thallatha* means to triple.
92. Abī al-'Abbās Aḥmad ibn 'Alī al-Qalqashandī, *Subḥ al-a'shā fi šin'at al-inshā* (Cairo, n.d.), 352; see also Abbott, *Rise*, 31-2, and Dodge's note in his translation of Ibn al-Nadim, *Fihrist*, 13, n. 23.
93. Priscilla P. Soucek, 'The Arts of Calligraphy,' in *The Arts of the Book in Central Asia: 14th-16th Centuries*, ed. Basil Gray (Boulder, CO, 1979), 14 and n. 33, citing Faẓā'ilī, *Atlas-i khatt*, 196-7 and 231.
94. The pen was measured by animal hairs (*sha'r al-birdhawn*), probably the hairs of a donkey. A pen twenty-four hairs wide was used to write the large script known as *tumar*, often used for the protocol (see Chapter 2). In descending order, the next sizes were *thuluthayn* (literally two-thirds and hence sixteen hairs), *nisf* (half, twelve hairs) and *thuluth* (one-third, eight hairs).
95. See, for example, the canon of proportion reconstructed by Ahmed Moustafa reproduced in Soucek, 'Calligraphy,' pl. III.
96. See the lengthy discussion in Abbott, 'Arabic Paleography,' 87-92, and the various charts and lists in Abbott, 'Arabic Paleography,' Table 1; al-Nadim, *Fihrist*, 13, n. 23; and Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' 123, none of which cogently adds up to the twenty-four scripts mentioned by Ibn al-Nadim at the end of the passage. The most recent study, Vlad Atanasiu, 'Les réalités subjectives d'un paléographe arabe du Xe siècle,' *Gazette du Livre Médiéval* 43 (Autumn, 2003): 14-22, argues that Ibn al-Nadim was classifying the scripts not only by their visual appearance, but also according to social, codicological, and genealogical principles, thereby making a parallel between writing and society and projecting an idealized conception of the world and society on writing. This essay is the most provocative on the subject, attempting to get behind the reasoning for Ibn al-Nadim's classifications and put the tenth-century scholar's work in context, but it too ends up with only twenty-one scripts. Ibn al-Nadim's text may be corrupt, and so far as it stands, it remains difficult to interpret.
97. Faẓā'ilī, *Atlas-i khatt*, 304. The traces of *thuluth* include the upturned tails on *ra*, as in *mustaqqirun* and *muntashirun*, the last words before the marginal blue dots in the third and sixth lines of Sura 54 (Figure 5.8). Derman, *Art of Calligraphy*, 202, noted that the script was actually *rayhan*. Mohamed Zakariya repeated this information in his lecture, 'Criticism in Islamic Art-The Case of Calligraphy,' delivered at the colloquium 'Expanded Frontiers,' held at Virginia Commonwealth University on November 6, 2004, and slated for publication. His colleague and fellow-speaker Nabil Safwat concurred.
98. Al-Nadim, *Fihrist*, 261.
99. Compare, for example, the same phrase written in *rayhan* and *naskh* by Zakariya, *Calligraphy*, 23 and 25, or the charts of the individual letters forms drawn by Habiballah Faẓā'ilī, *Ta'lim-i khatt*, 7th edn (Tehran, 1374/1995-6), 312-13, and reproduced in *EIr*, 4:682-3. Faẓā'ilī's chart of *naskh* is also shown here as Figure 13.2.
100. S. M. Stern, *Fatimid Decrees: Original Documents from the Fatimid Chancery*, All Souls Studies (London, 1964), 126-8; *EI*2, 'Tawqī'. 'Tawqī' was one of two terms used for the official signature in early Islamic times. The other, *'alama*, which originally meant distinctive

