

Alain George

# THE RISE OF ISLAMIC CALLIGRAPHY

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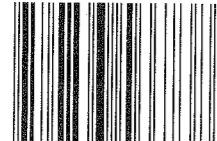
'This book rises to the challenge of a grand theme – how did the early Muslims develop a fitting script and presentation for the word of God? George presents, in vivid expository prose, bold but convincing answers to the many questions posed by this scattered and fragmentary material, especially on matters of date and provenance. An unerring sense of the bigger picture complements his mastery of detail and of earlier scholarship. This promises to be a classic.'

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The birth of Qur'anic calligraphy was a major event in the early history of Islam. In a few decades, it raised the Arabs and their language from the remote fringes of the civilised world to its very heart.

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Alain George highlights the historical context of early Arabic calligraphy and its relationship to the emerging civilisation of Islam, showing how a craft based on pen, parchment and ink came to convey the divine character of the Qur'anic text.

Beautifully illustrated, this is an essential reference work for students and connoisseurs of calligraphy alike.

Alain George is Lecturer in Islamic Art at the University of Edinburgh. His primary field of research is the art and architecture of the early Islamic era, with a focus on calligraphy, Umayyad religious art and the arts of the book.

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Alain George

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## Acknowledgements

The research behind this book was conducted over a period of several years in different places and was aided, along the way, by numerous colleagues and friends. It all started on an autumn day, when I first came across an old page of Qur'anic calligraphy at the Ashmolean Museum, in Oxford. A few weeks earlier, a fortuitous visit to a lecture on Islamic art had led me to engage in this fascinating field of study. The interest that burgeoned in those days proved to be a lasting one; I owe much of it to Julian Raby, his enthusiasm, dedication and inspiring teaching.

These early forays soon gave way to a doctoral thesis for which I was supervised with rigor and gusto by Jeremy Johns. As my interests grew and diversified, I was also fortunate to receive the input of a wide array of specialists at Oxford, notably Sebastian Brock, with his profound grasp of Syriac and early Christianity, and Michael Macdonald, who helped me chart the desert but richly inscribed paths of pre-Islamic Arabia. In Paris, I was welcomed, time and again, by a diligent team of experts at the Bibliothèque Nationale de France. A few métro stops away, François Déroche showed an unvarying readiness to share his vast knowledge of Arabic manuscripts and engage with new ideas about their history.

François Déroche, Venetia Porter and Sheila Blair read earlier versions of the text, to which they brought valuable comments and criticisms; I also owe Robert Hillenbrand particular thanks for his thorough and insightful remarks on an earlier draft of the book. The finished work, with any of its shortcomings, naturally remains my own responsibility. Illustration was another important part of the project: many of the difficulties it presented would not have been easily overcome without the steadfast and competent interventions of Farah Dabbous. I was also helped, at different stages and in

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Finally, the present book would not have been the same without the patient support and advice of my wife Hiba through good times and bad. This work is dedicated to her.

*Edinburgh, May 2009.*

## List of Abbreviations

BL	British Library (London)
BNF	Bibliothèque Nationale de France (Paris)
Camb.	Cambridge University Library (Cambridge, England)
CBL	Chester Beatty Library (Dublin)
Gotha	Forschungs- und Landesbibliothek (Gotha)
Khalili	The Nasser D. Khalili Collection of Islamic Art (London)
ÖNB	Österreichische Nationalbibliothek (Vienna)
Sanaa	Dār al-Makḥṭūṭāt al-Yamaniyya (Sanaa)
Sinai	Monastery of Saint Catherine (Mount Sinai)
TIEM	Türk ve İslam Eserleri Müzesi (Istanbul)
Vatican	Biblioteca Apostolica Vaticana (Vatican)



## Author's Note

### *Auctions*

All references are to London auction rooms, unless otherwise stated.

### *Dates*

Unless otherwise stated, dates are given in the Gregorian calendar, or in the form Hijrī/Gregorian. When the Hijrī year overlaps two Gregorian years, the later Gregorian date appears in the notation (unless more specific information about the month is available). Thus AH 77, which started in April 696 and ended in March 697 AD, is recorded as 77/697.

### *Dimensions*

Manuscript dimensions are given in the format height x width cm, unless otherwise stated.

### *Image references*

Essential information about each image is given in the captions; detailed references can also be found in the sources list at the end of the book.

### *Transliteration*

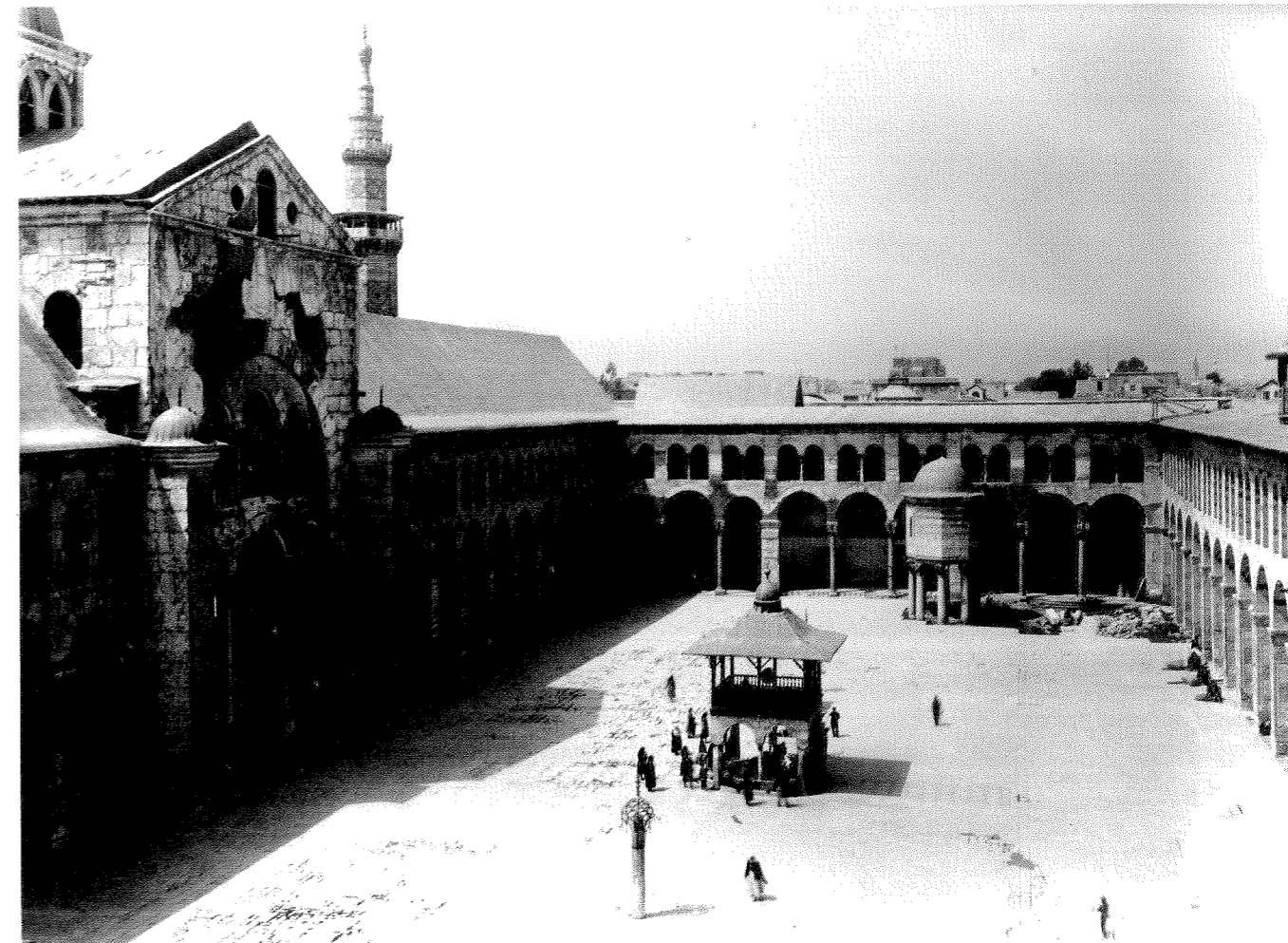
The transliteration system used here is that of the *International Journal of Middle East Studies (IJMES)*, with minor adjustments. Where a spelling has gained common acceptance in English, it has been preferred to its transliterated equivalent, e.g. 'Qur'an' for 'Qur'ān', 'Kairouan' for 'Qayrawān'.



## Introduction

Calligraphy is among the oldest and most revered arts in Islam. Having emerged during the new faith's first century, it grew and flourished at the apogee of its civilization. Then, in the course of time, the early tradition of Qur'anic calligraphy was replaced by the cursive styles still in use today. As people found the old scripts more difficult to

*1. The Great Mosque of Damascus in the early twentieth century.*

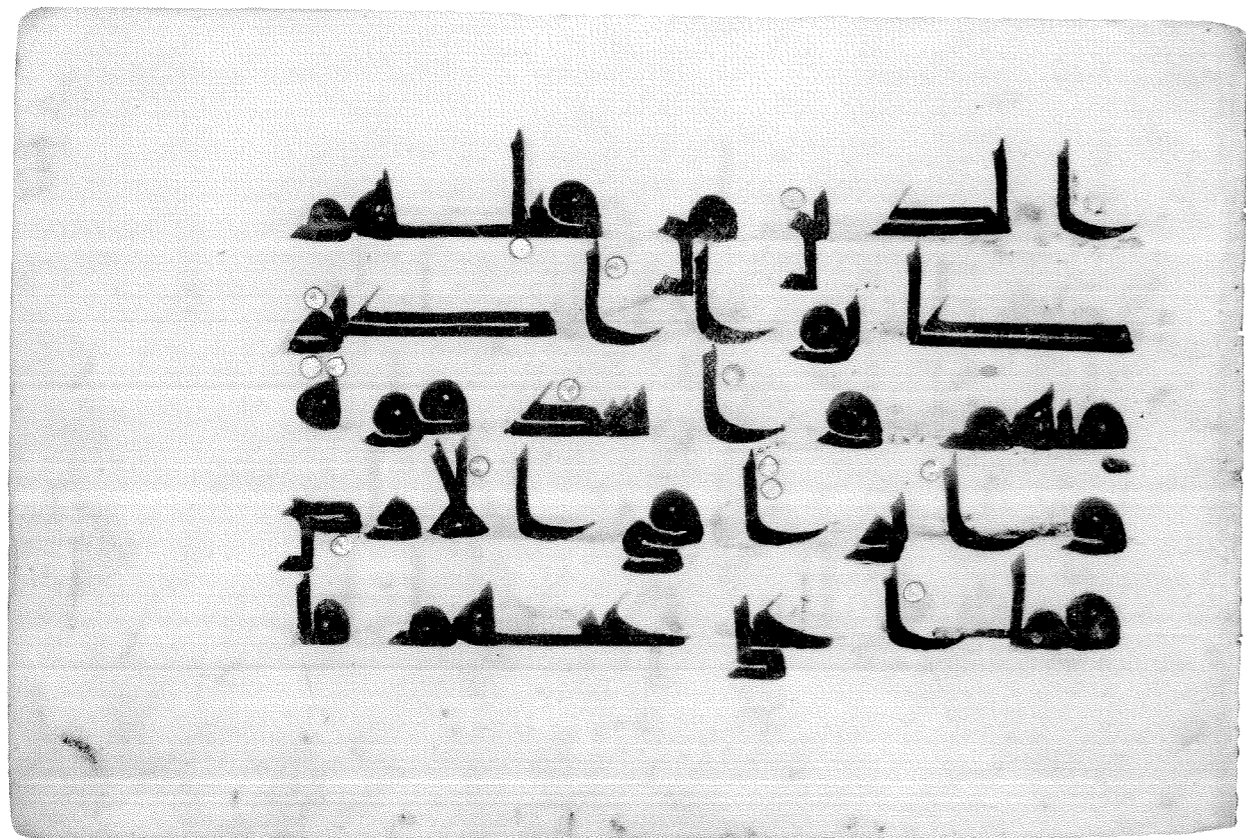


read, their parchment leaves were deposited in the dark corners of mosques, there to be slowly forgotten. Some of these mosques survived until the modern period, when these pages of black script and gleaming colour returned to the light.

By then, however, the living tradition behind the manuscripts had long ago died out. The main witnesses of the masterly calligraphy of the first centuries of Islam lay in thousands of parchment leaves scattered around the world, usually detached from their parent volumes. Each one of these pages is considered, today, as a work of art, and the published corpus is growing year by year. But they stand silent in front of the modern observer, concealing a story yet to be told. The present book explores the rise, growth and eventual demise of this art form.

Since it began two centuries ago, the study of these manuscripts has been hampered by several of its inherent problems. As most early Qur'anic codices were unbound over the centuries, only a handful of documents survive to tell us about their production period – in fact,

2. Early Qur'anic leaf written at the peak of the Kufic tradition, in the ninth century. The short vowels are indicated by gold dots.



not a single one until the third century of Islam. These documents are usually legal deeds (Ar. *waqfiyya*) endowing them to a religious institution: rather than a reliable date, they can only give us the latest time a manuscript may have been completed, its *terminus ante quem*.<sup>1</sup> Contextual information of any kind is scarce. One might have hoped to turn to Arabic textual sources dealing with related subjects for further insights – but they are few and not entirely reliable.

How, in these circumstances, can one make sense of the manuscripts? Different approaches have been attempted at different times. As they have already been traced by François Déroche,<sup>2</sup> I will only restate, here, some essential points, whilst outlining the parallel growth of collections. In 1780, Jacob Georg Christian Adler published a small group of leaves in a script he called 'Kufic', after Arabic sources. Like Antoine-Isaac Silvestre de Sacy shortly after him, he



3. The mosque of 'Amr ibn al-'Āṣ (Fustat, Egypt) in the late nineteenth century.

adopted an approach based on texts, which made its first decisive contribution when Silvestre de Sacy rediscovered the passage where al-Nadīm, a tenth-century bookseller from Baghdad, describes the *alif* of the ‘Meccan’ and ‘Medinan’ styles.<sup>3</sup> As time passed, more leaves, mostly purchased by travellers to the Middle East, gradually entered European collections, opening the way for increasingly refined palaeographical analyses. In 1833, the manuscripts of Asselin de Cherville, former French consul in Egypt, were acquired by the Bibliothèque Nationale de France (then known as the Bibliothèque Impériale). By working on this rich and diverse material, mainly found in the mosque of ‘Amr ibn al-‘Āṣ (Fustat), Michele Amari moved away from the impression of scriptural unity that had dominated previous scholarship.<sup>4</sup> From Fustat also came leaves bought before 1811 by Ulrich Jasper Seetzen for the Herzogliche Bibliothek zu Gotha, in Germany;<sup>5</sup> and the personal collection of Jean-Joseph Marcel, a member of Napoleon’s Egyptian campaign, acquired in 1864 by the Imperial Library of Saint Petersburg (today’s National Library of Russia).<sup>6</sup>

In 1887, the catalogue of the Königl. Bibliothek zu Berlin by

4. *The Great Mosque of Kairouan (Tunisia) in the early twentieth century.*

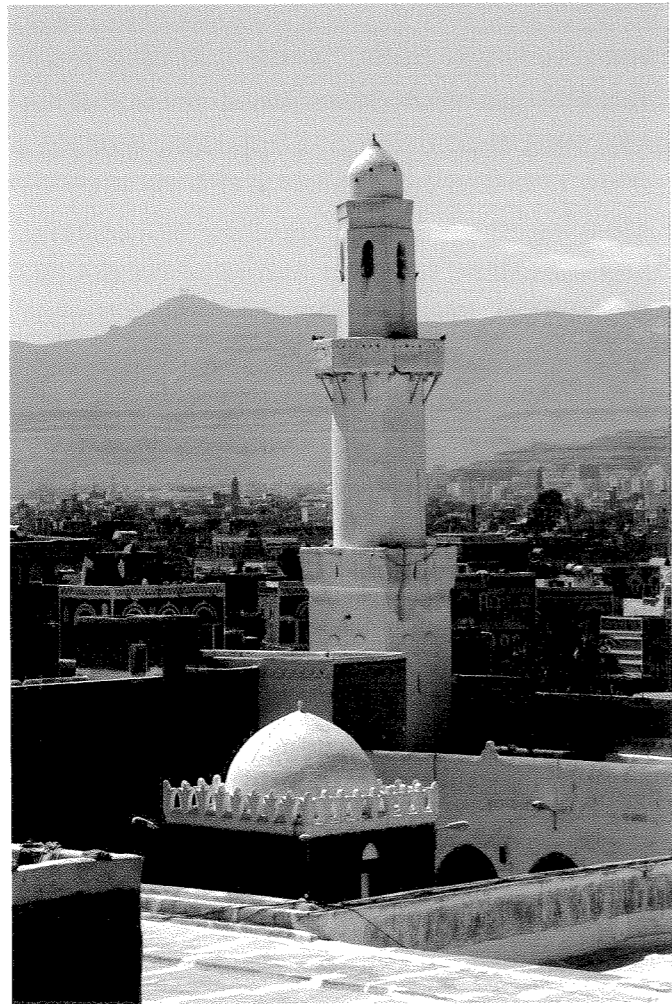


Wilhelm Ahlwardt produced detailed letter analyses which confirmed the scriptural diversity of Kufic.<sup>7</sup> In the following years, Josef von Karabacek introduced a methodology based on the study of individual letter shapes, rather than the overall appearance of the script, and emphasized the potential importance of the *alif* as a palaeographic element.<sup>8</sup> A few decades later, as part of the monumental *Geschichte des Qorāns*, Bergsträsser and Pretzl remarked on the limitations of diacritical and vocalization marks as chronological markers. More importantly, they noticed that some key letters strongly varied between styles.<sup>9</sup> By the turn of the twentieth century, the foundations of an approach based on letter analyses had been laid out, although the structure itself had yet to be built.

More manuscripts continued to surface in the following decades. In 1893, a fire ravaged the Umayyad mosque of Damascus, leading to the transfer of over 200,000 early Islamic folios and fragments to Istanbul by the Ottoman authorities.<sup>10</sup> Twelve years later, in 1905, Bernhard Moritz published some important fragments from Egypt, notably at the Khedival Library in Cairo.<sup>11</sup> Finally, during French rule in Tunisia, an important set of early bindings was discovered at the Great Mosque of Kairouan, which also housed, in its medieval library, a large number of early Qur’anic leaves.<sup>12</sup>

By 1939, both the number of manuscripts and published Arabic texts available for study had considerably increased. In that year, Nabia Abbott published *The Rise of the North Arabic Script*, in which she sought to retrace the evolution and classification of scripts as understood in contemporary eyes. She gathered a wide range of textual sources about the birth and early growth of Arabic calligraphy and sought to build a history on these premises. But these texts, written at least two to four centuries after the events, were not without inherent problems, such as their undue brevity, the contradictions between their different accounts and the large part played by myth. As a result, the conclusions Abbott reached remained unclear in places, inconsistent in others and generally built on weak foundations.<sup>13</sup> Her attempt thus appears, with hindsight, to have indicated the limits of an approach primarily based on texts. Yet she had also set the terms of an essential question: how was calligraphy perceived by those who wrote it?

