DEVELOPMENT OF ARABIC SCRIPT IN EARLY ISLAMIC TIMES

The most familiar calligraphic specimens that survive from early Islamic times comprise fragments from Koran manuscripts copied on parchment in various rectilinear scripts. These codices are known in Arabic as masahif (sing. mushaf), from sabīla (pl. sabīl), 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. 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 1977 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. They were probably saved because they contained God's word, much as orthodox Jews preserve fragmentary documents lest they bear God's name.

In addition to the Yemeni hoard, François Déroche has identified leaves from some three hundred parchment manuscripts. 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-Sarab) in Cairo. 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.

Shrines were also repositories for fine Koran manuscripts. Manuscripts from the Dome of the Rock in Jerusalem, for example,
have been collected in the city's Islamic Museum, which now holds 266 Koran manuscripts. Shia 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. The shrine at Mashhad for the eighth Imam 'Ali ibn Musa al-Rida has a similar collection and its oldest and most famous Koran manuscript (Figure 1.5) shows how these early fragments acquired particular prestige at certain times. 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 Jamada I 1008/November–December 1598 by Shaykh Bahai Amili, the leading theologian of the day, attesting to its genuineness. The fragment was part of a substantial gift to the shrine by Shah 'Abbass to bolster his legitimacy, an act that culminated in his famous pilgrimage on foot from Isfahan to Mashhad in the fall of 1010/1601. 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.

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. 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.

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. 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. 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). 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
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 true the patched bifolios as if they were true ones. The typical quire, or quire of five folios, thus combines true bifolios with bifolios of sheen patched together and inserted symmetrically between them. In this drawing of a hypothetical quire (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 cursive) 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' as a term that he had found in the works of the fourteenth century lexicographer al-Firuzabadi and the thirteenth century biographer Ibn Khalikan. 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 indiscriminately 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 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 Salih al-Din Munajdid proves these claims to be unfounded. 25 The most secure type of internal evidence for dating these manuscripts is a notice of pious endowment (waqfyya) 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 horizontal and verticals, can be distinguished from some two dozen non-Koranic 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 pasted 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 (sunuduguy). 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. 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 263/May–June 876). 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.

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纤维list (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 (nadjim) at the 'Abbasid court. 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 Fibrist includes a great deal of additional material along with his notes about poets and scholars. Instead of the catalogue for a bookstore, 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 Fibrist opens with a section on language and calligraphy. 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 Medianin, 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. 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-Hayraj, 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 (1808–89) already used this brief section of Ibn al-Nadim's text to identify examples of Meccan script. This script later became known as ma'il (leaning) after the next passage in the Fibrist, in which Ibn al-Nadim enumerates the scripts used to copy the Koran. This term, found in Gustav Flögel's Arabic edition of the Fibrist published in 1873, however, was based on a corrupt manuscript of the text. The word Ibn al-Nadim actually used was munabaddh or munabidh. Derived from the root nabaddha [flying or cast away], munabaddh or munabidh is a participle from the third form [separate or succeed] and is of unclear vocalization and meaning.
DEVELOPMENT OF ARABIC SCRIPT IN EARLY ISLAMIC TIMES

The ma‘l 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‘l. 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. 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 belonged to the famous Manilk historian al-Maqrizi—the text to illustrate the passage (Figure 4.3) shows the basmala, or invocation to God, in a rounded hand. 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 Rukaini, and eleven or twelve other varieties or sub-varieties, including the mysterious munabidh. Ibn al-Nadim makes no connection between the regular Meccan and Medinan scripts, with their tall alif 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.

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. Déroche followed the methodology used in Western paleographic studies, but the large number of homographs or similar letter shapes in Arabic led him to 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 designated as hitazi, 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 hitazi style therefore preceded 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 5.5 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 x 22.5 cm) that is divided between several institutions, some of which have held the pages since 1650.48 Group 2 (Figure 4.5) is exemplified by a large manuscript with twenty lines per page (average dimensions 40 x 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 spuriusly 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 Dhul-Qa’dah 206/July 915 by ‘Abd al-Mun‘im ibn Ahmad.51 Her criteria show that the Koran endowed by Amajur (Figure 4.3), 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 hitazi 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 alphanumerical 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
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 squatier vertical letters and tighter line spacing in which ascenders
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-yaqubifana 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-rahaban [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-rahaban, 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-rahaban from the basmagh 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 al-rahaban 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 kurus. 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 3].

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 [aajza'] 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.