- sign, was common in Fatimid Egypt and the western Islamic lands, whereas *tawqi* was standard in the east. The Ottomans later used a third term, *tughra*, which was also an emblem like the *tamgha* introduced by the Turkish dynasties which came to power in the Islamic lands from the tenth century. See Chapter 11 and Figure 11.15.
101. The Ghaznavid historian Abu'l-Fadl Bayhaqi, for example, mentions a letter that the 'Abbasid caliph al-Qa'im sent the Ghaznavid ruler Mas'ud that containing the caliph's signature (*tawqi*), 'my aid is desired of God' (*i'tidad bi'llah*).
102. In other *sura* headings, the *alif* of *ayat* is connected to the last word of the verse count as in the previous heading for Surat al-Tur (folio 241a), where the 'ayn of *arba* connects to the *alif*.
103. If we insist on labeling his scripts, the most accurate might be a text script merging *naskh* with *rayhan* and a touch of *thuluth* and a display script based on *thuluth* but verging toward *tawqi*. Such a description is accurate, but sounds more like a recipe in a cookbook.
104. See, for example, the manuscripts dated in the early eleventh century illustrated in Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' figs. 24 and 28-30.
105. Istanbul, TKS Baghdad 125. For the manuscript, see Rice, *Ibn al-Bawwab*, 19-21; Munajjid, *Al-Kitab al-'Arabi*, pl. 25; Derman, *Art of Calligraphy*, no. 14. For the poet, see EI/2, 'Salama b. Djandal.' His *diwan* has been edited by Fakhr al-din Qabawa (ed.), *Diwan Salama Ibn Jandal* (Aleppo, 1387/1968).
106. Anxious to prove that the subject of his own monograph, Ibn al-Bawwab's Koran manuscript in the Chester Beatty Library, was the only authentic work by this star calligrapher, Rice discounted the authenticity of the colophon on several grounds. Noting the half century gap between the date in the colophon and the date supplied by the ex-libris, Rice argued that the colophon had been added, although he did not specify when. He also suggested that the flashy gold colophon was not similar to the gold opening line of text. Derman, *Art of Calligraphy*, no. 14, a noted Turkish authority on calligraphy who valued the poetic manuscript as part of his national patrimony, countered Rice's reasoning, arguing that it was the ex-libris that had been added a half century after transcription and that indeed colophon and opening line differed because they were different scripts. Derman did not explain, however, why someone rubbed out the part of the ex-libris in *naskh*, but left the line in broken cursive, probably because that script had become too difficult to read. This must have been done by a later owner who did not want his predecessor's ownership known.
- All scholars agree, in any case, that the manuscript of Salama's poetry is a fine example of a luxury manuscript made in the eleventh century and one that itself served as a model for another copy, including the colophon, made as early as the fourteenth century. (The second copy of Salama's poems is contained in an anthology of three works; TIEM 2015; see Rice, *Ibn al-Bawwab*, 22-4.)
107. Munajjid, *Al-Kitab al-'Arabi*, pl. 25; Qabawa, *Diwan Salama Ibn Jandal*, pl. 4.
108. On the term, see Adam Gacek, *The Arabic Manuscript Tradition, a Glossary of Technical Terms and Bibliography*, Handbuch der Orientalistik (Leiden, 2001), 112. Such marks had been used at least since the tenth century, as in the copy of al-Mubarrad's grammar copied by Muhalhil ibn Ahmad at Baghdad in 347/958 (Istanbul, Koprulu Library 1508; Ramazan Şeşen, 'Les caractéristiques de l'écriture de

- quatre manuscrits du IVe s. H./Xe s. AD,' in *Les Manuscrits du Moyen-Orient: essais de codicology et paléographie*, ed. François Déroche [Istanbul/Paris, 1989], pl. IVb; Derman, *Art of Calligraphy*, no. 8).
109. The word *kitab*, which later came to designate the Koran and is usually translated as book or scripture, had not yet taken on this meaning when Salama was writing. On the word, see Daniel A. Madigan, *The Qur'an's Self-Image: Writing and Authority in Islam's Scripture* (Princeton, 2001) and his article 'Book' in *EQ*, 1:242-51.
110. Elsewhere, Salama ibn Jandal also mentions other elements of writing, such as inkwells (*dawat*) and parchment (*jidda muhraq*); poem 3, verse 2; Qabawa, *Diwan Salama Ibn Jandal*, 156.
111. Al-Yazidi (d. 922) was a friend of al-Jahiz; see al-Nadim, *Fihrist*, 1049.
112. Compare this arrangement to the more logical one in the printed edition (Qabawa, *Diwan Salama Ibn Jandal*, 208-9), where Salama ibn Jandal's concluding *qasida* is written in large bold script and the entire chain of transmission is written in the smaller script.
113. Rice called the smaller script *naskh*, but these features make Derman's identification of *rayhan* more likely.
114. Lane, *Lexicon*, 2:605-10.
115. For example, in his manual for secretaries, *Mawadd al-bayan*, 'Ali ibn Khalaf, an eleventh-century secretary in the Fatimid chancery who was one of the main sources for the Mamluk chronicler al-Qalqashandi, made the distinction between careful (*muhaqqaq*) and careless (*mutlaq*) execution. The treatise survives only in an incomplete manuscript in Istanbul (TKS Fatih 4128), but was used by Stern, *Fatimid Decrees*, 105. The Fatimid secretary reports:

The exact script (*muhaqqaq*) is such that its letters are precisely shaped if taken one by one. It is nobler than the negligent (*mutlaq*) and is only used for important matters, such as appointments, registrations (*isjalat*), and grants of property, which are meant to be kept for generations, and letters addressed by kings to kings which must indicate the importance of the sender and the addressee. Negligent script (*mutlaq*) is such that its letters run into each other and are joined together; it is derived from the exact script and used in order to expedite important correspondence which must not be delayed, and for common affairs. It appears more pleasing to the eye as long as one looks at it as a whole, but as soon as the single letters are distinguished and are compared with the letters of the exact script, it becomes manifest how great the difference is.