Some three decades later, two spectacular finds were made at the Great Mosque of Sanaa, in the Yemen. In 1965, abundant rains led to



5. The Great Mosque of Sanaa (Yemen) at the turn of the twenty-first century.

the accidental discovery of a depository of early Qur'anic fragments, long ago forgotten in a small chamber at the north-west end of the building. The room where they lay scattered was replete with insects, rodents, pigeons and snakes. The heavily worn leaves were gathered in large bags and placed in the custody of the *Awqāf*, the direction of religious endowments; but according to Qāḍī Ismā'īl al-Akwa', then head of the Yemeni Department of Antiquities, this first find was sold by an unscrupulous keeper and dispersed to collections worldwide.<sup>14</sup> In 1972, as the west wall was about to collapse, more leaves were discovered by workers in a second room between the mosque's ceiling and roof. Although some were again lost in the aftermath of these events, most were eventually safeguarded.<sup>15</sup> From 1980 onwards, German and Austrian experts undertook their restoration

and classification. This collection of about 15,000 fragments from some 950 manuscripts is now housed at the *Dār al-Makḥṭūṭāt al-Yamaniyya* in Sanaa.<sup>16</sup>

A new phase of extensive research was inaugurated in 1983, with the publication of François Déroche's *Les manuscrits du Coran: Aux origines de la calligraphie coranique*. Building on his own criticism of earlier authors, Déroche engaged in a detailed classification of scripts on the basis of the material record. 'Two centuries of palaeographical research based on the study of textual data,' he noted earlier, 'seem to have led to a dead end.'<sup>17</sup> With the exception of 'Hijazi', he remarked that textual approaches had not resulted in a single convincing script identification (as will soon become apparent, 'Hijazi' may be as much of a historical misnomer as 'Kufic'; but in what follows, we will continue to use both terms for practical reasons).<sup>18</sup> From these observations, Déroche decided to proceed with a letter by letter analysis of the key features of early Qur'anic manuscripts, starting with the material at the Bibliothèque Nationale. This comparative method led him to establish six major 'Kufic' styles (labelled A, B, C, D, E, F), each of them in turn divided into subgroups (e.g. B.II, D.Va).<sup>19</sup> The total number of styles identified by him reached seventeen, some widespread, others represented by only a few fragments. There is good reason to hope that, as a result of this line of work, the major periods and variants of early Qur'anic calligraphy will eventually be understood.

In any case, from a largely indistinct mass, the Kufic material had been divided into intelligible scriptural groups. In the 1990s, some scholars criticized Déroche for isolating the manuscripts from their historical background, mainly because of his wariness of textual sources.<sup>20</sup> Their criticism has, in our opinion, ignored one essential point: if properly understood, Déroche's classification can represent the basis from which to retrace the ties between these two realms. The following pages will, I hope, be one illustration of this potential.

The present work began with the study of one Qur'anic double folio held at Oxford. The manuscript to which it belonged, the 'Qur'an of Amājūr', soon appeared to be based, in its script and layout, on principles of geometry and proportion.<sup>21</sup> This initial finding led to the analysis of over 1,000 early Qur'anic pages along the same lines, which largely confirmed my initial observations.<sup>22</sup> By following this

thread and deepening its background, new elements began to emerge about the birth of Qur'anic calligraphy, its meaning and development until the advent of the 'proportioned script' in the tenth century. The approach adopted in this book is primarily based on the material record, with palaeography and codicology as its cornerstones. I have also attempted not to neglect the information provided by textual sources which, despite their well-known shortcomings, have often proved to mirror closely – and even illuminate – empirical findings. But the story of Arabic calligraphy must start with the origins, in the period that preceded the rise of Islam. It is to that period that I now turn.

## CHAPTER ONE

# Looking for the Origins

At the time of the Qur'anic revelation, the Arabs already had at their disposal a set of well-formed, if primitive, letter shapes. This alphabet had come out of a process which represents the background of the earliest Qur'anic calligraphy. By virtue of its geographical position between Syria, Persia, Egypt and Ethiopia, the Arabian peninsula had been crossed by trade routes for centuries before Islam. In the Hijaz, most of the population lived a pastoral life centred on nomadic tribes, which spoke a multiplicity of related dialects. The main urban centres were oasis towns of modest size, such as Mecca, Medina (then known as Yathrib), Dedān or Ḥegrā. The desert areas to the north were also part of the Arabs' cultural sphere. In the sixth century, they were controlled by two Arab dynasties: the Ghassanids and Lakhmids. The Ghassanids were Byzantine 'phylarchs', or tribal rulers of a vassal state, based at Jābiya, in the Golan; the Lakhmids, who had their capital at Ḥira, were allies of the Sasanians. These two client states acted as proxies in the rivalry between the two empires and in the latter's dealings with the Arabs. It is in this broad context that the script which existed at the rise of Islam came into shape.

### *The Arabic script before Islam*

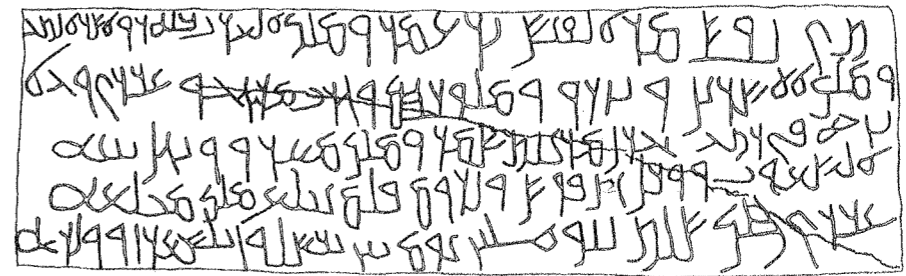
The pre-Islamic languages and scripts of Arabia can be divided into two main families: Ancient North Arabian (e.g. Taymanic, Dadanitic and Dumaitic) and Ancient South Arabian (Sabaic, Madhabic and Himyaritic, among others).<sup>1</sup> Linguistically, Old Arabic, the ancestor of Qur'anic Arabic, was closely related to Ancient North Arabian. Until around the late fifth century, it was written in the script associated with the local language of prestige: South Arabian at Qaryat al-Fāw; Dadanitic in Dedān; Nabataean at Ḥegrā; and so on.<sup>2</sup> By the fourth century, however, the native Ancient North Arabian scripts seem to

have disappeared in north-west Arabia, and to have been replaced by Nabataean (the written form of the Aramaic dialect of Petra).<sup>3</sup>

The earliest dated Old Arabic inscription in Nabataean script is the epitaph of Imru' al-Qays, 'king of all the Arabs': written in 328 at Namāra (Syria), it closely echoes contemporary Nabataean inscriptions. But by the sixth century, the strain of Nabataean used to write Arabic had departed considerably from this model (Figure 6). The shape of the letters had become close to what we know as 'Arabic'.<sup>4</sup>

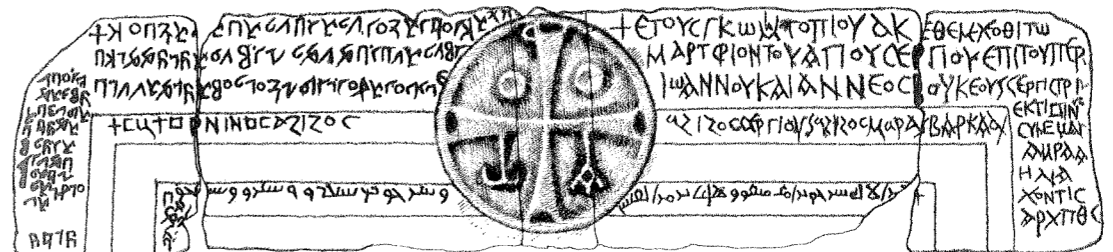
Three dated Arabic inscriptions from this period have been preserved. The one from Jabal Usays (AD 529) is a simple graffito. The other two, found at Zabad (AD 512) and Ḥarrān (AD 568), were respectively carved on the lintel of a church and of a martyrium, so they might be the work of specialized artisans.<sup>5</sup> The analysis of their style reveals some interesting features. The script is organized around three axes: the ligatures are horizontal, the tall letters have a marked slant to the right, while some of the shorter letters lean towards the left. Whereas in classical Nabataean the letters had been joined at the top, the ligatures now lie at the base. This trait can already be detected in late Nabataean inscriptions (and some earlier papyri);<sup>6</sup> but at Zabad and Ḥarrān, it acquires a new character: the ligatures – and in fact, the lines in their entirety – are almost perfectly straight. The threefold organization of the strokes gives the script a basic visual unity that was lacking in late Nabataean: it only finds a clear parallel, before Islam, in Syriac, where the letters are also joined by straight ligatures at the base. The underlying transformation was not as much about the letter forms, which were essentially derived from Nabataean at an earlier date, as the calligraphic character of the script.

Despite the small number of our documents, it is possible to develop a reflection about their background. A line of thought developed by Christian Robin and Robert Hoyland has the merit of matching the material record with its historical context.<sup>7</sup> The Arabs of Syria, as they noted, had begun to convert to Christianity at a relatively early date. One biographer of Simeon Stylites, a saint who lived in the region of Aleppo (c. 389-459), could thus write: 'It was impossible to count the Arabs, their kings and nobles who came and acknowledged Jesus ... and erected churches beneath their tents.'<sup>8</sup> In previous centuries, the rise of the Coptic, Christian Palestinian Aramaic, Ethiopic and Armenian scripts had been linked to the diffusion of Christianity among local

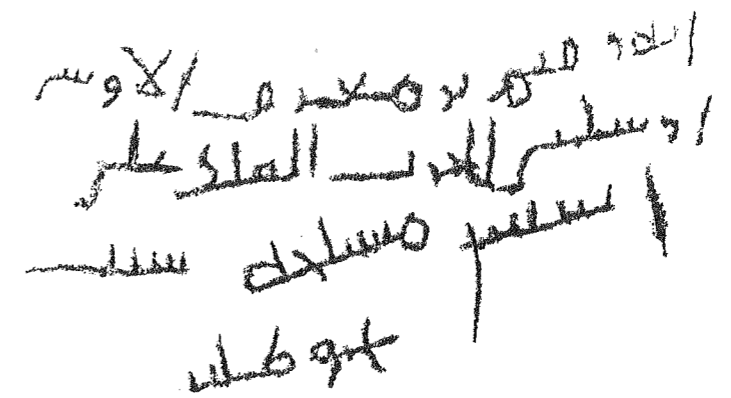


6. The earliest dated Arabic inscriptions.

Namāra (AD 328).



Zabad (AD 512).



Jabal Usays (AD 529), after a new picture by Michael Macdonald.



Ḥarrān (AD 568).

populations. The transformation of the late Nabataean script used by the Arabs may have been related to similar motives.<sup>9</sup>

The early sixth century witnessed a consistent effort on the part of the Monophysite, Syriac-speaking Church authorities of northern Syria (Mabbūg, Edessa and to a lesser extent Antioch) to spread Christianity among the Arabs.<sup>10</sup> Several events recorded in texts reflect this reality. Ruṣāfa, on the Roman frontier with the empire of Iran, had grown into an important Arab pilgrimage site centred on the cult of Saint Sergius. A basilica dedicated to the saint was built there shortly before 431 by Alexander, bishop of Mabbūg. Between 512 and 519, Jacob, bishop of Sarūg (near Mabbūg), composed a hymn to Sergius, which was probably read at Ruṣāfa. Severus, patriarch of Antioch, is also recorded to have pronounced a homily to the saint in the region of Aleppo in 514. The inscription from Zabad belongs to the same historical context: it is dated 512 and originally adorned the front of another church of Saint Sergius, also in northern Syria (see map).<sup>11</sup> Two of the persons named in it are called Sergius, as if to remind us of the saint's status among the Arabs.

The Usays and Ḥarrān texts were discovered further south, in the Ghassanid sphere of influence. Despite their political allegiance to Byzantium, the Ghassanids adhered to the Monophysite creed around 510. Their foremost king, al-Ḥārith ibn Jabala (r. 529-69), even went as far as pleading the Monophysite cause during his visit to the emperor Justinian in 563.<sup>12</sup> The author of the Usays graffiti was sent to that area by al-Ḥārith himself.<sup>13</sup> The patron of the Ḥarrān martyrion, Sharaḥīl ibn Zālim, is designated as 'phylarch' in the Greek part of the inscription: he was therefore another Arab ally of Byzantium, although his exact relation to the Ghassanids remains unclear.<sup>14</sup>

The Ghassanids and their Lakhmid rivals had espoused, in this period, the high culture of their respective patrons, notably in the arts (Figure 7). They also valued Arabic as a language of prestige and a cornerstone of their identity.<sup>15</sup> Their buffer states must have required some degree of administration to function, which could have provided another impetus for the spread of the primitive Arabic script.<sup>16</sup> The portrait of one historical figure resonates with this background: the pre-Islamic poet 'Adī ibn Zayd, son of the former regent of Ḥīra, who served as secretary of the Sasanian emperor Khusrū Anūshīrvān (r. 531-79). 'Adī was an Arab Christian, as asserted by Muslim writers



and confirmed by some of his verse that has been preserved.<sup>17</sup> He and his line are reported to have been translators and interpreters of the Shah in his dealings with the Arabs; and the sources repeatedly refer, in passing, to correspondence written by them in Arabic.<sup>18</sup> Whatever the truth of these assertions, from a historical point of view, it is plausible that Arabic administrative documents resembling the earliest Islamic papyri (Figure 8) began to be written in a Ghassanid or Lakhmid context, although no physical evidence of their existence has been discovered.

There were conflicting attempts, in that period, by the Monophysite and Nestorian Churches (both of which used Syriac for their liturgy) to win over the Lakhmids to Christianity. Although most Lakhmid kings eventually remained pagan, many of their family members did convert and their capital, Ḥīra, had an important Arab Christian population. From that region, Nestorian missionaries reached the east Arabian coast, where they established two ecclesiastical provinces, Bēt Qatraye and Bēt Mazūniye. Their substantial presence in that region has been confirmed by recent excavations of churches and monasteries.<sup>19</sup>

Likewise, the missionary efforts of the Monophysites went beyond Syria to reach the peninsula itself. The first two bishops of the oasis town of Najrān, between the Yemen and Hijaz, were ordained by Philoxenus, bishop of Mabbūg (northern Syria), in the early sixth century.<sup>20</sup> The persecution of their community, which revolted against the Jewish king of the Yemen around 523, had a considerable resonance in the Near East. These events were recorded in great detail by Monophysite clergymen of northern Syria, who also composed

7. Inscription in the name of 'Arethas, son of Arethas', from a church complex probably built under Ghassanid patronage at Niṭl (Jordan) in the sixth century. The Greek 'Arethas' is a transcription of the Arabic 'Ḥārith.'



hymns to the martyrs. From these accounts, we learn that among the martyrs of Najrān were two priests who had been educated at monasteries in the region of Edessa (again, in northern Syria). This evidence implies that lines of communication existed between these two parts of the world, which must also have crossed the Hijaz. This broad historical context involving the Ghassanids, Lakhmids and Christian missionaries makes it likely that the late Nabataean script used by the Arabs, having been transformed north of the peninsula, was brought back to that region in the century before Islam.

Arabic textual accounts of this process were written at least three centuries after the events. Their reliability suffers from caveats to which we have already alluded.<sup>21</sup> Yet they may not be completely irrelevant to the subject. Leaving aside legendary stories attributed to distant antiquity, typically involving Adam and Ishmael,<sup>22</sup> most sources converge around a single ‘historical’ narrative for the birth of the Arabic script. Thus al-Balādhurī (d. 892) writes:

Three members of [the tribe of] Ṭayyi’ gathered in Baqqa:<sup>23</sup> Murāmir ibn Murra, Aslam ibn Sidra, and ‘Āmir ibn Jadra; and they invented the [art of] writing (*al-khatt*). They modelled the Arabic alphabet upon the Syriac alphabet (*hijā*). Some people from Anbār learned it from them; and the people of Ḥīra learned it from those of Anbār.<sup>24</sup>

An Arab Christian called Bishr ibn ‘Abd al-Malik learnt how to write Arabic from the people of Ḥīra and, in turn, taught it to people in Mecca. The same story is repeated, with variations in length and wording, by Ibn Durayd (*fl.* ninth century), Ibn Abī Dāwūd (d. 929), Ibn ‘Abd Rabbih (d. 940), al-Jahshiyārī (d. 942), al-Ṣūlī (d. 946), al-Nadīm (wrote 987), Ibn Khallikān (d. 1282) and al-Qalqashandī (d. 1418).<sup>25</sup> The sources contradict each other as to its origin: al-Balādhurī attributes it to al-Sharqī ibn al-Quṭāmī (d. 767), al-Ṣūlī to a certain Ibn Ja‘da, al-Nadīm and al-Qalqashandī to Ibn ‘Abbās (d. 688), and so on. The variability of the tradition brings to mind an oral tradition. Qalqashandī’s version is developed in this way:

They established linked and independent letters, then they modelled them upon the Syriac alphabet (*hijā*): Murāmir created the letter forms (*suwar*), Aslam divided and linked [the letters at the base], and ‘Āmir introduced the diacritics (*ījām*).<sup>26</sup>

One might have suspected this to be a late elaboration of the anecdote, yet in the tenth century, Nadīm had already given the same statement, almost word for word – but without referring to Syriac.<sup>27</sup> The latter reference, however, is also early, as it occurs in the accounts of Balādhurī and Ibn ‘Abd Rabbih. In addition to the haziness of its roots and variants, the underlying narrative has legendary overtones, notably in the way each part of the scriptural process becomes personified. At the same time, it asserts that the shape of the letters, their isolation or inclusion in the word’s continuum, and the diacritical marks were modelled upon Syriac. According to the material record, two of these features (the letter shapes and joins) were in fact derived from Nabataean, but given calligraphic consistency under the influence of Syriac. The third, the dots, probably represents a borrowing from Syriac, to which we shall return. Another interesting detail is the mention of Ṭayyi’, a tribe which was well known to Syriac writers, who designated the Arabs as ‘Ṭayyāyē.’<sup>28</sup> This paradigm finally points to a plausible context, involving Arab Christians between Ḥīra, Anbār and the Hijaz in the sixth century. While it should not be taken too literally, especially as far as names of persons are concerned, it may contain a historical core.<sup>29</sup>

### *The earliest Islamic documents*

Whatever the state of Arabic writing may have been in the sixth century, it was radically transformed by the rise of Islam, which created a new political situation and, most of all, new scribal needs. According to Muslim tradition, the Qur’an was at first memorized by the Prophet and his companions. As the revelation progressed, verses began to be noted by way of an aide-mémoire on scattered leaves (*ṣuhuf*) and other available material, such as flat white stones, camel bones and palm stalks. With Muḥammad’s death, in 632, came the risk of losing the sacred text. Al-Bukhārī (d. 870) attributes these words to Zayd ibn Thābit (d. c. 666), the Prophet’s foremost secretary:

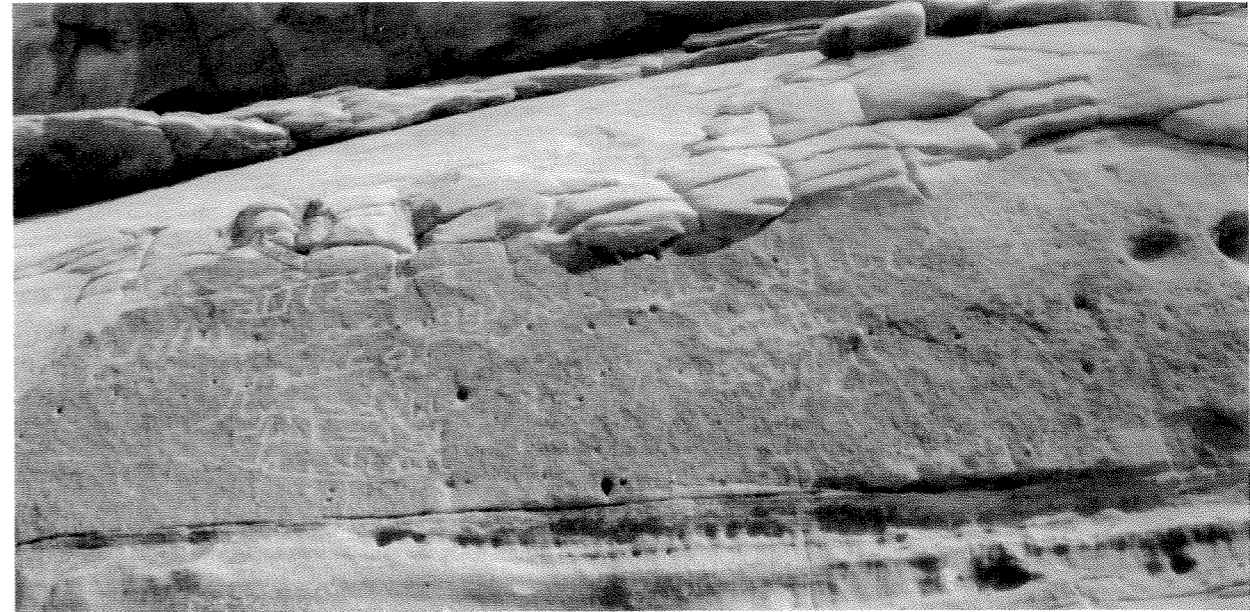
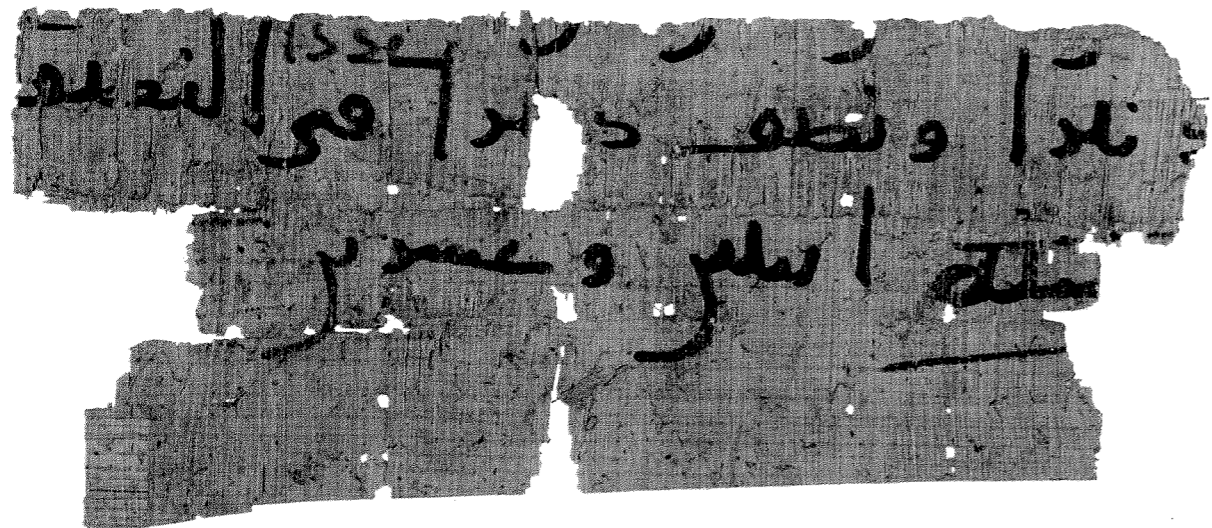
After the battle of Yamāma, Abū Bakr sent for me, while ‘Umar ibn Khaṭṭāb was with him. Abū Bakr said: ‘‘Umar came to me and said: ‘Many Qur’an reciters were killed at Yamāma, and I fear that heavy casualties will be inflicted on Qur’an reciters in other places and that much of the Qur’an will be lost. I think

that you should collect the Qur'an." ... So I began to search out the Qur'an and collect it from palm stalks, thin white stones, and the breasts of men until I found the end of *Sūrat al-Tawba* with Abū Khuzayma al-Anṣārī which I did not find with anyone else.<sup>30</sup>

The first *maṣāḥif* ('codices') are said to have emerged between these days (the battle of Yamāma took place around 633) and 'Uthmān's reign (644-56), when an official recension of the Qur'an was issued. While the underlying narrative is in itself plausible, it cannot be taken at face value, as Muslim histories of this fundamental period, written down two to three centuries after the events, have often proved to contain a mythical component.<sup>31</sup> The process therefore needs to be documented by other types of evidence.

The earliest dated Islamic documents are two papyri written in 22/643. They both share a utilitarian purpose: PERF 558 is a bilingual letter by the military commander (*amīr*) 'Abdallāh ibn Jābir acknowledging the receipt of sixty-five sheep from two patriarchs of Ahnās (Gr. Heracleopolis, Egypt) for the maintenance of his troops; P.Berol. 15002 contains the very fragmentary end of a text in which *dīnārs* are mentioned alongside the date (Figure 8).<sup>32</sup> In script, they are comparable to the earliest dated Islamic inscription: a large rock carving written by a certain Zuhayr in 24/645 near Ḥegrā to commemorate

8. Islamic papyrus document (Egypt, AH 22/ AD 643). P.Berol. 15002 (5.1 x 11.9 cm).



اناذهم كسب ذم نوبه  
و عنتره  
سما لله  
عمر سنة اذ بلغ

'the death of 'Umar' – possibly the caliph of the same name, who was assassinated in the last days of the year 23 (Figure 9).<sup>33</sup>

At least eight other papyri and as many inscriptions have been securely ascribed to the first six decades of the Muslim era.<sup>34</sup> Three orthographic improvements distinguish these documents from known sixth-century inscriptions. As they have already been discussed elsewhere,<sup>35</sup> I will only outline them for our present purposes.

The first innovation was the introduction of diacritical signs to distinguish phonemes based on the same letter form. These signs are not attested in pre-Islamic inscriptions, but appear in all the earliest Islamic papyri and two of the earliest inscriptions (Figure 9, Figure 12). Although their use is parsimonious, they follow the same conventions as in later Arabic, which suggests that the underlying orthographic system had already come into being by 643.

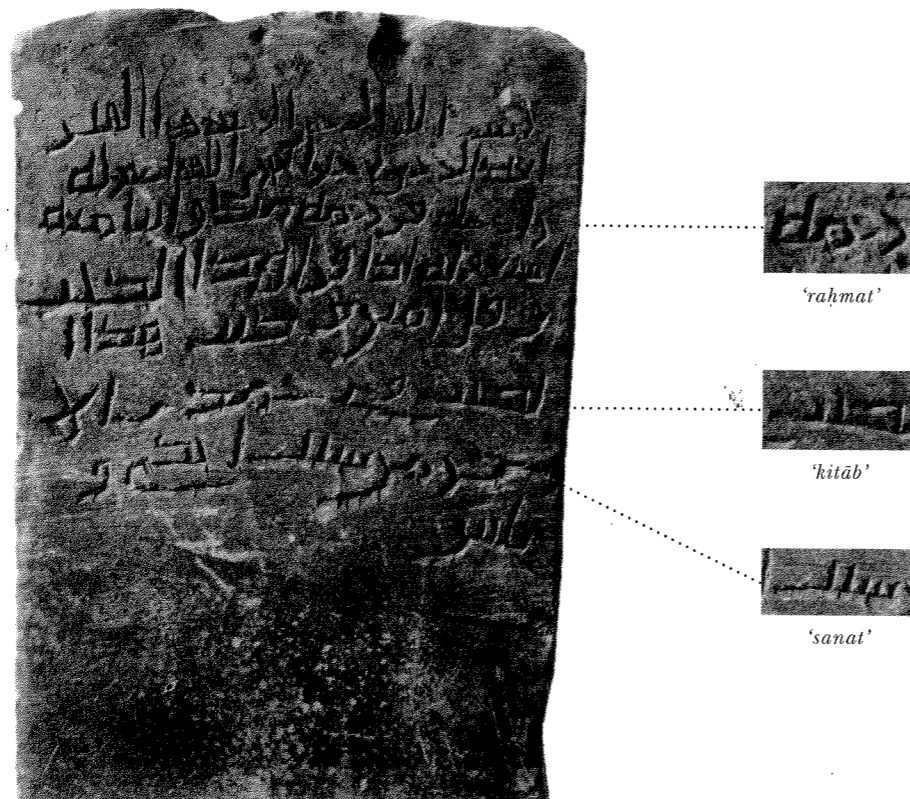
A second innovation, the distinct notation of short final *tā'* (*tā' marbūta*), occurs in all the earliest inscriptions and documents.<sup>36</sup> The new form still coexists with the older one in a short inscription written

9. The inscription of Zuhayr, from the region of Ḥegrā (Hijaz, 24/645).

by the same Zuhayr as above, presumably also in 645 (Figure 10); and in a tombstone from Egypt dated 31/652 (Figure 11 – compare, for example, the short and elongated forms respectively used for ‘*rahmat*’ and ‘*sanat*’ in this inscription).<sup>37</sup> This implies that the new convention was still being standardized at the time.



The third orthographic improvement regards the long sound ‘ā’ in the middle of words. Before Islam, this had either been omitted or noted with the same sign as medial *yā’/bā’/tā’/thā’/nūn*, a potential source of confusion (in the Egyptian tombstone, for example, the first word of line 6, ‘*kitāb*’, is written ‘k-t-b’). The modern convention, using the letter *alif*, first appears in an inscription from the region



10. (above) Second inscription of Zuhayr, carved on the same rock as the previous one.

11. Tombstone of ‘Abd al-Rahmān ibn Khayr al-Hujrī (Egypt, Jumādā II 31 / January–February 652).

of Mecca dated 40/661, the last year of ‘Alī ibn Abī Ṭālib’s reign as caliph.<sup>38</sup> In the following two decades, it becomes common to witness the old and new forms side by side in the same text.<sup>39</sup>

All these changes appear as responses to the graphic weaknesses of the Arabic script, where several consonants were noted by the same letter form, while many vowels were omitted, with obvious implications for meaning. The first two reforms (the diacritical dots and *tā’ marbūta*) were introduced some time before 643, while the third (medial *alif*) must have emerged not long before the 660s, which has led Robin and Hoyland to think that they all took place during the early years of the caliphate, when the seat of power was still in Medina.<sup>40</sup> The conquests, involving complex logistics, must have necessitated the reliable transmission of orders across long distances. This, along with the need to record the Qur’anic text, could have provided an impetus for reforming the script. Yet in the present state of our knowledge, it remains possible that some of these changes had been initiated before Islam. The diacritical dots, in particular, are essential to the comprehension of any Arabic text not already known by memory or convention.<sup>41</sup> Though they are not attested in pre-Islamic inscriptions, absence of evidence is, in their case, not evidence of absence: thus in the first century after the Hijra, they were completely omitted from most inscriptions, but commonly used in documents. It seems premature, at this stage, to draw a conclusion about this feature.

### *The earliest manuscripts of the Qur’an*

Leaves from primitive manuscripts of the Qur’an have been gradually discovered over the last two centuries, notably as the result of the spectacular finds at the Great Mosque of Sanaa. Islamic sources generally refer to primitive Arabic scripts as *jazm*.<sup>42</sup> The modern term *Hijazi* (Ar. ‘from the Hijaz’) is derived from al-Nadīm’s description of the Meccan and Medinan scripts:

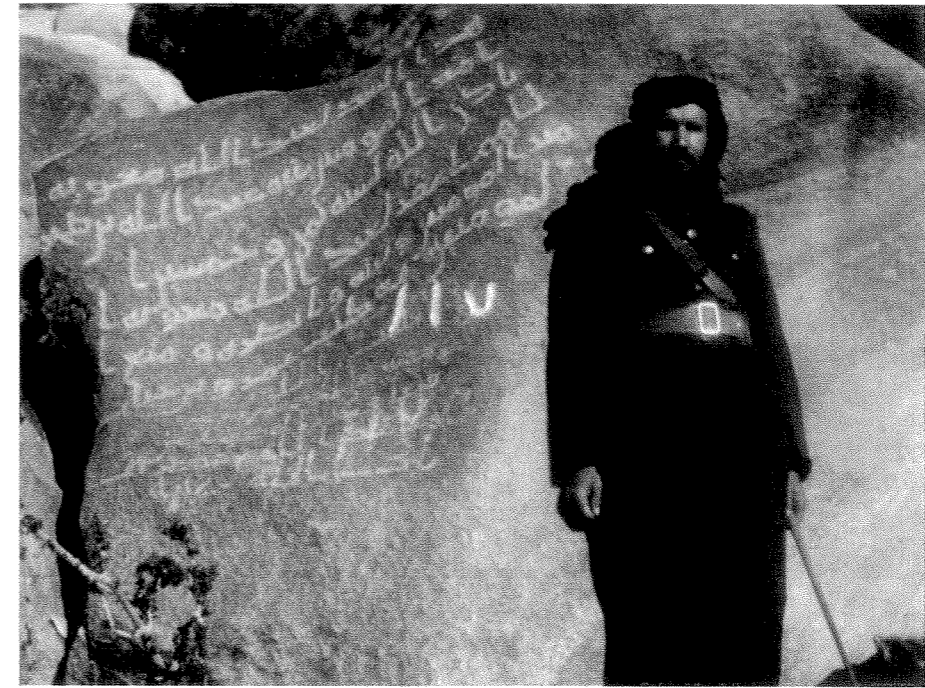
The first Arabic scripts were the Meccan and after that the Medinan, then the Basran, then the Kufan. As regards the Meccan and Medinan, there is in its [*sic*] *alifs* a bend to the right hand side and an elevation of the vertical strokes (*al-aṣābī*); and in its form, there is a slight inclination.<sup>43</sup>

The main distinctive feature of Hijazi is indeed the slant of the tall letters to the right, more or less pronounced according to the manuscript. The orthography is relatively primitive. As in the earliest inscriptions, medial *alif* is omitted from many nouns – a trait which was partly preserved in later Qur’anic notation. The sound ‘ā’ is sometimes noted, in the middle or at the end of a word, by the undotted letter *yā* (e.g. الله for الله, ‘deity’ or ‘god’); or by *wāw* before *tā’ marbūṭa* (e.g. صلاة for صلاة, ‘prayer’). These archaic usages appear alongside the modern one, using the letter *alif*.<sup>44</sup>

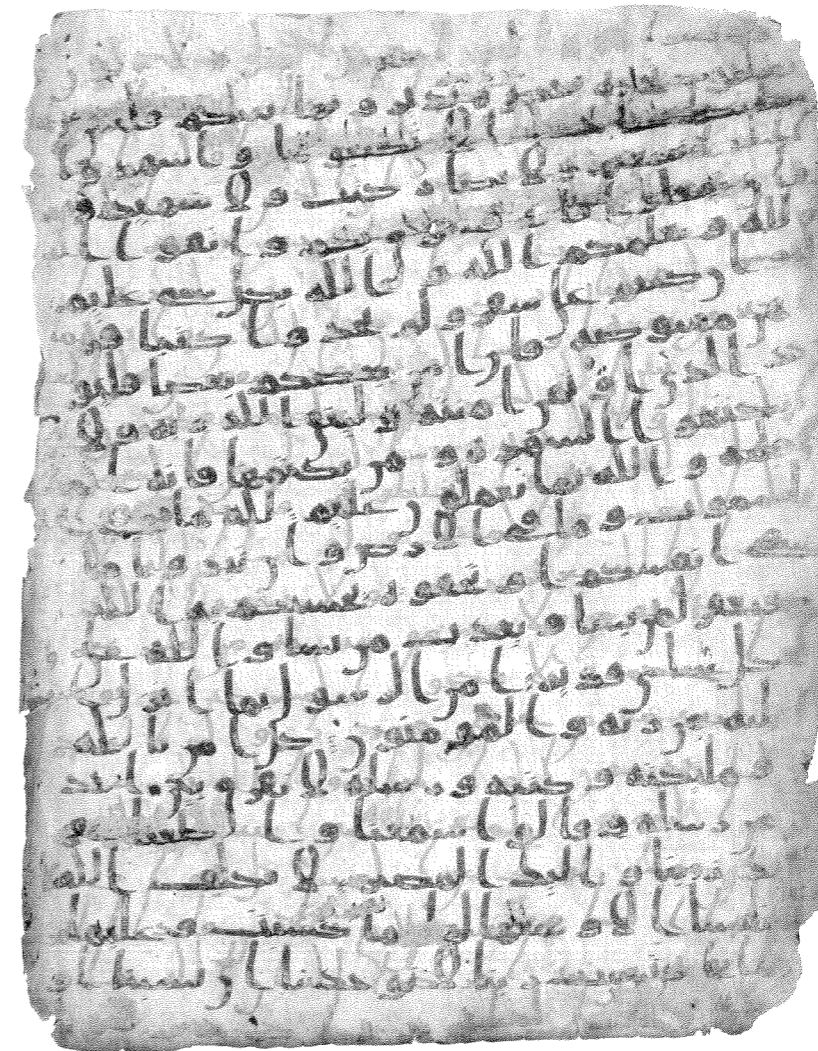
Although no colophon or other element of context is known, the corpus can be broadly dated on palaeographical grounds. The script of Hijazi Qur’ans is similar to that of seventh-century Islamic papyri, as documented by Grohmann, Déroche and, before them, Amari.<sup>45</sup> To give one example, the shape of the *wāw*, *ṣād*, *tā’ marbūṭa*, initial ‘*ayn* and final *nūn* is almost identical in Arabe 328a (Figure 20) and P.Berol. 15002 (Figure 8, dated 643). An inscription written in 58/678 in the name of the caliph Mu‘āwiya (Figure 12) also bears a striking resemblance to some Hijazi book hands, notably the upper text of a famous Hijazi palimpsest fragment (Figure 13):<sup>46</sup> compare, in these two texts, the shape of the independent *alif*, with its relatively long and flat return; and the oblique upper stroke of *dāl*, which curves slightly upwards at the top.<sup>47</sup>

These elements suggest a date range which is corroborated by other types of evidence. One manuscript, the ‘Sanaa Qur’an’, has been scientifically dated to the late seventh or early eighth century: its more complete orthography, elaborate decoration and confident Kufic script clearly reflect a later phase of evolution than Hijazi, for which it can provide a broad *terminus ante quem*. Three other Qur’ans with transitory features between Hijazi and Kufic can also be ascribed, from their orthography and illumination, to the early Umayyad period.<sup>48</sup> To this list, one can add two inscriptions, respectively dated 700 and 723, one from Mecca (Figure 14) and the other from Qaṣr al-Muwaqqar (Figure 15): their script, which lies between B.Ib and B.II, confirms that Hijazi was being superseded by early Kufic styles in the first quarter of the eighth century.<sup>49</sup> Put together, these elements converge to place the bulk of the Hijazi corpus in the seventh century.<sup>50</sup>

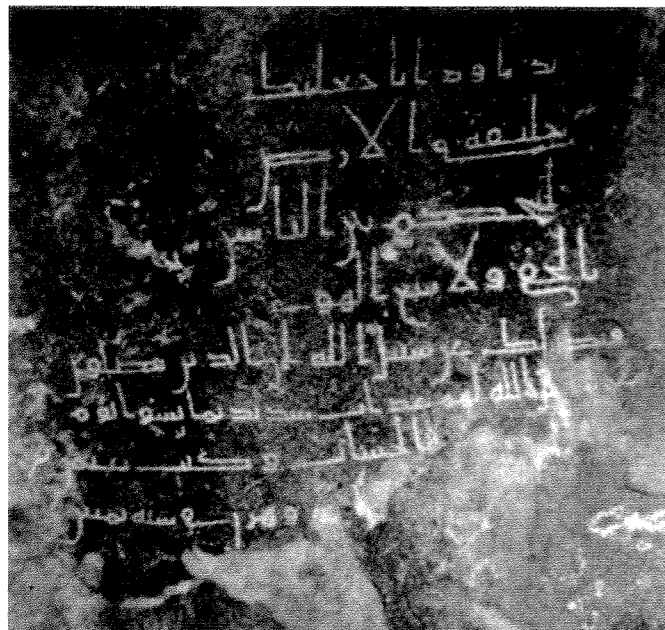
The analysis of Hijazi scripts is much more arduous than for Kufic: being close to individual handwriting, they tend to be highly variable



12. Inscription from the region of Tā'if in the name of the caliph Mu'āwiya (Hijaz, 58/678).



13. Qur'anic palimpsest in Hijazi script (36.6 x 28.2 cm).



14. (above, left)  
Inscription from  
the region of Mecca  
(Hijaz, 80/700).