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.4 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 'ain 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; dal with an upper stroke that is hairline-thin and diagonal, and isolated bu' that begins with a slightly curved stroke. Internal relations are the same as well: the tails of sin and sad, 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
bisection by the straight stroke for ḥim. This is sometimes the case in Group 2 manuscripts [Figure 4.5c], but more often the letters preceding ḥim 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’ can also extend like final nun, and in Group 1 manuscripts, final ya’ can have a third tail shaped like a dal. The Dome of the Rock inscription also uses the sickle-shaped tail on qaṣf 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 masonic 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. The texts were manuals drawn up to provide clerks or secretaries kuttab (sing. kuttab) in the ‘Abbasid chancery with a set of rules for the practical details of their profession. In his handbook for secretaries, the tenth-century aktar al-Suli 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 artsy of professional calligraphers who used their skill to adorn Koran manuscripts, special state documents, and royal correspondence. These manuals are not therefore, have much bearing on early Koran manuscripts. Whelan used several examples from the Kitab al-kuttab by the grammarian Ibn Durustwah [850–947] to drive home the point that these secretarial treatises do not apply to Koran manuscripts penned in angular script. Ibn Durustwah 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 (masabīḥ), other copyists (al-ṭarraqa), and secretaries (al-kuttab). Whelan gave the example of final ya’. Ibn Durustwah 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 Durustwah must have known about such examples, otherwise he would not have condemned such usages. The grammarians also caution secretaries not to break words between lines, and his companion Abu Hayyan al-Tawhidi [d. after 905–10] warns them not to use tannin-based brownish ink, both features standard in parchment Koran manuscripts. 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, some manuscripts had different sorts of quions. One manuscript in the Bibliothèque Nationale [ms. Arab 138a], for example, had quinions [quires with four bifoliis, in which the order of the hair and skin sides varied. Since Déroche considered this manuscript was in bihāzī 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. More study might determine whether quire composition was a distinctive feature of certain groups of manuscripts made at particular times or places. Quinions 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. In later times, the arrangements of quions also differed in different places. The terion, for example, was particularly popular for Koran manuscripts made later in the Maghrib.

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. 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 relevant. One of the most effective is the correlation of individual motifs with those found in the Umayyad period. This comparison is often based on 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 writing of verse numbers given in suṣa 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 the usual name Sajda [Prostration, Sura 32], followed by the information that it contains twenty and nine verses [‘ashura wa ṭisa’ yuṣi]. 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 repre-
sent some of the oldest.57

Whelan’s analysis of the numbering system used in chapter head-
ings 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. Accor-
ding to this arrangement, which has been generally but uncriti-
cally accepted, 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 orna-
mental headings containing the written titles of the suras.

This new ordering of manuscripts, in which those with orna-
tmental bands may be among the earliest, finds support in one of the frag-
mentary manuscripts discovered in San’a’ [Figure 4.7].58 The fragmen-
to 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 17 × 28 cm. A rosette in the middle
of the page marks the end of Sura 33 (Sajda, Prostration). The intro-
ductive 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 36 and 37 of
the later text. The palimpsest suggests that manuscripts with decora-
tion 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.59

Both codicology and the choice of manuscripts are areas of inves-
tigation 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.52 Ibn al-Nadim listed eleven different works on
the disagreement among codices (ikhtilaf al-masabih). In an attempt to
put an end to these arguments, Ibn Mujahid [d. 936], a Baghdad
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.53 Like the inscrip-
tion 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
colors.54 For example, the folio 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,
both red and green dots. Red was used for normal purposes, that is, for short final vowels, tanwin, hamza, 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’ (shadthath) readings, and for other grammatical reasons. In addition, red and green dashes were used for consonantal variants e.g. `ya' instead of yaa.

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 hamzaat al-qinna (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. 1053) 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 372/683-1 (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 hamzaat 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 'Amr, 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. The most popular reading was that of the Basran Abu 'Amr. Now common in Africa, 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 expertise of different types of scholars, is clearly needed.