- Ibn al-Nadim uses the term *muhaqqaq* in describing the origins of Arabic writing according to sources other than Ibn Thawaba. Ibn al-Nadim says that during the 'Abbasid period there developed a style called the *'iraqi*, which was the formal type (*muhaqqaq*) known as *warraqi*. Al-Nadim, *Fihrist*, 15.
116. Ibn al-Nadim (*Fihrist*, 16), for example, lists *muhaqqaq* as one of the scripts that derived from *ri'asi*, a script said to have been invented by al-Fadl ibn Sahl, known as Dhu'l-Ri'asatayn (possessing two positions) because he was both vizier and army commander under al-Ma'mun (r. 813-33).
117. See Yosufi's article 'Calligraphy' in *EI*, 4:689, presumably citing the unpublished treatise attributed to Ibn Muqla in Cairo.
118. The *alifs* and *lams* in the basmala, for example, have no serifs, a feature standard in later *muhaqqaq*.
119. Déroche, *Abbasid Tradition*, 133 and elsewhere.

120. Bloom, *Paper before Print*.
121. Lothar Ledderose, *Ten Thousand Things: Module and Mass Production in Chinese Art*, Bollingen Series (Princeton, 2000), 20–1. In China, as in the Islamic lands, many of these innovations were later linked to a celebrated individual: Wang Xizhi, for example, is credited with transforming calligraphy into a transcendent art form and giving the final formulation to the cursive Running Script (*xingshu*) and Draft or Grass Script (*caoshu*). As Eugene Y. Wang, 'The Taming of the Shrew: Wang Hsi-Chih (303–61) and Calligraphic Gentrification in the seventh Century,' in *Character and Context in Chinese Calligraphy*, ed. Cary L. Liu, Dora C. Y. Ching, and Judith G. Smith (Princeton, 1999), 132–73, pointed out, however, Wang Xizhi's canonization occurred only in the seventh century, nearly three hundred years after his death, as part of the Tang emperor Taizong's rewriting of the past to bolster his own line.
122. Efim Rezvan, 'The Qur'an and its World: VI. Emergence of the Canon: The Struggle for Uniformity,' *Manuscripta Orientalia* 4, no. 2 (June 1998): 51, n. 63.
123. The classic work on the subject is Dominique Sourdél, *Le vizirat 'abbāsīde de 749 à 936 (132 à 324 de l'Hégire)* (Damascus, 1960).
124. Yasser Tabbaa, 'Monuments with a Message: Propagation of *Jihād* under Nūr al-Dīn (1146–1174),' in *The Meeting of Two Worlds: Cultural Exchange Between East and West during the Period of the Crusades*, ed. Vladimir P. Goss, Studies in Medieval Culture (Kalamazoo, MI, 1986), 223–41; Tabbaa, 'Transformation 1: Qur'anic Calligraphy,'; Yasser Tabbaa, 'The Transformation of Arabic Writing: Part 2, The Public Text,' *Ars Orientalis* 24 (1994): 119–47; Yasser Tabbaa, 'Canonicity and Control: The Sociopolitical Underpinnings of Ibn Muqla's Reform,' *Ars Orientalis* 29 (1999): 91–100; Yasser Tabbaa, *The Transformation of Islamic Art during the Sunni Revival* (Seattle and London, 2001).
125. The earliest manuscript in broken cursive to survive is the mystical treatise copied by the author al-Niffari in 344/955–6, and broken cursive continued to be used for many kinds of manuscripts in the tenth century. A disciple of Ibn Muqla, Muhalhil ibn Ahmad al-Baghdadi (d. 958), for example, used broken cursive to transcribe a two-volume copy of al-Mubarrad's Arabic grammar, *Muqtasab fi'l-nahw* (Istanbul, Köprülü Library, mss. 1507 and 1508; Şeşen, 'Caracteristiques de l'écriture,' pls. IVB and VA; Derman, *Art of Calligraphy*, no. 8). The manuscript was corrected the same year by the linguist Abu Sa'id al-Sirafi, author of the treatise on Basran grammarians copied by 'Ali ibn Shadhan in broken cursive script in 376/986. By the eleventh century broken cursive was also used for manuscripts written in Persian (Figure 6.1). The same is true of other round scripts (see Chapter 6).
126. Muhalhil ibn Ahmad, for example, transcribed his Arabic grammar for someone named Abi'l-Husayn Muhammad ibn al-Husayn al-'Alawi, a patron whose name suggests that he would not have been part of the so-called Sunni revival. Not only was he the son of someone named Husayn (the Prophet's grandson), but he also named his own son Husayn and his *nisba* connects the family to the Prophet's son 'Ali.
127. Dominique Sourdél (*Le Vizirat 'Abbaside*, 2:257–62), the foremost authority on the 'Abbasid vizierate, judged Ibn Muqla neither an administrator of great vision nor a statesman of much originality, but someone who merely followed the politics of his predecessors. From modest beginnings as a secretary, he became a suave man-about-town, a versatile and