15. (above, right)  
Inscription from a water  
gauge at Muwaqqar  
(Jordan, 104/723).

across and even within manuscripts. In some cases, there is a complete stylistic shift between the recto and verso of the same folio, reflecting a change of scribe.<sup>51</sup> This variability makes any classification attempt difficult and the typology offered by Déroche remains, in this case, tentative.<sup>52</sup> Likewise, there is a lack of overarching norms in the way leaves were prepared and assembled into books. The lands conquered by the Muslims were home to a mosaic of peoples with highly developed scribal traditions: Greek, Syriac, Hebrew, Coptic, Pahlavi, to cite but the most prominent ones. Their imprint can be felt at various degrees in Hijazi. Before turning to these correspondences, let us briefly outline the scribal landscape that prevailed at the eve of Islam.

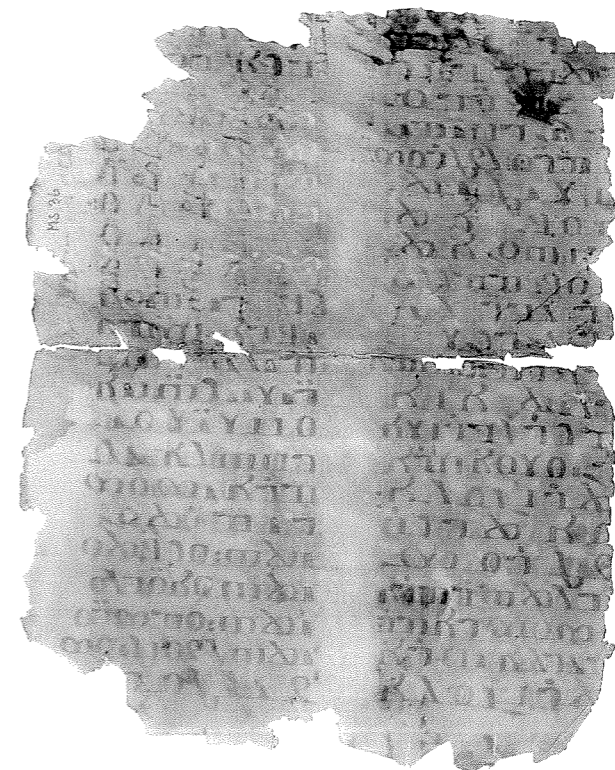
### *The scribal world of Late Antiquity*

Greek was, in that period, the language of the upper strata of society in Syria and Egypt. Its intimate association with Christianity, the Classical heritage and Byzantium gave it a unique cultural standing. Alongside Greek, Syriac (the written form of the Aramaic dialect of Edessa) was a major liturgical idiom, which blossomed from the Nile to the Euphrates in the sixth and seventh centuries, and even reached as far afield as China. Learned men from Syria were often versed

in both languages. Syriac was used not only by the Nestorian and Monophysite Churches, but also for some Manichaean and pagan writings.<sup>53</sup> Towards the time of the Muslim conquest, the Greek and Syriac arts of the book were producing fine parchment codices, some of them rich with figurative imagery.<sup>54</sup> The scribal techniques used in each of these traditions differed and, in turn, their respective influence radiated beyond their linguistic borders.

In the region of Jerusalem, Greek was thus used side by side with a local dialect: Christian Palestinian Aramaic (CPA).<sup>55</sup> CPA began to be written in the fourth or fifth century with an alphabet based on Syriac. It was associated with the 'Chalcedonian' (or 'Melkite') Church, which followed Byzantine liturgy, and most CPA manuscripts are faithful translations of Greek religious texts. CPA scribal activity reached its peak towards the time of the conquest, albeit on a much more modest scale than Greek and Syriac, never extending far beyond Palestine.

In Egypt, another regional alphabet emerged in the second century: Coptic, with twenty-four letters borrowed from Greek and seven others from Demotic (the native script ultimately derived from



16. Palimpsest  
fragment with Christian  
Palestinian Aramaic  
lower text dating to the  
sixth century (Schøyen  
Ms. 36, 20 x 16 cm).

the hieroglyphs).<sup>56</sup> Coptic literary activity was initiated by biblical translations before extending, in the third to fourth centuries, to gnostic, Manichaean and monastic texts. In manuscript form, the techniques used in both Coptic and CPA were largely derived from Greek, so that all three traditions form one coherent scribal group.

Further south, in Ethiopia, the king of Aksum had converted to Christianity in the fourth century under the influence of two shipwrecked missionaries from Syria. The Bible was translated into Ge'ez (classical Ethiopic) between then and the late sixth century. The country was a powerful actor in regional politics: following the massacre of the Christians of Najrān, it invaded the Yemen in 525; from there, an incursion into the Hijaz was even attempted around 570. During



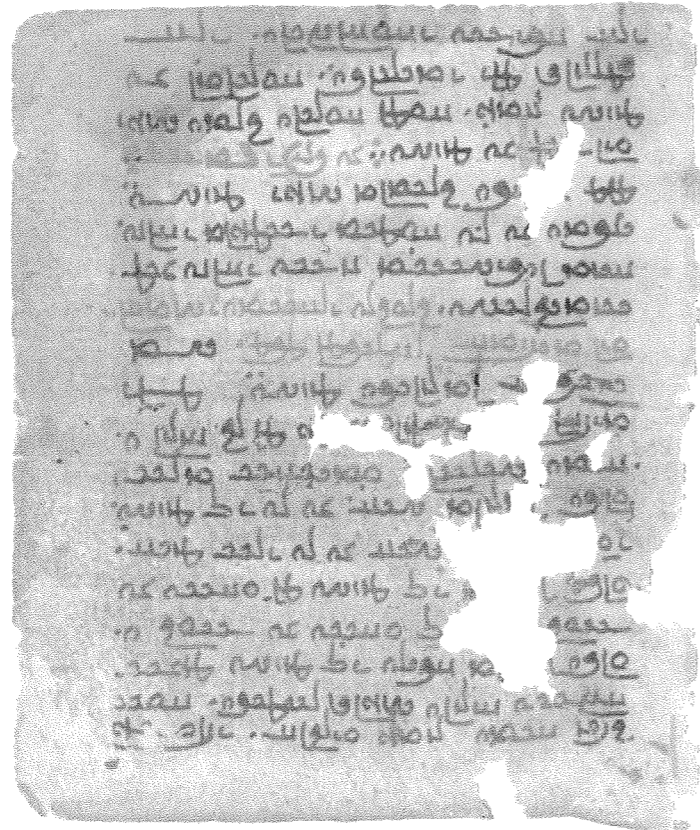
17. Gospels held at the monastery of Abba Gärima (Ms. 'Gärima 2', Ethiopia, possibly sixth/seventh century, 34 x 22 cm). Second page of the letter of Eusebius on the Gospel canon tables.

the very first years of the Qur'anic revelation, a group of Muslims who had fled from Mecca were granted refuge by the king of Aksum – this event is recorded by Muslim historians as the 'first hijra'.<sup>57</sup>

Though very little of the Ethiopic manuscript tradition remains prior to the thirteenth century, decorated pages from a Gospel belonging to the monastery of Abba Gärima have recently been carbon-dated to a time range between AD 330 and 650 (Figure 17).<sup>58</sup> This provides a broad framework against which finer analysis remains the task of the historian. On the basis of their style, Jacques Mercier and Marilyn Heldman have recently ascribed this and a closely related set of decorated leaves from the same monastery to the sixth or seventh century.<sup>59</sup> Their sumptuous illumination has strong Near Eastern overtones which might reflect the close ties that existed between Ethiopia and Syria before the rise of Islam.<sup>60</sup> The script and codicology of these exceptional Bibles remain to be fully documented.<sup>61</sup>

In Iran, Pahlavi, the principal form of Middle Persian, was the official language of the Sasanian empire. The Pahlavi scribal tradition is hardly ever mentioned in modern scholarship because of the extreme dearth of surviving material. Astonishingly, in these circumstances, one psalter fragment dating to the seventh century or earlier has been found at Bulayiq, near Turfan (present-day Xinjiang) in the early twentieth century (Figure 18).<sup>62</sup> Its type of script, being unique among preserved fragments, has been labelled 'Psalter Pahlavi.' This small manuscript (11.1 x 9.6 cm) follows a division of the Canon attributed to Mār Abhā, patriarch of the Nestorian Church between 536 and 552. Its dotting system and red chapter titles also denote a Syriac model, and the Syriac invocation *shubhā* ('praise') is written in Pahlavi script before some psalms. One or two letters in Estrangelo can even be seen on a few pages, probably as reminders of the points in the liturgy where Syriac verses were to be read.<sup>63</sup> This pervasive influence bears testimony, once again, to the vitality of Nestorian Christianity east of the Euphrates in that period.

Finally, Hebrew was the liturgical language of Jewish communities throughout the Near East. Our principal documents of the Hebrew script before Islam are scrolls found in caves around the Dead Sea, near Qumrān; the latest of these were written before the second century AD. Thereafter, our chronology suffers an almost complete gap until the earliest surviving Hebrew parchment codices (ninth/

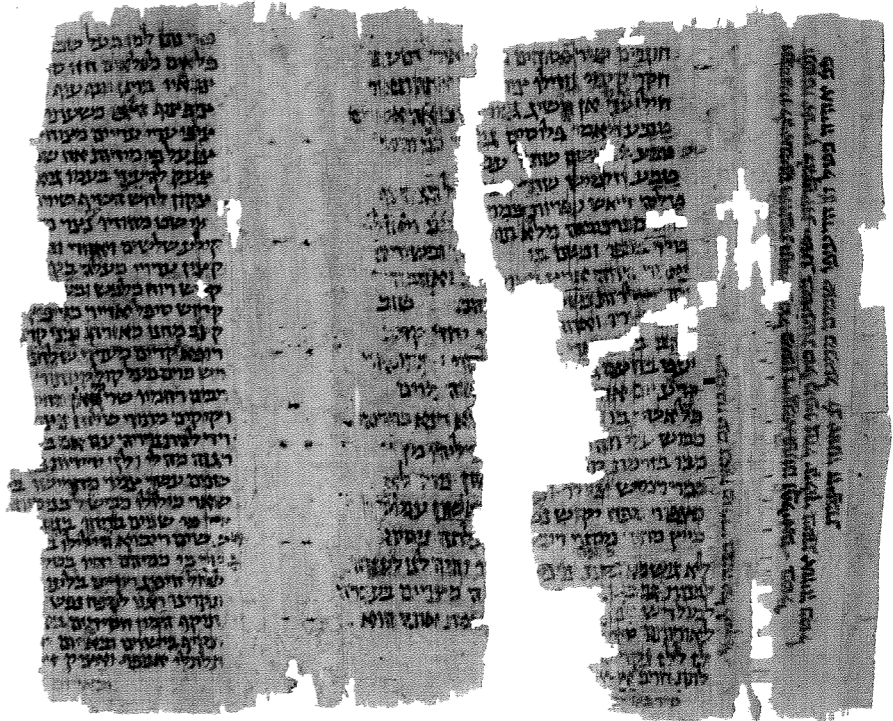


18. Pahlavi Psalter  
found at Bulayiq, near  
Turfan, in north-west  
China (seventh century or  
earlier, 11.1 x 9.6 cm).

tenth century).<sup>64</sup> But some fragments datable to the intervening period have been preserved, principally at the Cairo Geniza.

### *Codex versus scroll*

Hebrew scribes appear to have remained faithful to the scroll format until the eighth century, as suggested by texts and scraps of surviving material.<sup>65</sup> By contrast, all known Qur'anic fragments in Hijazi initially belonged to codices. The codex began to spread in the Near East between the second and fourth centuries. It was at first associated with Christianity, marking a clear visual distinction with the scrolls hitherto used by pagans and Jews.<sup>66</sup> The earliest Hebrew codex, now kept in Cambridge, is datable to the eighth or ninth century (Figure 19). Colette Sirat has shown that this carefully written manuscript initially consisted of a single quire of twenty to twenty-four papyrus bifolios, an archaic composition which suggests that the codex was relatively new in Hebrew at the time.<sup>67</sup> Originally, the manuscript



19. Hebrew papyrus  
codex (eighth/ninth  
century, page height c.  
16 cm). Liturgical poetry  
of Joseph Berabi Nissan.  
The image shows two  
fragmentary bifolios,  
with sewing marks from  
the original codex in  
their central margin.

must have been either square or slightly oblong, a format hardly encountered elsewhere than in early Kufic (e.g. Figure 33).<sup>68</sup>

As in other Hebrew fragments from the Islamic lands, the writing has features borrowed from Arabic, such as the notation of *lamed* and *alef* in one sign (Ar. *lām-alif*) and the use of horizontal elongation (Ar. *mashq*). One can also note the use of a dot within a circle to mark a verse separation, as in early Kufic.<sup>69</sup> When Hebrew parchment codices started to be made in the late ninth to tenth centuries, the influence of Arabic scribal practice became even more pronounced.<sup>70</sup> But what about the preceding period?

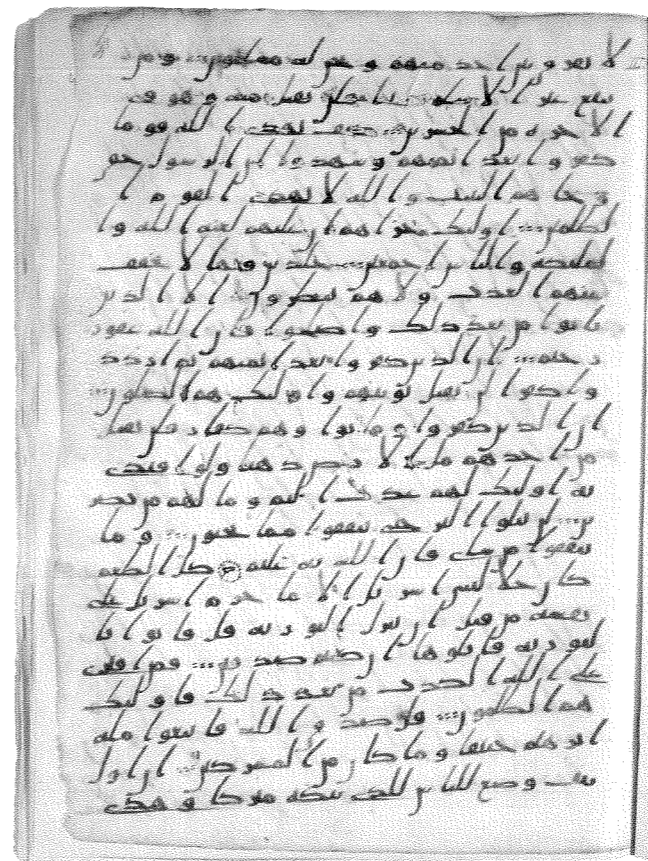
The only evidence at our disposal, in this respect, is textual. According to Arabic sources, the Jewish minority that lived in Medina at the time of the Hijra had its own religious school.<sup>71</sup> A tradition ascribed by al-Balādhurī and al-Qalqashandī to al-Wāqidī (d. 823) says that few people could write Arabic among the town's two main tribes, Aws and Khazraj. One Jew (or 'some' according to Balādhurī) taught the script to Arab children, among them Zayd ibn Thābit and Ubayy ibn Ka'b, who would later become secretaries of the Prophet.<sup>72</sup> Of the persons cited, Zayd alone is also said to have written

in Hebrew.<sup>73</sup> Ibn Sa'd (d. 845) and Balādhurī also mention a second tradition whereby the Prophet enjoined Zayd to learn Hebrew – or, Ibn Sa'd adds, possibly Syriac – after the Hijra, as required by the needs of his correspondence.<sup>74</sup>

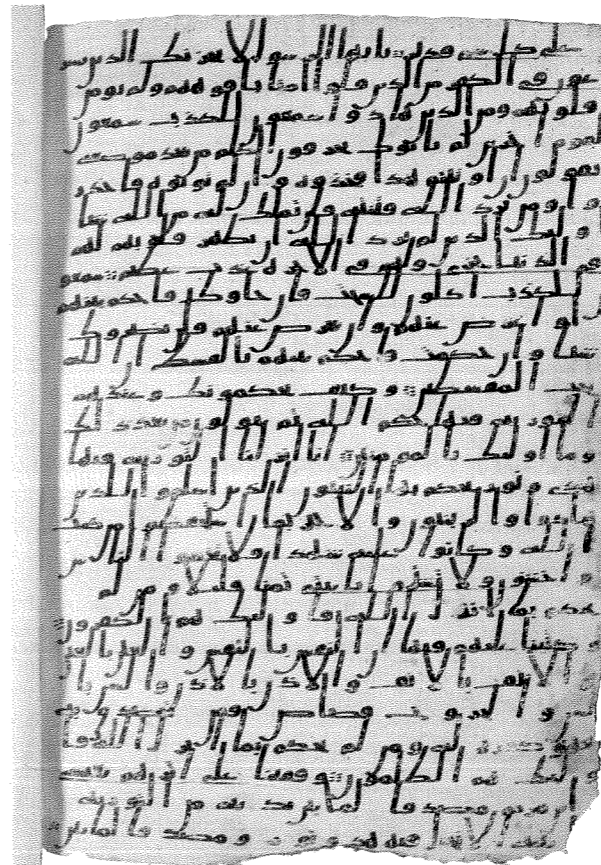
It is difficult to derive historical facts from these contradictory accounts. But even if one chose to take them at face value, they would not clearly imply a Hebrew influence on Arabic. In a controversy against Islam attributed to the ninth century, 'Abd al-Masīh al-Kindī, a Christian apologist, asserts that the recensions of the Qur'an made in the days of Abū Bakr and 'Alī ibn Abī Ṭalib were not bound into a single volume (*muṣḥaf*), but left as scattered leaves (*ṣuḥuf*), or scrolls (*adrāj*) arranged in the manner of Jewish scrolls.<sup>75</sup> However, the date of this text has been disputed and its polemical purpose greatly undermines its historical reliability.<sup>76</sup> A few Qur'anic parchment scrolls, often apologetic in content, have been found in the Istanbul collection but, judging by their script, they cannot be much earlier than the ninth century.<sup>77</sup> A Hebrew legacy is, at any rate, improbable in their case given that they are *rotuli*, whereas the *volumen* was used for the Torah (the two formats fundamentally differ in the direction of writing and the manner of unfolding the scroll).<sup>78</sup> There are, at present, no grounds to assert a Hebrew influence on early Qur'anic calligraphy.

*Format, ruling, quires and decoration*

Several traits of preserved Hijazi fragments can, on the other hand, be traced back to other scribal traditions. The observations made here are based primarily on the study of the collection at the Bibliothèque Nationale de France, of the published record and of a palimpsest held at Cambridge.<sup>79</sup> While this sample reflects a diverse body of material, its scope remains limited, and it can only be hoped that more manuscripts will eventually come under close scrutiny. The first remark is the most obvious: the format employed in Hijazi is, as in all pre-Islamic codices, vertical (the few horizontal items that exist are either late in the tradition or small, perhaps personal, copies of the Qur'an).<sup>80</sup> While there was always one column in Hijazi, there could also be two or three in Greek, Syriac, Christian Palestinian Aramaic, Ethiopic and, more



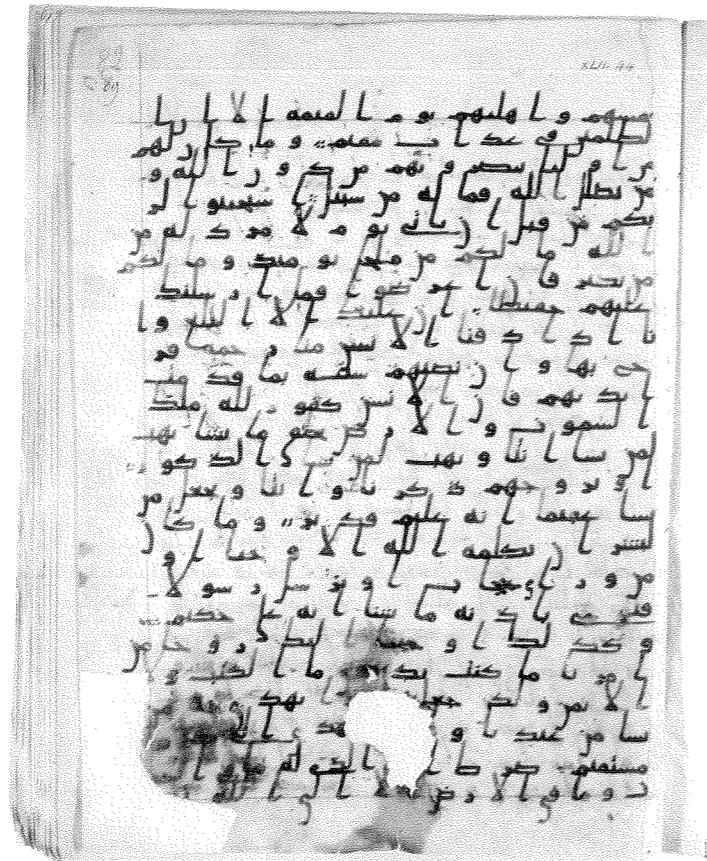
20. Hijazi Qur'an (BNF Arabe 328a, 33 x 24 cm).