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 hamzaat al-wasl by putting either a green or a blue dot near the allif. 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-Najjat, a vocalizer from al-Andalus, that had red dots for vowels, green dots for connective hamza, and a thin red line for vowels of liasion, 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. The text is penned in a distinctive early hand in which the elongated bodies of the letters contrast with the more angular forms of the short vowels.
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 ‘khamsan’, 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 sweeping tails of final ‘$u$’ (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 410/1019, 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 prolimate use of parchment. Like the Amajur Koran (Figure 4.4), 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 Cordoba 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 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 373/984–3 (Figure 5.4). In addition to yellow dots for hamza ‘$a$‘ and blue dots for hamza ‘$al$‘, it uses a distinct system of vocalization, with a thin red slash for unwritten long ‘alif’ and a hemicycle for shadda. The same system is used on an undated Koran fragment on parchment (Figure 4.9).41 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 (93–112). This corresponds to the last sixtieth (lizzb) of the text, a division found in other Koran manuscripts made in the Maghrib, such as a copy made in 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.8 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 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 ‘idra‘ (Read), the opening word of the sura. Similarly, Sura 107 [Figure 4.9] is not called al-Ma‘an [Charity], but Ara‘ayta (Did you see?). Furthermore, the titles do not use the scriptio defectiva standard for transcribing the Koran 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.\textsuperscript{91} 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.\textsuperscript{88} Even if one accepts the usual divisions, the numbering can vary depending on whether the basmul 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 method). Such new methods have been used persuasively to date medieval textiles, including the shroud of Turin.\textsuperscript{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.\textsuperscript{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 feature, such as the Amajar Koran, whose terminus ad quem of 163/876 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.\textsuperscript{91} Almost any date within the range is, from a scientific perspective, equally possible.\textsuperscript{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 (1775 to 995 CE) at the 95 per cent confidence level.\textsuperscript{93} Radiocarbon analysis of another manuscript, the so-called Samarkand Koran, produced a similar range of 260 years, from 595 to 855 CE.\textsuperscript{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. 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.\textsuperscript{95} 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.\textsuperscript{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 circles and that 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.\textsuperscript{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.\textsuperscript{99} The text is transcribed on large sheets of parchment, many trimmed, but measuring on average c. 30 × 35 cm.
DEVELOPMENT OF ARABIC SCRIPT IN EARLY ISLAMIC TIMES

Figure 4.3. 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-twelfth 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 E. 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. 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 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. 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 is an acronym formed from the first four letters—alif, ba, jin, and dal (א, ב, ג, ד). For the sake of pronunciation and memorization, the letters in this system are grouped into pronounceable but meaningless words. The traditional system is abjad hawaz, hurrīyya sa faḍ qarashat thakhkhdhī dashgh. In the Maghrib, however, another system is used: the fifth, sixth, and eighth groups are arranged differently and the letters grouped 'abjad hawaz hurrīyya kalaman sa faḍ qarashat thakhkhdhī zagbī. This latter system is the one used in the Blue Koran.

On the basis of historical evidence, Bloom then localized the manuscript of the Blue Koran to mid-twelfth century Tunisia. 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 aleooswood case decorated with copper inlaid with gold. 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 garrison, 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. 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. 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 maghribī system rather than the sin used in the standard system. 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 maghribī provenance, such as the arrangement of the folios in tervations, the marking of sevenths (folio 152 is marked as the half of the first seventh), the occasional green dot to indicate connective alif (hawanat 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
**DEVELOPMENT OF ARABIC SCRIPT IN EARLY ISLAMIC TIMES**

Koran manuscript in the Khalli Collection. The medium-sized folio (18 x 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 (zi'a wa sita wa sab'a). It is also written in a distinctive foliated script that calls to mind architectural inscriptions rather than penmanship. Such flourished script could hardly be earlier than the mid-ninth century.

These other avenues of investigation — ranging from paleography, codicology, vocalization and variant readings, sura titles, verse counts, and ajnab 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 forgeries. Until we obtain and coordinate such information, we must conclude, as Whelan did, that as yet we have no external evidence — no colophons, 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, and some of them may well survive among the leaves already published and known to scholars, but we still do not have convincing evidence 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**


2. A few folios have also been reused in bindings. Ursula Dreibholz, *Some Aspects of Early Islamic Bookbindings from the Great Mosque of Sana'a, Yemen,* in *Scripta et manuscripta 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 Sana'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.

3. 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' *Summa 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.


5. Nearly three hundred thousand examples, dating mainly from the mid-ninth century to the mid-thirteenth, were discovered at the end of the nineteenth century in a storeroom [known in Hebrew as a genizah] 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, 2004), 74-8. The Cairo Geniza included trousseau documents, 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. Dreibholz, *Quran Fragments*, 21.


7. Some of these were published by Bernhard Moritz, *Arabic palaeography: A Collection of Arabic Texts from the First Century of the Hifjra till the Year 1000* (Cairo, 1901), an album that, like the collection, is relatively inaccessible today. WorldCat lists sixteen copies worldwide.


9. 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 (with the author calls *tab'a, pl. rab'at*), and in size from small to huge (a two-volume copy made in the five centuries, no. 1, measures over a metre 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