rather fickle courtier who wooed the caliph with polish and good manners. In Sourdél's view, Ibn Muqla's political program was hard to gauge and his financial acumen outweighed by his talents as poet and calligrapher. But even then, Sourdél concluded that Ibn Muqla's calligraphic impact was difficult to define. Ibn Khallikan credits Ibn Muqla's brother Abu 'Abdallah al-Hasan as the real inventor of the proportioned script, and according to Ibn al-Nadim, both brothers followed the calligraphy of their grandfather. It seems that Ibn Muqla, in calligraphy as in politics, was more an opportunist than an innovator.

Furthermore, Ibn al-Bawwab did not share the partisan religious beliefs of his predecessor Ibn Muqla. Although the caliph al-Qadir was intent in reinforcing 'Abbasid propaganda and persecuting Shi'ites, Ibn al-Bawwab was not associated with the 'Abbasid court. His main patrons were the Buyids, the Daylamite dynasty that rose to power in Iran and Iraq as 'Abbasid grip over the provinces waned. Like most Daylamis, the Buyids were Shi'ites, probably first Zaydis and then Imamis or Ja'faris (Twelvers). Under their rule, Qumm became a center of Shi'ite theology, and the Baghdadi teacher Ibn Babawayh, known as Suduk (d. 992), became one of the foremost thinkers of Imami Shi'ism. Ibn al-Bawwab frequented the government circles of the Buyids. He worked in Shiraz as librarian for the Buyid Baha' al-Dawla. Ibn al-Bawwab also used to preach in Baghdad at the Mosque of al-Mansur, and when the Buyid vizier Muhammad ibn 'Ali ibn Khalaf, known as Fakhr al-Mulk, assumed the governorate for the Buyids there in 1010, he made Ibn al-Bawwab one of his intimates.

As Rice (*Ibn al-Bawwab*, 13) showed, the copy of the Koran penned by Ibn al-Bawwab suggests that the calligrapher shared the Shi'ite leanings of his patrons. The verse count at the beginning (Figure 5.9) says that the Koran uses the Kufan version established by 'Ali ibn Abi Talib, who is eulogized with the phrase *'alayhi al-salam* (peace be upon him), a phrase used by the Shi'ites instead of the Sunni form *radiya allah 'anhu* (may God be pleased with him). Since the text does not actually follow this version, the frontispiece may have been added as a selling point, but the eulogy in the colophon at the end of the text refers to the Prophet's pure family (*'itratuhu al-tahirin*), and the colophon invokes blessings on the Prophet's family (*alihi*). Such references to the Prophet's family were favored by Shi'ites, whose claims to legitimacy were based on descent through the Prophet's line. Similar eulogies for the Prophet's family show up in contemporary mosques in Iran, such as the Friday mosque at Nayin (Blair, *Monumental Inscriptions*, no. 9). Rather than promulgating the Sunni branch of Islam, Ibn al-Bawwab's copy of the Koran and others like it (e.g., Khalili Collection QUR284, David James, *The Master Scribes: Qur'ans of the 10th to the 14th Centuries AD*, ed. Julian Raby, The Nasser D. Khalili Collection of Islamic Art [London, 1992], no. 1, a manuscript whose unexplained provenance and remarkable similarities to the Ibn al-Bawwab manuscript in Dublin might raise a few eyebrows) may have been made for the nascent Shi'ite community in Iran and Iraq. See also the comments in Sheila S. Blair and Jonathan M. Bloom, 'The Nasser D. Khalili Collection of Islamic Art,' *Persica* 15 (1993–5): 77–90.