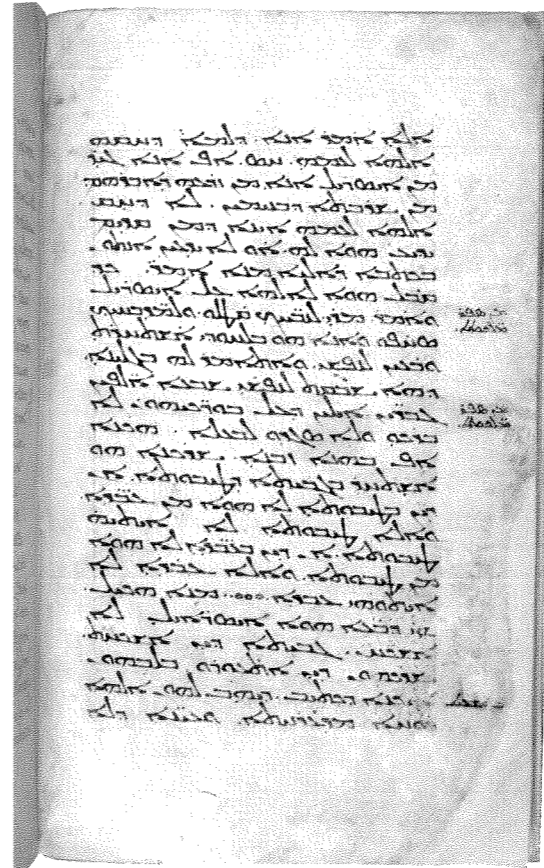
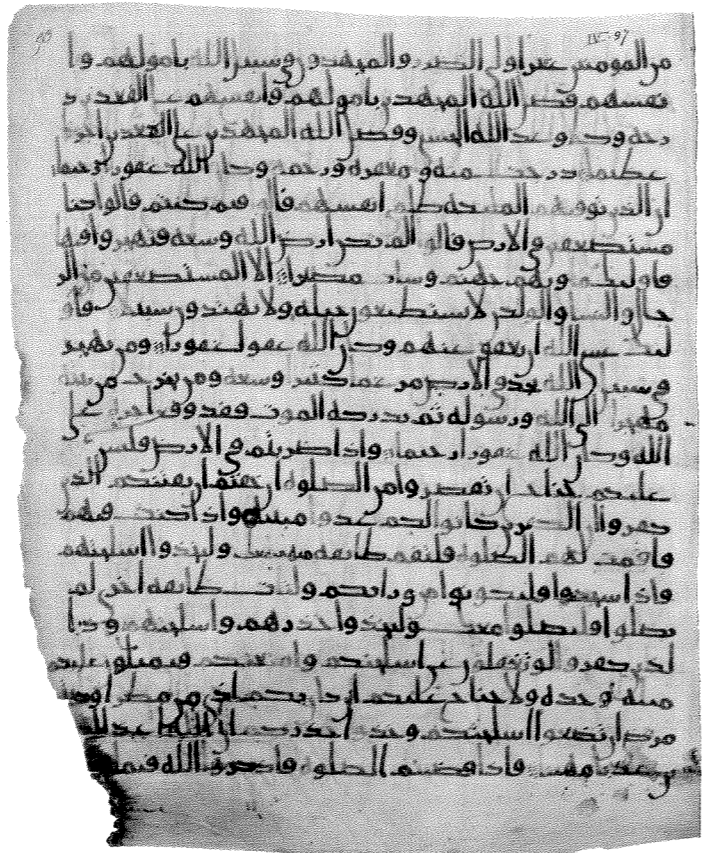
21. Hijazi Qur'an (BNF Arabe 328e, 31.5 x 21.5 cm).



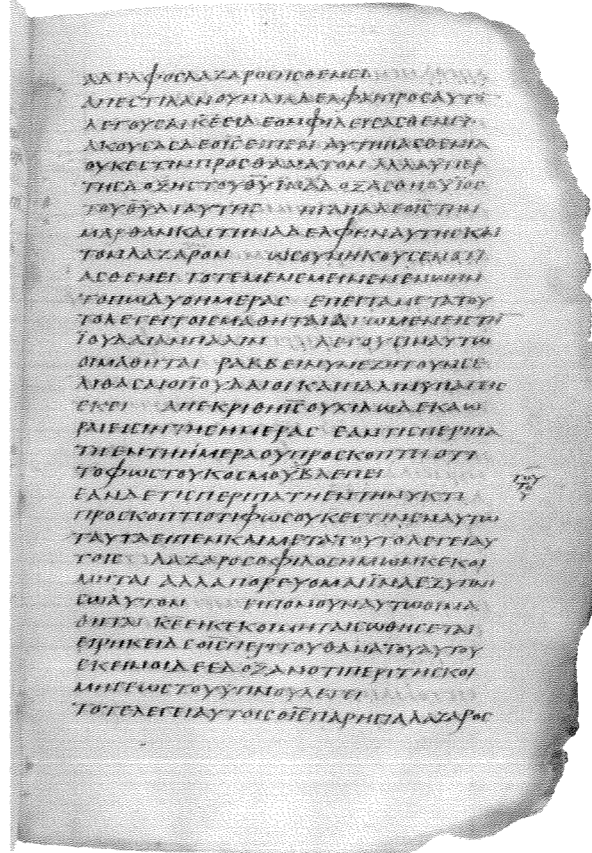
22. Qur'an written in B.1a, a transitory style between Hijazi and early Kufic (BNF Arabe 328d, 32.5 x 25 cm).



24. Qur'an written in an unclassified style close to Hijazi, with incised line-by-line ruling (BNF Arabe 330g, 35.5 x 28 cm). The tall letters tend to slant slightly to the left, rather than the right.



23. Syriac manuscript dated 622, the year of the Muslim Hijra (BL Add. 14,478, 24.1 x 14.3 cm).



25. The Freer Gospels, one of the earliest manuscripts of the New Testament, written in Greek (Egypt, fourth/fifth century, 20.9 x 13.8 cm).

Lead ruling  
Incised ruling  
Top baseline of text

rarely, Coptic.<sup>81</sup> Notwithstanding this difference, Hijazi manuscripts were still inscribed in the visual landscape of Late Antiquity.

The dimensions of preserved Hijazi fragments are consistently large (typically 33 x 24 cm and above, see Table 1).<sup>82</sup> They are only matched, towards the lower end of this range, by the most lavish Greek, Syriac, CPA or Ethiopic manuscripts.<sup>83</sup> In Coptic, while a few codices of imposing dimensions were produced, much smaller formats (typically under 15 x 12 cm) prevailed in the pre-Islamic period.<sup>84</sup> Likewise, the Pahlavi Psalter measures only 11.1 x 9.6 cm. Before more subtle transformations were introduced, size may have been one way of conveying the distinct status of the Qur'anic text.

The comparison can be extended to other codicological features. Ruling is the system of lines drawn to guide the scribe's hand on the parchment. It is virtually absent in some Hijazi manuscripts;<sup>85</sup> but most of them use it in at least a primitive form. In some cases, it simply consists of baselines for the text, which are not even exactly straight or parallel and can either be incised with a dry point (as in BNF Arabe 328a, Figure 20) or drawn in lead (Arabe 328e, Figure 21).<sup>86</sup> In terms of layout, this technique is hardly more effective than the complete absence of ruling.

In other manuscripts however, the text box is framed by a rectangle drawn in lead, with no baseline rulings (Figure 22). As a result, the lines of calligraphy are only approximately straight, parallel and equidistant, but well delineated within the framing rectangle. The top ruling coincides with the first baseline of text – that is, the ligatures rest on it. This exact configuration is encountered in BNF Arabe 328d, written in B.Ia, an intermediary style between Hijazi and early Kufic, while Arabe 331 (also in B.Ia) and Arabe 325a (B.Ib) simply have two vertical rulings drawn in lead to justify the text.

This broad pattern is reminiscent of Syriac, where three rulings are typically drawn in lead: two vertical for justification, and one horizontal which roughly corresponds to the top baseline of text (Figure 23). Its two Hijazi variants also appear to have existed, albeit marginally, in Syriac.<sup>87</sup>

In different Hijazi fragments, we find incised justification and line-by-line rulings (Figure 24). Two variants can be noted: in some manuscripts, the top horizontal ruling coincides with the top baseline of text; while in others, it reaches one line's height above it.<sup>88</sup> Before

	Quires	Ruling	Parchment	Chapter markers	Dim. (cm)	Illustration
Greek, Coptic, CPA	Quaternions Hair faces hair*	Incised	Thin, supple, uncoated	None (or rare)	–	–
Arabe 328a <i>Hijazi</i>	Quaternions Hair faces hair	Incised	Thin, supple, uncoated	None	33 x 24	Figure 20
Arabe 330g <i>Unclassified</i>	–	Incised	Thick, supple, uncoated	None	35.5 x 28	Figure 24
Arabe 330d ** <i>A.I</i>	–	Incised	Thin, supple, uncoated	None	35 x 27	<i>Unpublished</i>
Syriac	Quinions Hair faces flesh	Lead	Very thick and rigid, coated	Horiz. band and/or red title	–	–
Arabe 328c <i>Hijazi</i>	Quinions Hair faces flesh	Lead	Thick, rigid, coated? (traces)	Horiz. band	31.5 x 21.5 (damaged)	<i>Unpublished</i>
Or.1287 *** <i>Hijazi</i>	–	Lead	Very thick and rigid, coated	Horiz. band	25 x 19 (cropped)	<i>Lewis and Mingana 1914: Qur'an A</i>
Arabe 328d <i>B.Ia</i>	–	Lead	Thick, rigid, uncoated	Red title	33 x 25	Figure 22
Arabe 331 <i>B.Ia</i>	–	Lead	Thick, rigid, uncoated	Blank space or horiz. band	41.3 x 34.8	<i>Unpublished</i>

Table 1. Codicological features of key Hijazi manuscripts.

\* On non-standard quire compositions and the case of CPA, see note 95

\*\* The same features can be observed in Arabe 330e and f (also in style A.I).

\*\*\* Cambridge, Or. 1287, fols. 87–94 (modern numbering).

Islam, the same ruling technique (first variant) was also used in Greek, Coptic and CPA, whether in one or more columns (Figure 25).<sup>89</sup>

In the rest of the Hijazi corpus, there can be variations upon these basic models: part of Cambridge Or.1287 displays thick, regularly laid out baseline rulings in lead;<sup>90</sup> while BNF Arabe 334c has its text framed in a rectangle of four rulings, but incised (this manuscript, however, may belong to a later phase of evolution).<sup>91</sup>

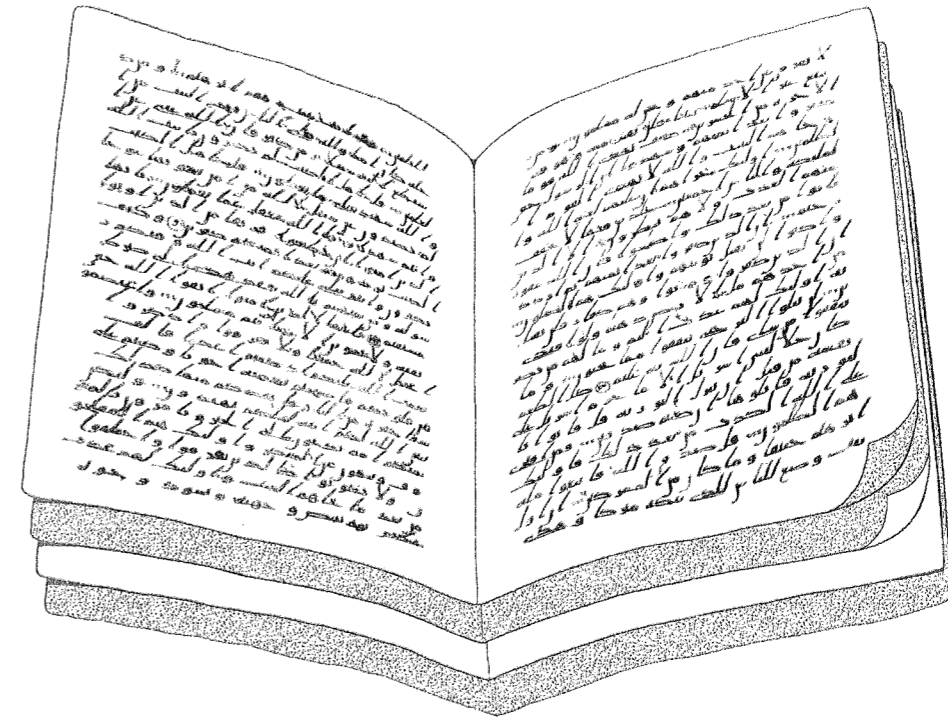
The parchment itself can bear traces of scribal influence. Most Syriac manuscripts of this period have their folios coated with a layer of lime, which gives them a white appearance.<sup>92</sup> By contrast, in Greek, the pages were simply pumiced and instances of coating are rare.<sup>93</sup> The leaves tend to be thin and soft, whereas in Syriac they are thick and stiff (the pages hardly bend as they are turned over). In Hijazi and early Kufic, manuscripts ruled in lead tend to have thick, relatively rigid parchment (but still less so than in Syriac), sometimes with traces of white coating. By contrast, those with incised ruling will usually have thin, flexible parchment, devoid of coating (Table 1).<sup>94</sup> These discrepancies do not have an obvious practical rationale, since lead could be used to rule thin parchment and vice versa.

The finished product, the bound codex, results from the assembly of quires made from this raw material, usually with a regular number of pages. Before Islam, quaternions (typically made of four bifolios, i.e. sixteen pages) were dominant in Greek, Coptic and probably CPA, while Syriac scribes used quinions (twenty pages, characteristically in five bifolios).<sup>95</sup> Parchment, being made from animal skin, has a hair and a flesh side presenting different qualities to sight and touch. Manuscript quires can thus be arranged in two standard ways: either flesh faces flesh and hair faces hair ('Gregory's rule', which prevailed in Greek and Coptic); or hair faces flesh (as in Syriac). Furthermore in Greek, each quire normally opens with a flesh side, as opposed to hair in Syriac.<sup>96</sup>

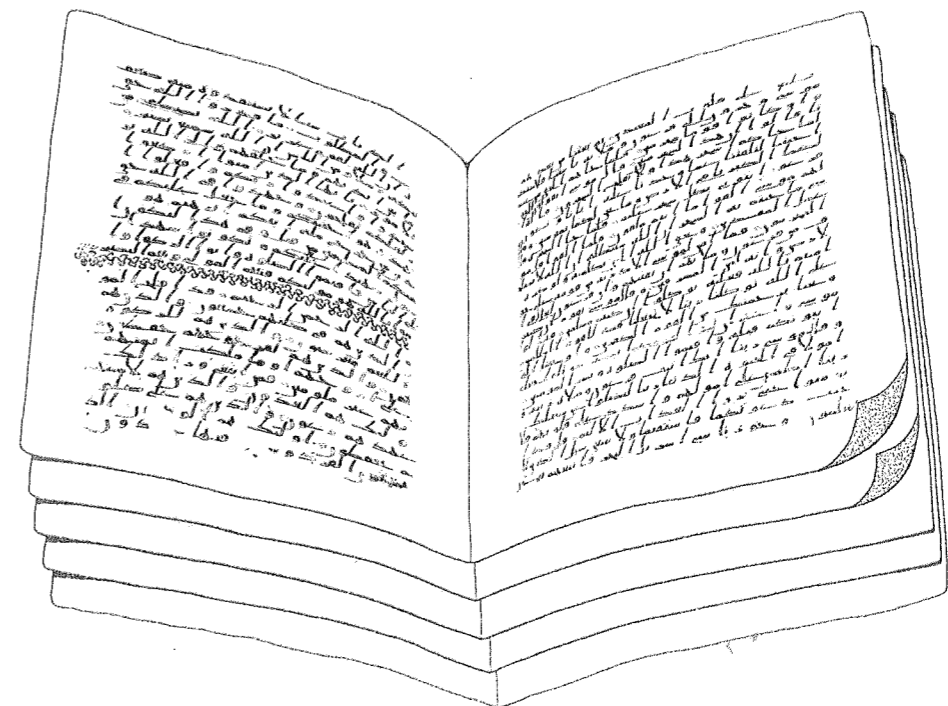
The quire structure of Hijazi manuscripts is difficult to analyse, since consecutive leaves from the same codex are rarely preserved. Déroche has made observations on two of them in Paris (Figure 26): one (Arabe 328a), he concluded, must originally have consisted of quaternions arranged according to Gregory's rule and opening with a flesh side (as in Greek), whereas the other (Arabe 328c) had quinions

26. Quire structure of two Hijazi manuscript

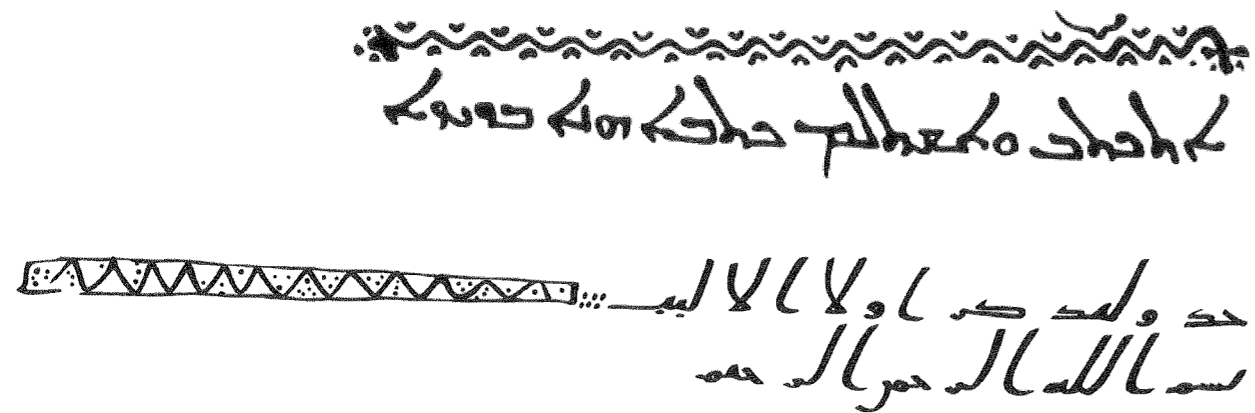
■ Hair side  
□ Flesh side



Quaternions, hair face hair (Arabe 328a).



Quinions, hair faces flesh (Arabe 328c).

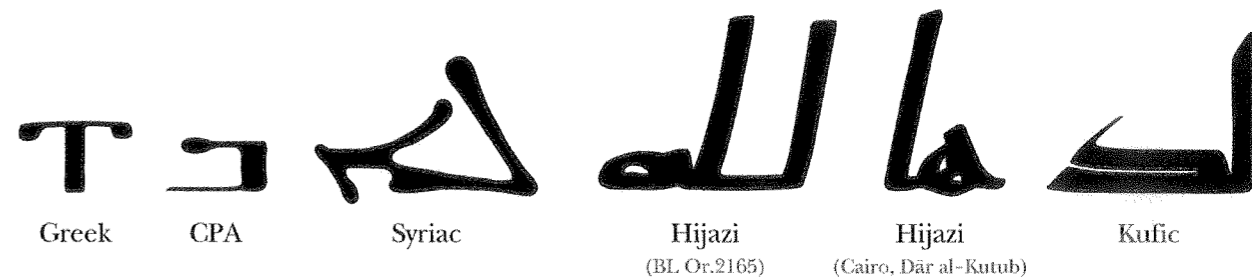
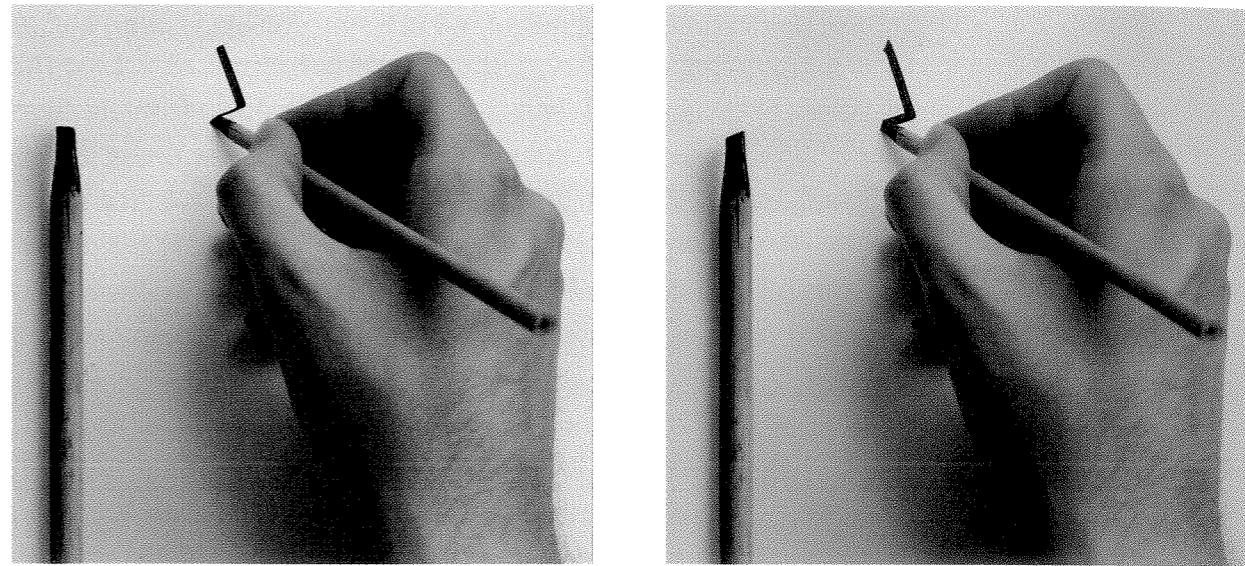


with hair facing flesh, the first page of the quire being a hair side (the Syriac rule, which also became the norm for Kufic Qur’ans).<sup>97</sup>

Hijazi manuscripts are, on the whole, sparsely decorated. In one example where the opening page survives, it has been left blank (in later Qur’anic manuscripts, this part of the book would have been richly illuminated).<sup>98</sup> Likewise, the beginning of a new sura is usually marked by an empty space. When a decorative motif does occur, it takes the form of a thin horizontal band that fills the end or the whole of a line.<sup>99</sup> In Syriac, chapter markers also assumed this form, occasionally with comparable decorative motifs (Figure 27).<sup>100</sup> In Greek, by contrast, new paragraphs were marked by a large capital letter and, apart from figurative illustration, decoration was rarely used in the text.<sup>101</sup> The Hijazi approach to sura markers may therefore be related to a Syriac model. This approach was taken over and amplified in early Kufic, where the chapter titles were often written in red, as in Syriac.<sup>102</sup>

Taken as a whole, the above features of Hijazi manuscripts – quires, ruling, parchment, decoration – tend to appear in an internally consistent manner, leading back either to the Greek or the Syriac tradition (Table 1). For instance Arabe 328a (Figure 20), noted earlier for the use of quaternions and Gregory’s rule, has no sura markers, a primitive form of incised ruling and thin, supple parchment. This recalls the pattern observed in Greek, Coptic and CPA. But in Arabe 328c, which has quinions arranged in the Syriac manner, each new sura is marked by a decoration band, while the ruling is drawn in lead on its thick parchment, which bears traces of coating. There are exceptions to the rule and variations upon it,

27. Chapter marker of the Rabbūlā Gospels, a Syriac manuscript written in AD 586, and sura marker of a Hijazi Qur’an (Sanaa IN 00–29.1).



such as the relatively thick parchment of Arabe 330g (Figure 24) or the lack of coating in Arabe 328d (Figure 22) and 331. Like the increasingly varied ruling patterns, they might reflect the gradual blending of the initial components by Arabic calligraphers.

*Pens, strokes and dots*

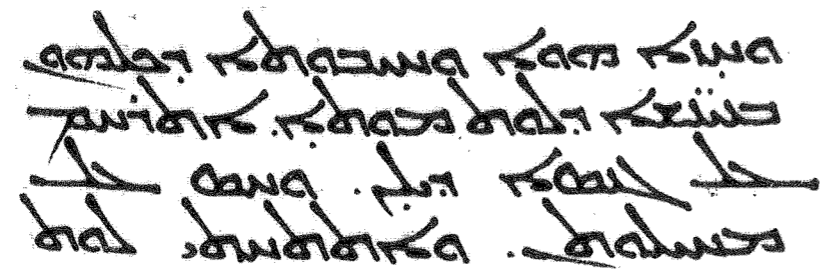
The writing instrument used by the first Qur’anic scribes was the reed. The Arabic word for ‘pen’ (*qalam*) comes from the Greek *kālamos*. It occurs in the Qur’an.<sup>103</sup> Before Islam, reed pens were used in Greek, Coptic, CPA and Hebrew. Syriac scribes, on the other hand, used an instrument that gave rise to large, rounded letter endings, with a fluid variation of the strokes and circular dots – possibly the quill, which is more supple than the reed and mentioned in texts.<sup>104</sup>

Different pens will give a different appearance to the script. In

28. Nib cut and pen stroke.

‘square’ or ‘biblical’ uncial (a Greek style also used in Coptic) and in CPA, the horizontal strokes are thin, whereas the verticals use the full thickness of the nib and typically have straight, horizontal endings (Figure 28).<sup>105</sup> This implies that the reed was horizontally applied to the page, having either a horizontal or slightly right-facing oblique cut. In Hijazi, the head of the vertical letters fluctuates between a comparable horizontal shape and a slight slope to the left, often within the same manuscript. Although they remain thinner than the verticals, the horizontal strokes have more volume than in Greek, Coptic or CPA. This means that the nib made contact with the page at a slightly left-facing angle. The same tendency was amplified in Kufic, where the letter heads have an angle of 30 to above 45° to the line, while the horizontal and vertical strokes are of approximately equal width.<sup>106</sup> This gradual transformation of scribal technique was probably accompanied by an evolution of the nib cut from horizontal or right-oblique cut to left-oblique.

Like CPA, the Arabic alphabet combines vertical, horizontal and rounded shapes; in both languages, some of the letters are also joined at the base. Hijazi scripts could thus easily have moved towards a similar approach to writing, with thick vertical strokes and very thin horizontals. Instead, they remained based, as in pre-Islamic inscriptions, on a combination of slanting strokes and horizontal



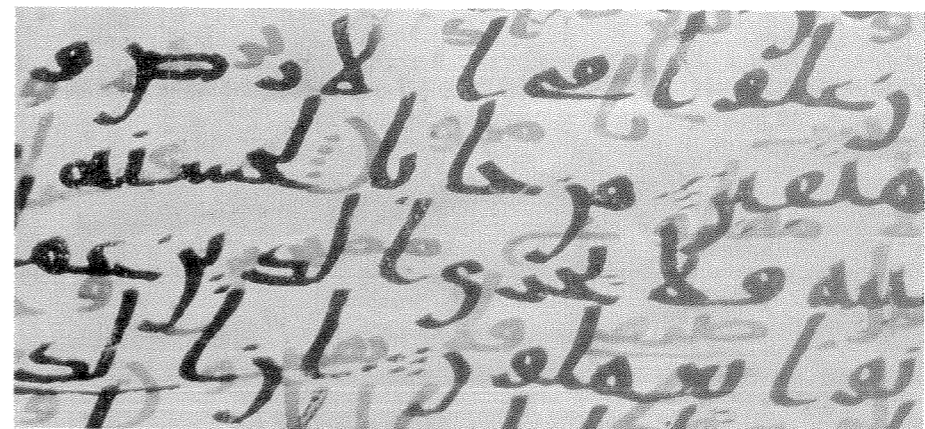
29. Syriac final nūn and Hijazi final yā'.

ligatures. This, like the tendency to make the horizontal and vertical strokes even, seems to reflect the Syriac aesthetic of the script.

In some Hijazi manuscripts, the shape of final yā' directly echoes that of Syriac final nūn: a long stroke that horizontally extends to the right until the ink runs out (Figure 29). This type of dextrograde yā', which is of Nabataean origin, thus appears to have been transformed in Arabic under a Syriac influence.<sup>107</sup> It is not encountered in all the Hijazi corpus, but does occur in Qur'ans related by their codicology to both Greek and Syriac: alone, it may not be sufficient to denote a direct Syriac imprint on a given manuscript.<sup>108</sup>

The diacritical marks attested in Arabic from 643 onwards are also thought to have originated in Syriac, where dots were used from at least the fifth century to distinguish letters or mark the plural, vowels and accents.<sup>109</sup> In Hijazi, they take the form of either an ovoid dot, as in the earliest papyri and inscriptions; or of a thick, slightly curved dash (Figure 30).<sup>110</sup> These forms still occur in Kufic styles A.I and B.I, alongside the thin, flat dashes that eventually prevailed in C.I and later Kufic. The natural hand movement required to draw a dash with a reed is simple: a downward pressure of the pen. The dots observed in Hijazi could thus represent a forced attempt to imitate the round form initially inherited from Syriac before it was gradually adapted to the Arabic writing instrument.

In sum, while Arabic scribes adopted and developed their own type of pen, Syriac left a distinct imprint on the Hijazi aesthetic of the script. Three of its aspects – the tridirectionality of the letters, thickness of the strokes and shape of the dots – can be



30. The dots in a Hijazi palimpsest found at the Great Mosque of Sanaa.

observed across the Hijazi corpus. This makes them likely to reflect a common origin, the state of the script at the very beginning of Islam.<sup>111</sup> The *terminus ante quem* for their introduction can be placed in 643, the date of the earliest papyri, leaving us to assess whether they emerged before or during the early years of the Muslim era. Since one of these features, the slanting letters, is clearly attested in the sixth century, at Zabad and Ḥarrān, and since the other two are linked to the same source, they may well have all arisen in that period, as part of the same scribal process. Our evidence, however, is too limited to allow a definitive conclusion in this respect.

With the rise of Islam came the urgent need to produce bound codices in Arabic script. The codicological diversity observed in Hijazi suggests that pre-established techniques and norms were lacking in this domain, which probably led to their being learned from older scribal traditions within the confines of the newborn empire. Beside the slant of the tall letters to the right, one feature, the one-columnar format, usually of large dimensions, contributed to the outward unity of a tradition otherwise marked by its diversity. Its universal adoption might reflect the will to generate a visual identity with the frugal scribal means at hand, perhaps on the basis of a revered model.

#### *Christian scribes of the Qur'an*

The manuscript evidence, at any rate, shows that some of the earliest Qur'anic scribes had become acquainted with Christian scribal techniques. This could have happened either by personal contact, or because some of them were (or had been) Christian. The latter case is, surprisingly, recalled in early hadith literature. 'Abd al-Razzāq al-Ṣan'ānī (744–827) thus writes in his *Muṣannaf*: 'A Christian from Ḥīra wrote 'Abd al-Raḥmān ibn Abī Laylā a *muṣḥaf* for seventy *dirhams*.'<sup>112</sup> Born in 638, 'Abd al-Raḥmān ibn Abī Laylā was a Kufan *tābi'i*, a man who collected traditions he had heard from 'Alī ibn Abī Ṭālib and other companions of the Prophet. This *khābar* ('account'), recorded at an early date, is based on a particularly solid chain of transmission, going through 'Abd al-Razzāq's teacher Sufyān al-Thawrī (d. 778) to 'Abd al-Raḥmān's own son Muḥammad ibn Abī Laylā (693–765) and the latter's elder brother 'Isā.<sup>113</sup> It reappears in the slightly later

compilation of Ibn Abī Shaybah (d. 850) and the *Kitāb al-maṣāḥif* of Ibn Abī Dāwūd (844–929).<sup>114</sup>

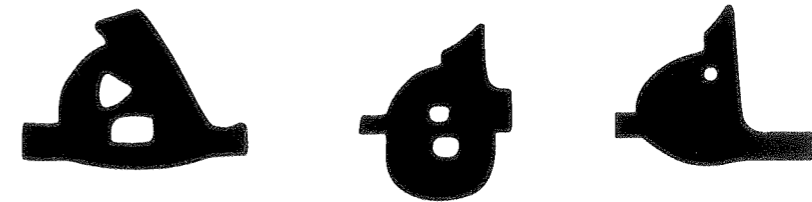
The latter also records that 'Abd al-Raḥmān ibn 'Awf had a Christian from Ḥīra write him a *muṣḥaf* and gave him sixty *dirhams*.<sup>115</sup> 'Abd al-Raḥmān ibn 'Awf (d. 653) was a companion of the Prophet who notably took part in the hijra to Ethiopia and played a major role in the appointment of 'Uthmān as caliph. Ibn Abī Dāwūd adds that 'a Christian wrote a *muṣḥaf* for 'Alqama'<sup>116</sup> – presumably 'Alqama ibn Qays (d. c. 682), a Kufan disciple of Ibn Mas'ūd and an authority on the Qur'anic text.

These purely factual anecdotes, which incidentally appear, in their respective books, among *akhbār* that condemn the copy of the Qur'an for a pay, are most unlikely to have been invented for this purpose: they are probably authentic. The process described is simple: some of the earliest Muslims had Christian scribes copy the Qur'an for them. Given the dates of the persons involved, there can be little doubt that the reference is to Hijazi manuscripts. One implication is that Christians from Ḥīra were among the most reliable Arabic scribes in the early decades of Islam. This reinforces the possibility that the city played a role in the pre-Islamic diffusion of the Arabic script. It might also explain why Kufa, lying just a few miles away from Ḥīra, soon became a prominent centre for Arabic calligraphy (in the above anecdotes, two of the three Muslims mentioned are themselves Kufan).

The late Nabataean alphabet used by the Arabs was transformed under the influence of Syriac, around the early sixth century, to give rise to 'Arabic.' Beside inscriptions, this primitive phase probably included utilitarian documents. Whether or not bound codices were also sporadically made in that period, the advent of Islam created an unprecedented need for their production. Alongside traits inherited from Syriac, different techniques were thus adopted from older manuscript traditions in the earliest Qur'ans. Having reached this point, it is also clear that much remains to be learned from this immensely important corpus.

## The Birth of Kufic

The birth of Kufic represented, in many ways, a radical break with the past in which Hijazi had still been anchored. The rules that were defined at the outset of the Kufic tradition essentially remained the same throughout its lifespan. Whereas Hijazi styles were akin to individual handwriting, Kufic represents a mature calligraphy based on extremely precise definitions. Let us take one letter, medial *hāʾ*, as an example.



A.I

B.II

D.I

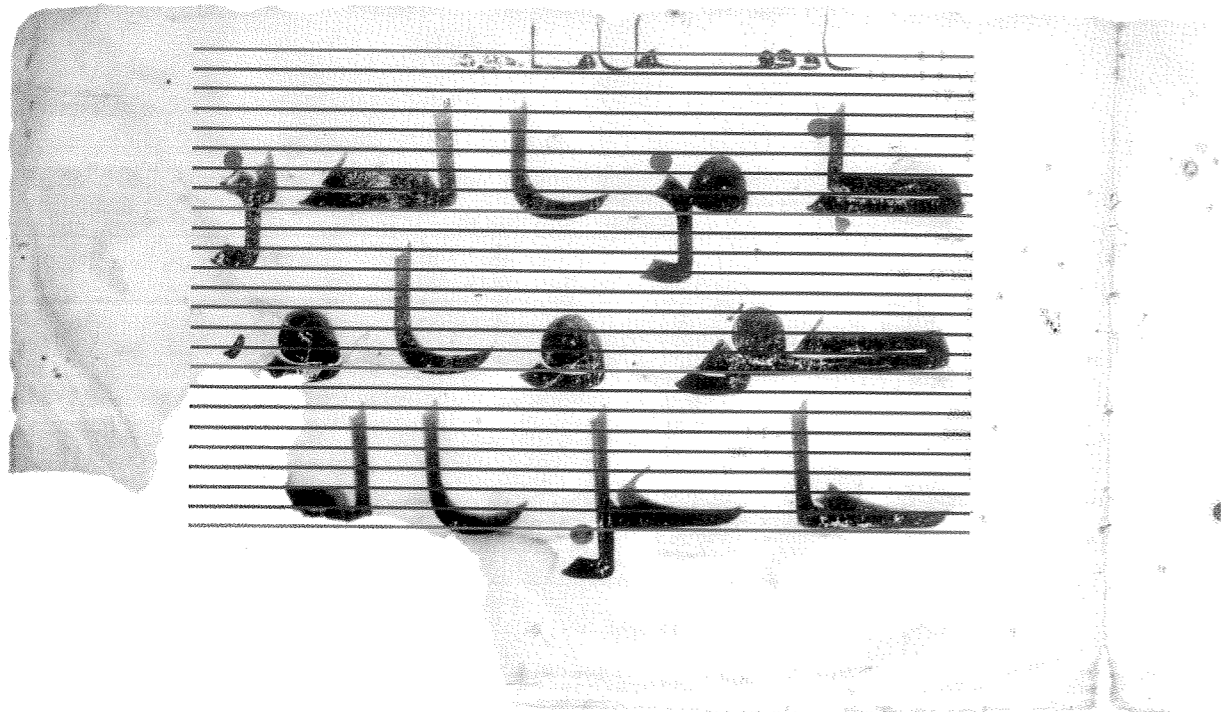
In style A.I, the letter rests on the baseline and its vertical bar slopes to the left, with well-defined 'eyes.' But in B.II, it extends over both sides of the baseline, which coincides with the letter's median horizontal bar; the 'eyes' are small, while the vertical bar is straight and linked to the baseline by a nearly circular stroke to the left. In D.I, the same letter sits on the baseline and consists of a semicircle that rests on a vertical bar with a pointed head. In much the same way, key letters appear in consistently the same form in each of the seventeen main Kufic styles, which boil down to six broad families. The adherence to these rules is, in most manuscripts, very close, becoming looser in less stylistically accomplished examples.