128. On the problem of the biographical dictionaries and their limitations in compiling biographies of specific individuals, see R. Stephen Humphreys, *Islamic History: A Framework for Inquiry* (Princeton, 1991), 189–208.
129. Tabbaa, 'Transformation 1: Qur'anic Calligraphy,' 137. This is not

- entirely true, as the Koran copied by Shanbak ibn Muhammad in Misr in 325/936-7 is written in a round script (see above, note 31).
130. Anna Contadini's attribution (*Fatimid Art at the Victoria and Albert Museum* [London, 1998], 10-11) of a small manuscript in broken cursive dated 428/1037 (CBL 1430) to Fatimid Egypt is not convincing. Only one Koran manuscript has so far been attributed to the patronage of the Fatimids in North Africa: the so-called Blue Koran (Figure 4.10).
131. Taqī al-dīn Aḥmad b. 'Alī b. 'Abd al-Qādir al-Maqrīzī, *Le Manuscrit autographe d'al-Mawā'iz wa'l-i'tibār fī dhikr al-khitāt wa'l-āthār de Taqī al-dīn Aḥmad b. 'Alī b. 'Abd al-Qādir*, ed. Ayman Fu'ad Sayyid (London, 1416/1995), 300-1.
132. Al-Maqrizi also preserves a long account of the sad looting of the Fatimid treasuries in 461/1068 from a work entitled *Kitab al-Dhakha'ir* (Book of Treasures). Books were stolen from forty separate depositories in the palace and included 2,400 boxed Korans (*khatmat qur'an fi rab'at*) written in the proportioned scripts (*al-khatut al-mansuba*). See further Paul E. Walker, 'Fatimid Institutions of Learning,' *Journal of the American Research Center in Egypt* 34 (1997): 179-200.
133. The information that we have has recently been collected by Ayman Fu'ad Sayyid, 'L'art du livre,' *Dossiers d'archéologie*, no. 233 (May 1998): 80-3.
134. Fu'ad Sayyid reproduces the title pages from the two surviving volumes, this one in Cairo (DK, no. 242 luga) and the other in the library of the Asiatic Society of Bengal in Calcutta.
135. It is now in Public Library in Rabat, Morocco.
136. See Chapter 6 and Figure 6.7 for discussion and illustration of the scripts used in the Fatimid chancery.
137. See Chapter 8 for further discussion of al-Tayyibi's manual.
138. Gülru Necipoğlu, *The Topkapi Scroll: Geometry and Ornament in Islamic Architecture*, The Getty Center in the History of Art and Humanities (Santa Monica, CA, 1995), 104-9.
139. Necipoğlu, *Topkapi Scroll*, 108.
140. Whelan, 'Writing the Word of God,' 123.

CHAPTER SIX

The Proliferation of Round Scripts

IN THE LATE eleventh, twelfth, and early thirteenth centuries, round scripts came to dominate the calligraphic scene, as copyists strove to transform their regular hands into graceful and imposing scripts suitable for larger codices containing important texts, including the Koran. Some copyists in the eastern Islamic lands continued to use the broken cursive supposedly canonized by Ibn Muqla, but the script became increasingly stylized until it was gradually relegated to headings and incidentals. Secretaries and copyists there also played with other round scripts. Like the majuscule and minuscule scripts used in the West,¹ these round scripts eventually came to be grouped in sized pairs later canonized as the Six Pens – *tawqi'* and its smaller counterpart *riqa'*, *thuluth/naskh*, and *muhaqqaq/rayhan*. Contemporary copyists in the Maghrib, who eschewed the adoption of paper and continued to use parchment, created their own distinctive style of round script, which also came in larger and smaller sizes. The development of regional varieties of round scripts is clearly related to the historical situation, in which distinct cultural centers arose at Baghdad, Nishapur, Cairo, Córdoba, and elsewhere.² Since these scripts had not yet reached their canonical forms, scholars sometimes categorize the same specimens under different names,³ and one of the aims of this chapter is to delineate significant features of individual examples.

The stylization of broken cursive

Broken cursive had a long and varied shelf life. In these centuries it was used not only for Arabic but also for Persian. The first surviving manuscript in new Persian – a copy of al-Haravi's pharmacological work entitled *Kitab al-Anbiya'* (Book of the Prophets) (Figure 6.1) transcribed in 447/1055-6 by the poet 'Ali ibn Ahmad Asadi al-Tusi – is copied in a rough broken cursive, with a larger and more polished version used as display script in the opening two lines with the Persian invocation to God.⁴ The text script is characterized by strokes of varying thickness, left-facing serifs, diagonal tails, and a spur on final *alif*; the display script is a more stylized version.⁵ In it, the vertical strokes of the four *alifs* in the first line are drawn out to contrast with the horizontal bars of *gaf* in the second line, which is so