### A novel codification

Kufic scribes' rigorous approach to writing was underpinned by an elaborate geometrical codification. As this has already been discussed elsewhere, I will only restate, here, its most essential elements.<sup>1</sup> Kufic manuscripts were laid out with a stable number of lines per page, and these were strictly parallel and equidistant.<sup>2</sup> Each line was, in turn, divided into parallel 'interlines', equal to the thickness of the pen, which defined the main pivotal points of the letters. This interline grid was closely adhered to in manuscripts of the highest standard. For example in the Qur'an of Amājūr (Figure 31), which was completed in 876, probably in Syria, the body of the elongated letters (*kāf*, *dāl*) and the vertical stroke of final *nūn* reach up to the second interline. The top of *wāw*, *fā'*/*qāf*, *hā'*, *mīm* and initial *ayn* falls on the third interline, while *alif* and the other tall letters are six interlines high. Likewise, the whole script is codified along the lines of this geometrical grid.<sup>3</sup> The underlying model was followed in virtually all Kufic manuscripts, but with more or less precision according to the lavishness of the commission and skill of the scribe.<sup>4</sup>

The text box of Kufic manuscripts was also laid out with a fixed

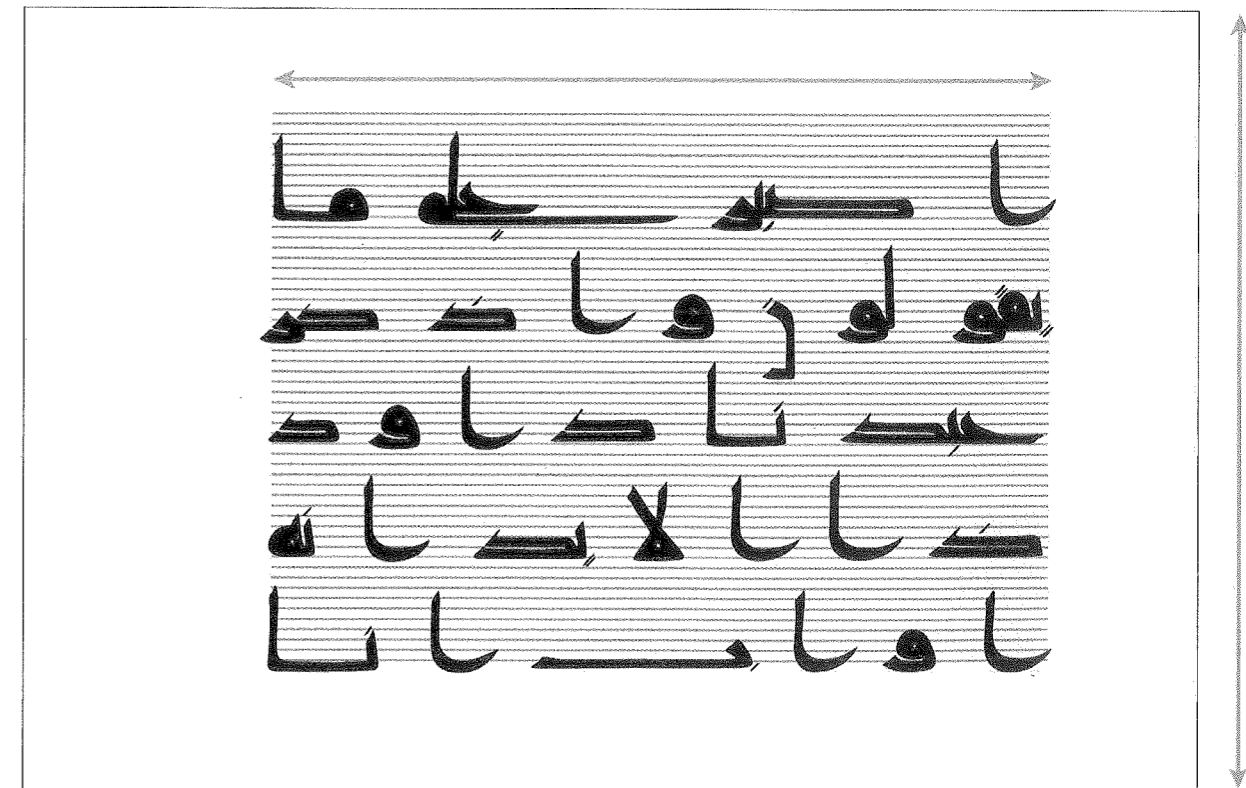
31. The interlines in the Qur'an of Amājūr (style D.I, written in or shortly before 876, 12.5 x 19.5 cm).



proportion of width to height, for instance  $\sqrt{2}$ , 3:2 or  $\sqrt{3}$ .<sup>5</sup> Once it had been chosen for a given manuscript, this proportion was scrupulously maintained by scribes, page after page. The precision achieved in practice is all the more remarkable because Kufic manuscripts were not ruled.<sup>6</sup> It was probably obtained by placing a template grid under each page while writing: one could imagine a wooden board with the layout drawn in ink. The parchment, as prepared at the peak of the tradition, was translucent enough to let such a grid show through.<sup>7</sup> Finally, although the original page dimensions were often altered through time by trimming and wear, it is probable that the text box's long side was made equal to the page's short side and that the page, in turn, had a constant ratio of width to height (Figure 32).<sup>8</sup>

Kufic, in sum, was built upon a geometrical expansion that linked its elements, from the thickness of the pen to the page, through a series of proportional relationships. In the same spirit, the art of illumination developed towards more and more abstract forms based on a geometrical grid of equal modular units, either square or rectangular.<sup>9</sup>

32. The geometry of the Kufic page.



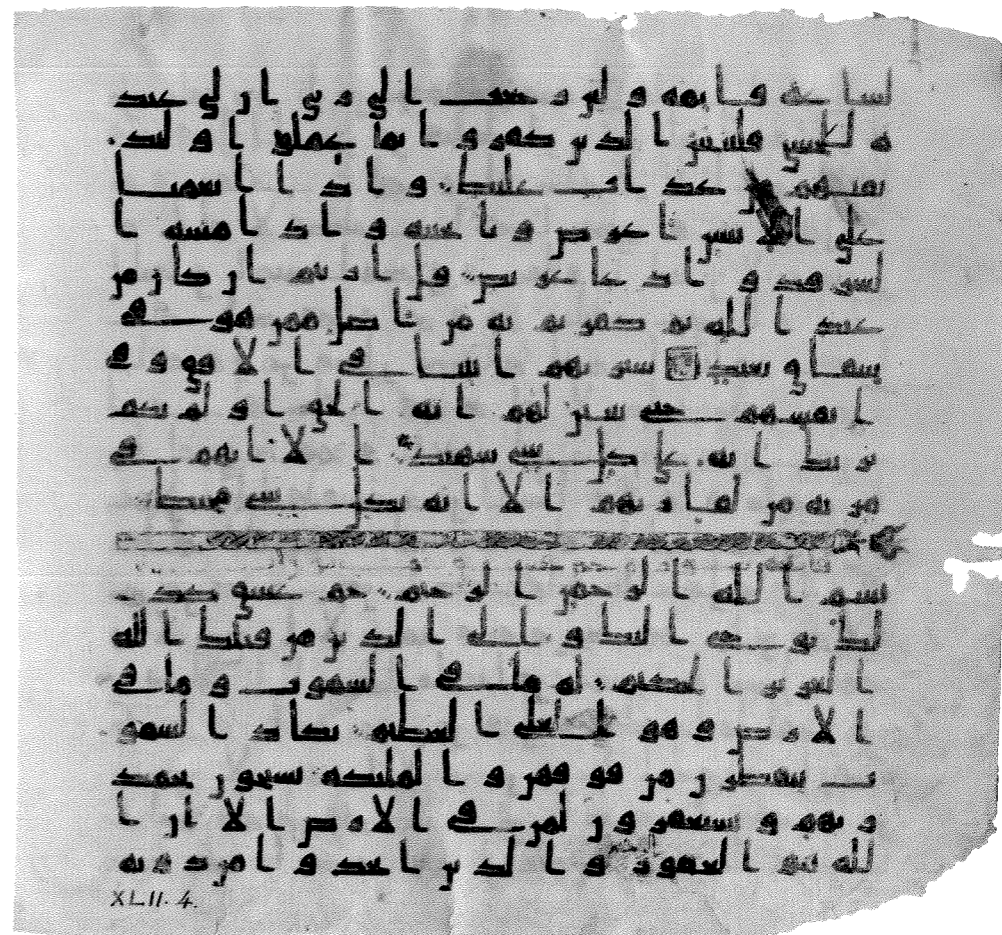


These features, which occur in even the earliest Kufic manuscripts, are a world away from the previous phase represented by Hijazi. Only a few of them can be traced back to earlier scribal traditions. In Kufic, the quires were universally quinions with hair facing flesh, as in Syriac.<sup>10</sup> The use of geometrical decoration in bands to mark the beginning of a new chapter was also a primarily Syriac usage before Islam.<sup>11</sup> While it is occasionally encountered in Hijazi, it became the norm, grew and improved in Kufic. Sometimes, a stylistic kinship is also apparent: for example, the sura markers with rope-and-pearl motifs encountered in some early Kufic Qur'ans have close Syriac equivalents – note, in Figure 33, the treatment of the surface and marginal flourishes.<sup>12</sup>

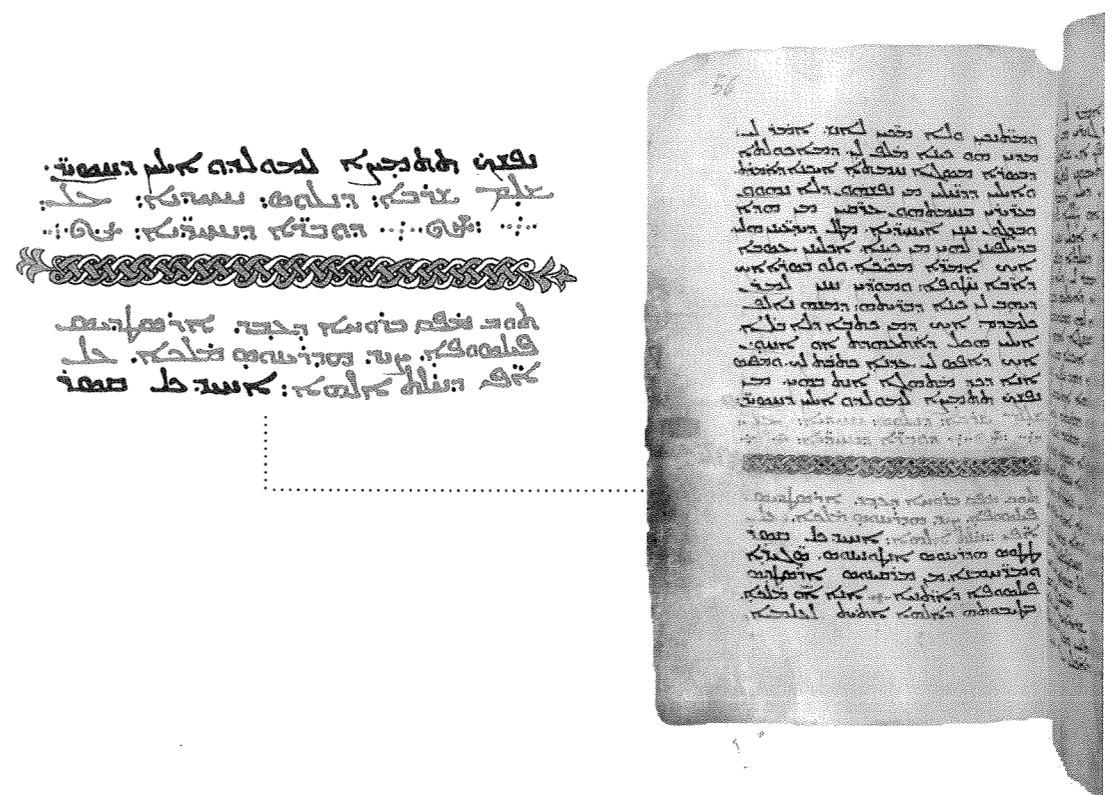
As already mentioned, it was common, in Syriac manuscripts of the sixth to seventh centuries, to write the title of each new chapter in red (Figure 34). In a few Hijazi examples, red sura titles can be noticed, but they are in a different script from the text and could be later additions.<sup>13</sup> At any rate, this type of title became frequent in Kufic styles B and C. The pen used is thinner than in the rest of the text, which makes it resemble Syriac headings (Figure 60). This relatively awkward feature would, in fact, be difficult to understand in the context of Kufic manuscripts' accomplished calligraphy and decoration, had it not been a legacy from earlier sources.

The interline system of Kufic, on the other hand, does not find a clear parallel in any earlier tradition. In Greek, Coptic and Christian Palestinian Aramaic, the body of the letters was sometimes encompassed by a (theoretical) median interline which bisected the area between two baselines.<sup>14</sup> This usage may have prefigured the codification of Kufic, but it is also much simpler. Similar remarks apply to layout. The Kufic text box partly resonates with the line-by-line ruling used in Greek, Coptic and CPA, but it also exhibits fundamentally novel features: the use of a constant text box proportion; the absence of visible ruling; and, in spite of this, the extremely precise justification of the lines, whereas they commonly fluctuated at the beginning and end in earlier traditions. The strokes of Kufic calligraphy are also markedly thicker than before. These differences all contribute to create a distinct visual impact of the page, to which we shall return.

In the end, the novelty of Kufic remains essentially unexplained by reference to earlier scribal traditions. Some of even the earliest Kufic manuscripts surpassed what had preceded them in visual harmony



33. Kufic Qur'an in style B.Ib (BNF Arabe 327, 27 x 28 cm).

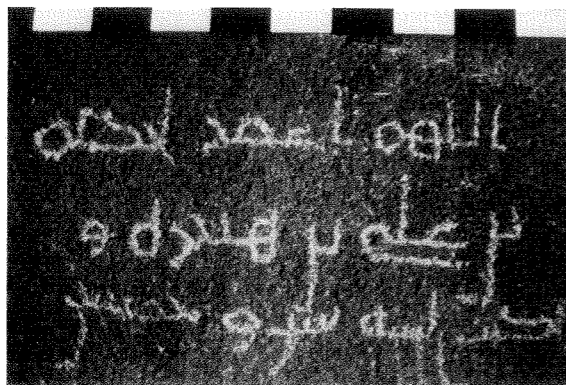


34. Syriac Bible from the Sinai collection (Syr. Ms. 16, seventh century, 25 x 16.5 cm)

and geometrical rigour. Their uniformity in structure and writing suggests the conscious creation of a tradition. But when, and under what impetus? The answer to this question begins with the oldest surviving Islamic monument: the Dome of the Rock.

*The inscriptions at the Dome of the Rock*

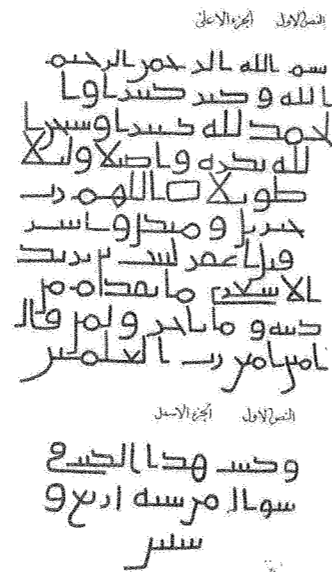
The Dome of the Rock was built in 72/692 by the caliph ‘Abd al-Malik (there has been some debate as to whether construction began or ended at that date).<sup>15</sup> It contains the earliest extant Arabic monumental inscription, marking a watershed in our documentation of the script. Shortly before then, the material record still suggests a relatively primitive approach to writing. We have already mentioned the Ṭāʾif inscription of 678 and its kinship to Hijazi (Figure 12). In



35. (left) Inscription from Khashna (Hijaz, 52/672).

36. (right) Inscription from Hafnat al-Abyad, near Karbalā’ (Iraq, 64/684).

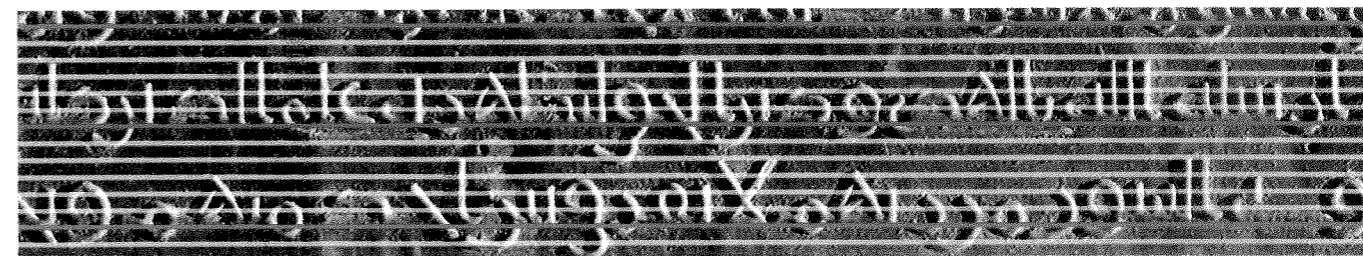
the inscriptions from Khashna (dated 52/672, Figure 35) and Hafnat al-Abyad (64/684, Figure 36), one can observe a move towards more geometrical letters forms: straighter lines and approximate circles, rectangles or triangles.<sup>16</sup> Even so, the script remains irregular in shape and size, and far removed from the interline codification of Kufic. Our evidence, however limited, suggests that the underlying reform of writing had not taken place by 684.<sup>17</sup>



By contrast, the record clearly shows, at the Dome of the Rock, a dramatically transformed script. The mosaic inscription that runs around both sides of the inner octagon is a compilation of Qur’anic and non-Qur’anic passages that stress the oneness of God and the prophecy of Muḥammad, in an implicit refutation of Christian doctrines of the Holy Trinity. The original name of the founding caliph, ‘Abd al-Malik, was replaced in the ninth century by that of his Abbasid successor, al-Ma’mūn (r. 813-33).<sup>18</sup> However, the foundation date (AH 72) has been left intact, which led Max van Berchem to see this as a gesture of symbolic appropriation rather than historical forgery (a change of foundation date would indeed have seemed absurd in contemporary eyes). A similar process has been repeated in the copper plaques which once stood above the north and east doors. The greater part of their text, written in elegant Kufic, consists of Qur’anic passages comparable to the above; but the last two lines, which are in a compressed, uneasy script, are in praise of al-Ma’mūn and his governor (Figure 37).<sup>19</sup> The joint between the original and added parts is still visible.

If we turn to the script of these texts, we note that the baselines of writing are almost perfectly straight and, where applicable, parallel and equidistant. By superimposing six equal interlines on each line of script, we define not only the thickness of the stroke (be it mosaic tesserae or engraved copper); but also the curves of each letter.

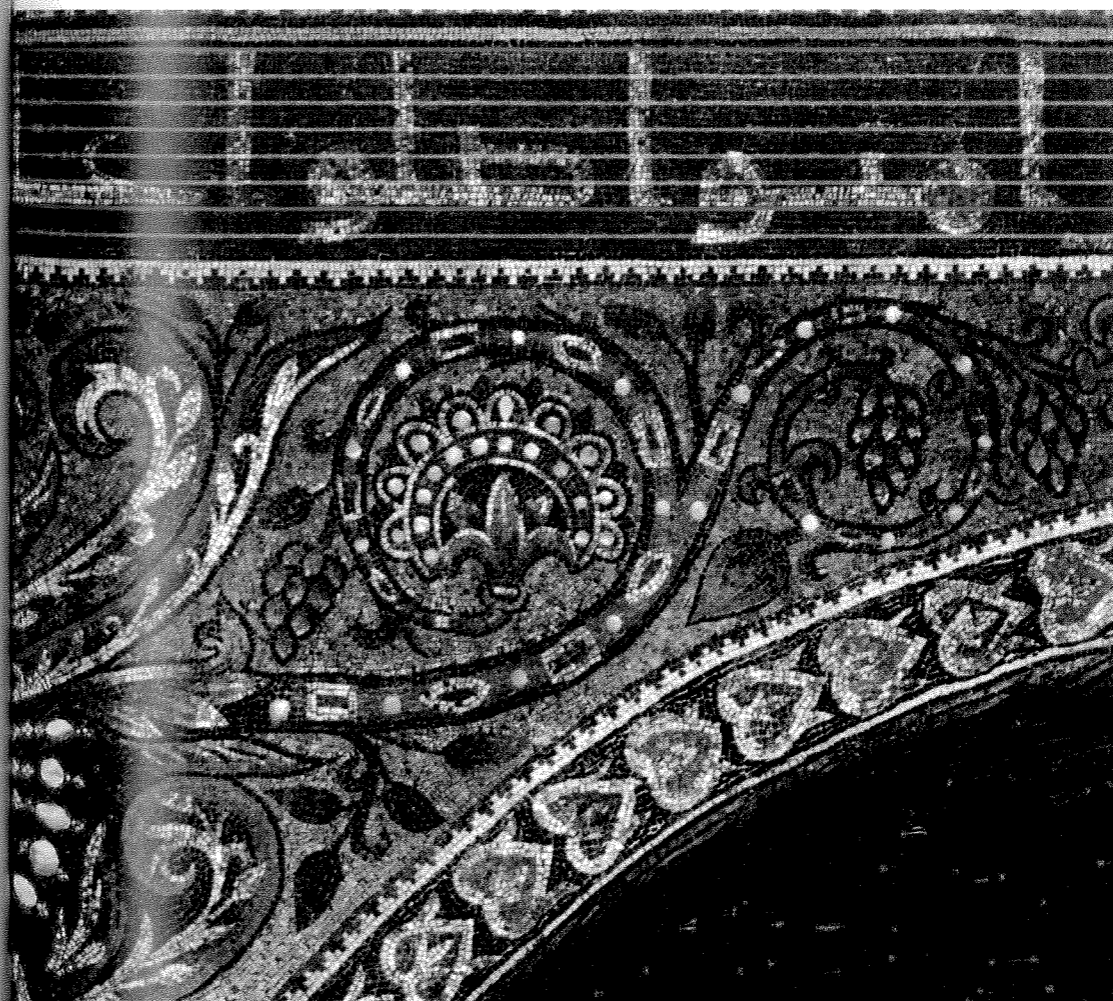
37. Copper plaque from the north door, Dome of Rock (Jerusalem, 72/692). The text was executed in repoussé and painted in gold on a blue ground.



The same grid applies to all parts of the inscriptions, except for the additions by al-Ma'mūn.<sup>20</sup> This shows that, by or shortly after 692, the Arabic script had been codified in the geometrical terms that remained at the basis of the Kufic tradition.

In the copper plaques, the letter shapes tend towards two basic elements: the straight line and the circle. The *alif* is four interlines high throughout, making its proportion to the line  $6/4 = 3/2$  (this is also true of *lām*, *kāf*, *ṭā'* and *zā'*). The only exception to this rule is the top line, where these letters all have a height of five interlines. This pattern might have been intentional, for it also occurs in early Qur'anic manuscripts.<sup>21</sup> In the rest of the text, the interlines are also used in a consistent manner: for example, the body of the elongated letters (such as *ṣād* and *kāf*) is two interlines high; the top of initial 'ayn, medial *hā'* and of *wāw* is three interlines high; while the loop of final *qāf* extends two interlines below the baseline.

38. Mosaic inscription, Dome of the Rock (Jerusalem, 72/692). Part A.



39. (above) Mosaic inscription, Dome of the Rock (Jerusalem, 72/692). Part B.

40. Mosaic inscription, Dome of the Rock (Jerusalem, 72/692). Part C.

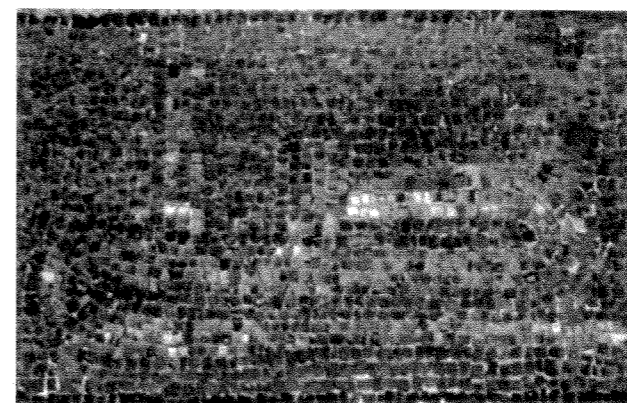
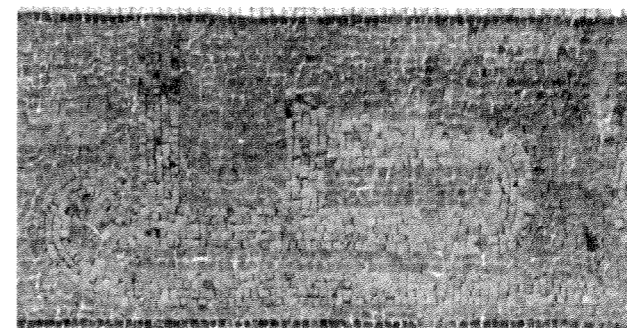
The mosaic inscription, with its combined length of some 240 metres, is of an altogether different scale.<sup>22</sup> Close observation reveals different patterns of writing between three of its parts:

- Part A: the outer side of the inscription.
- Part B: the south to southwest sections of the inner inscription.
- Part C: the northwest to southeast sections of the inner inscription.<sup>23</sup>

Disparities can be noted, first of all, in the way the letters adhere to the interlines. In part A, the construction of *ṣād/dād* and final *hā'* is as follows: first interline, horizontal stroke; second interline, void; third interline, horizontal stroke; fourth interline, top of vertical stroke (Figure 38). By contrast, in the rest of the inscription, the vertical stroke is much shorter: in part C, the whole letter is even sometimes compressed to make it fit, with this stroke, under the third interline (Figure 40). Furthermore, in A, the vertical stroke of medial *bā'/tā'/thā'* and the like is three to four interlines high; whereas in B and even more commonly in C, it varies between two and three interlines. While the interline grid is more closely followed in part A, its relatively supple rendition in B and C results in a more accomplished script.

These divergences are reflected in the techniques employed by the mosaicists.<sup>24</sup> In part A, the thickness of the stroke is regularly equal to five tesserae but in B, it fluctuates between four and five and in C, between three and four.<sup>25</sup> These fluctuations are partly balanced by the size of the tesserae, which gradually increases between parts A, B and C, so that the overall stroke width remains relatively regular.<sup>26</sup> Part C is set further apart by a distinctive brilliance: its gold tesserae were probably placed at a downward angle to the wall surface, which allowed them to reflect daylight in the direction of viewers at ground level.<sup>27</sup> While on the outer side (part A), simple successive rows of black and white lines frame the text, a triangular repeat pattern with four colours (black, white, but also green and red) has been used on the inner side (B and C). This distinction echoes the overall order of the decoration, which is relatively crude on the outer side and more refined on the inner side.<sup>28</sup>

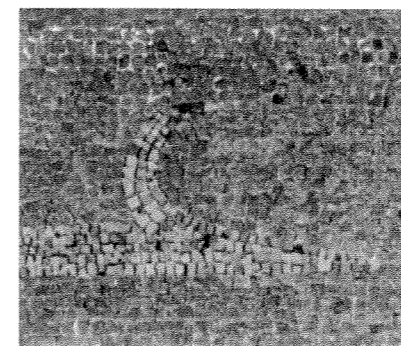
These differences of execution suggest that two or three teams of mosaicists – who could have been masters and pupils from the same atelier – were at work on this project. Having each been assigned a



different part of the text, they responded to the same requirements, based on the same template, in slightly different ways.

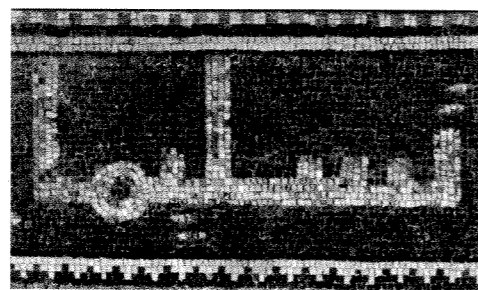
The imprint of calligraphers can also be felt at varying degrees in the inscription. Throughout the text, the sharpened endings of some strokes seem to reproduce the movement of the calamus, for example in *alif maqṣūra* (Figure 41).<sup>29</sup>

A discrepancy can be noticed in the initial *ʿayn*: in part A, its hook tends towards the strict form of a circle, as against a more indistinct



41. (above) The word *ṣallā'*, with its tapering *alif maqṣūra*. (top) Part A. (bottom) Part C.

42. Initial *ʿayn*. (left) Part A. (right) Part C.



curve in B and C (Figure 42). In A, its lower part often ends in a downward bevel which slices through the horizontal stroke; whereas in B and C, it merges into the latter stroke, which either finishes vertically or in an upward bevel. The shape observed in B and C more closely echoes the reality of reeds and manuscripts, where the hook is either oval or consists of two distinct strokes, and the lower bevel is vertical or points upwards.

Diacritical signs are almost nonexistent on the outer side of the inscription (part A) and the first sentence of its inner side (which belongs to B), but they become frequent in the remainder of that side (including the whole of part C).<sup>30</sup> These signs either consist of oblique dashes, ovoid dots, or an intermediary shape – that is, the forms encountered in Hijazi manuscripts (Figure 43). If the sloping dash is the most natural form to be obtained with a reed, the same could be said of the square or rectangle with tesserae. These dots and dashes, if anything, tend to disturb the natural flow of the design: their rationale does not belong to mosaic.

All these elements imply that Arabic calligraphers with a background close to Hijazi were at work, along with the mosaicists, on this inscription, particularly the inner side of the octagon. The higher standard of craftsmanship observed on that side, in both script

43. Examples of diacritical signs (part C).

and mosaic technique, reflects the overall architectural scheme of the building, with its ritual focus on the sacred rock.<sup>31</sup>

In practice, the calligraphy was the first part of the inscription to be set, as revealed by the way the green tesserae follow the contours of the gold before merging into the ground.<sup>32</sup> Marguerite van Berchem has noted that the underdrawing was generally done in red for the gold and silver tesserae, as opposed to dark grey for the green and blue.<sup>33</sup> Because the mosaic is so well preserved, the layers of plaster that lie beneath it have not been fully documented. But what is known converges with observations made at the Great Mosque of Damascus and on a mosaic from the market of Baysān dating to the reign of Hishām (724–43) to show that Umayyad mosaicists followed regular Byzantine practice.<sup>34</sup> It is thus possible to tentatively reconstruct how the work was carried out.

At the outset, the walls were covered with a relatively thick layer of plaster, which primarily served to suppress irregularities of surface. Guidelines resembling the interlines may have been drawn or incised at this level. Their use was not systematic in the craft, but they are commonly attested for geometrical mosaics, where they acted as a template upon which the design was articulated.<sup>35</sup> At the Dome of the Rock, such guidelines could have considerably aided the craftsmen in ensuring the continuity of their two immensely long inscription bands. The next step was to gradually cover the first coating with a fine layer of adhesive plaster, the setting bed. This was added in small sections, day after day, so that the underdrawing could be painted and immediately executed with tesserae while the surface was still fresh.<sup>36</sup>

These technical aspects of the craft reveal the close collaboration that was required, for a work like this, between calligraphers and mosaicists, often standing side by side on the same scaffolding. While laying out such an enlarged script, a geometrical grid will have helped preserve the coherence of the design and have facilitated its execution, especially by craftsmen whose language was not Arabic. Indeed, the rationale that was placed at the heart of calligraphy – not only in this inscription, but in the Kufic tradition as a whole – mirrors that of mosaic, with its parallel rows of tesserae and underlying grids.<sup>37</sup> We may be close, here, to the context that led to the spectacular transformation of Arabic script.

The Dome of the Rock represents the symbolic climax of ‘Abd al-Malik’s state building programme. After or even during the war he waged against his rival Ibn Zubayr, he engaged in a vast effort to consolidate the Muslim polity.<sup>38</sup> First, the official language of the *dīwān* was changed, from Persian in the East and Greek in the West, to Arabic. This resulted in better control over the administration, where Muslims also began to replace non-Muslims. In the material record, we thus see bilingual papyri giving way to exclusively Arabic documents.<sup>39</sup>

Second, after numerous experiments, the gold and silver coinage underwent a revolutionary transformation, with the introduction of a purely epigraphic design in 77/697. Beyond a defiant gesture towards Byzantium, these coins represented a formidable vehicle of propagation for the basic precept of the new faith, engraved on their small surface: ‘There is no God but God alone, He has no associate.’ The standardization of coinage went along with a fiscal reform which moved away from tribute taking towards regular taxation.<sup>40</sup> In a gesture of territorial control, ‘Abd al-Malik also improved the road system of Syria and Palestine, as notably attested by milestones discovered in the region of Jerusalem and the Golan.

One essential idea underlies these various initiatives: the construction of a viable and strong state, able to control its territories and assert its distinctive religious identity in the midst of a predominantly Christian environment. But they also share a more concrete trait: their reliance on the Arabic script, whether for practical or symbolical purposes. Its codified form was thus consistently spread across different media during this period.

#### *The milestones of ‘Abd al-Malik*

Seven milestones dating to the reign of ‘Abd al-Malik’s have been discovered to date. Two of them, found at Abū Ghūsh and Bāb al-Wādī, closely echo the copper plaques at the Dome of the Rock in their letter forms. They are articulated upon a ten-interline grid: we are clearly dealing, here, with a reformed version of the script (Figure 44).<sup>41</sup> At Bāb al-Wādī, the diacritical signs on the last line are also dashes, as in Kufic, rather than dots.<sup>42</sup> To this list can be added a third milestone from Khuzaybā’ (only published as a squeeze) and a



fourth from ‘Ayn Hemed (now very fragmentary).<sup>43</sup> A fifth milestone (Khān al-Ḥaṭhrūra, Figure 45) is also based on the same codification, but more loosely applied: the tall letters tend to be slightly inclined, and the writing as a whole echoes manuscript calligraphy;<sup>44</sup> traces of preparatory lines that mark different horizontal levels in the script – a basic version of the interlines – can be seen. The five milestones from the region of Jerusalem also share the same wording, except that some indicate the distance to Damascus and others to Jerusalem: they thus form a coherent group, with small variations.

Two further milestones dated 85/704 have been found near the village of Fīq, in the Golan.<sup>45</sup> Also from Fīq is an inscription in the name of ‘Abd al-Malik dated 73/693 or 83/703, which commemorates a ground levelling.<sup>46</sup> The script of the three Golan inscriptions is more primitive than in the Jerusalem group, recalling the earlier

44. Milestone of ‘Abd al-Malik (Bāb al-Wādī, 685–705).



text from Khashna (Figure 46). This could reflect either a lower rank of patronage (and the work of non-professional engravers), or a chronological evolution from one group to the other.

The latter possibility has been defended by Amikam Elad, who noted several differences in wording between the two sets of milestones.<sup>47</sup> Most remarkably, whereas an explicit date is given in the Golan, the name “Abd al-Malik” is simply followed by the phrase ‘*rahmat allāh ‘alayh*’ (‘God’s mercy be upon him’) in the Jerusalem group. In classical Islam, such a formula would have been funerary, which led Elad to think that the caliph had recently died at the time.<sup>48</sup> This would place the date of the Jerusalem milestones in or shortly after 86/705. But it presupposes that the formula had already acquired this connotation in the early Umayyad period, an idea that still requires confirmation.<sup>49</sup> In either case, the reformed script was applied to the milestones during or immediately after the reign of ‘Abd al-Malik.

45. Milestone of ‘Abd al-Malik (Khān al-Hathrūra, 685-705).



*The epigraphic coinage*

Coins, by their very scale (about 3 cm in diameter), stand in the sharpest possible contrast to monumental inscriptions, yet they are also precious documents of the script’s evolution. As already mentioned, a purely epigraphic design was introduced in gold coinage by ‘Abd al-Malik in 77/697, then in silver from 78/698. Although the gold *dīnārs* carry no mint names, it is thought that they were all produced at Damascus in the Umayyad period.<sup>50</sup>

The production of silver *dirhams* was decentralized until 84/703,<sup>51</sup> with more than forty active mints. There followed, in 85-9/704-8, a period of centralization when they were only produced at Damascus, Wāsiṭ and a peripatetic mint in the northern provinces. The provincial mints resumed operation in 90/709.<sup>52</sup>



46. (above) Milestone of ‘Abd al-Malik (Fig. 704). The original stone slab, of which only half survives, had an elongated format.

47. Epigraphic gold *dīnār* struck in 77/697, probably at the mint of Damascus.

In 85-6/704-5, an improved design was introduced at Wāsiṭ (Table 2). On the obverse, the size of the circles around the field was increased in order to create more space for the central text. The most important innovation lay in the script itself. Until 85, the execution recalls freehand writing, with relatively irregular strokes that tend to curve slightly. By 86, the letter strokes had become perfectly straight, with curves tending towards geometrical circularity.<sup>53</sup> By contrast with earlier issues, these coins give the impression of a sharp horizontal levelling of the script. Close observation reveals that the letters follow, with slight variations, a sixfold interline grid on the obverse, which









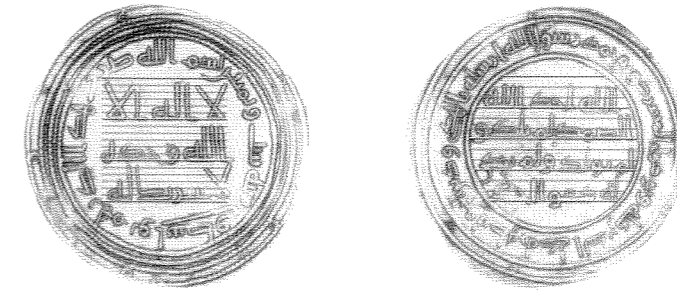
Mint	Year (AH)	Obverse	Reverse
Wāsiṭ	85		
Wāsiṭ	86		
Damascus	86		
Damascus	98		

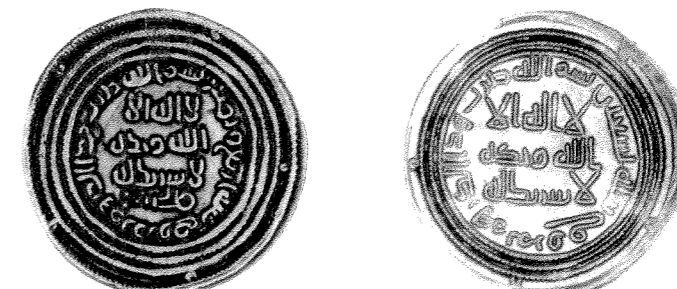
Table 2. Umayyad issues of silver coinage at Wāsiṭ and Damascus.

becomes threefold on the reverse, probably as a result of the latter's smaller lines (Figure 48).<sup>54</sup> A reformed version of the script was, in other words, introduced in the silver coinage at Wāsiṭ between 85 and 86.



The reduction of the design to this scale would have required minute engraving of the dies on which the metal was struck.<sup>55</sup> This technical prowess is not entirely surprising: fine figurative compositions had been executed on coins since Antiquity and were still produced in the early decades of Islam, notably in the eastern provinces (see, for example, Figure 59).<sup>56</sup> On the reformed epigraphic *dirhams* themselves, the engravers were also able to create a succession of perfectly circular plain and void concentric rings whose thickness is comparable to the interline height.

The new design, which is attested solely at Wāsiṭ until 89/708, suddenly spread to the eastern provinces in 90/709.<sup>57</sup> The contrast is particularly sharp in some Iranian mints, like Merv, where earlier epigraphic issues had retained a distinctive roundedness inherited from Pahlavi, which was at once severed (Figure 49). Interestingly, although they are all based on the same model, the new issues are



48. (above) The interlines on a dirham minted at Wāsiṭ in 86/705.

49. Epigraphic dirhams from Merv. (left) 84/703. (right) 90/709.



not strictly identical, which suggests that their dies may have been engraved locally.<sup>58</sup>

An altogether different path was followed at the capital mint, Damascus, where a distinct style with rounded letter endings was belatedly developed from around 98/717 (Table 2).<sup>59</sup> This Damascene style remained essentially unchanged until the end of the Umayyad period, but it was not adopted elsewhere, except sporadically in the West. On the contrary, from 105/724 onwards, the western mints of Ifrīqiya, al-Andalus and the northern mints of Armīniya then al-Bāb began to move, one after the other, towards variations on the Wāsiṭī model, leaving Damascus alone out of this trend.<sup>60</sup> Wāsiṭ thus emerged as an avant-garde post for the design of epigraphic coinage between 704 and 705.

The city had been founded only a few years earlier by al-Ḥajjāj ibn Yūsuf al-Thaqafī, the Umayyad governor of Iraq (694-714).<sup>61</sup> Al-Ḥajjāj had been actively involved in ‘Abd al-Malik’s state-building programme, notably the spread to Iraq of the epigraphic coinage initially introduced at Damascus. He appears, between the very end of latter’s reign and the beginning of al-Walīd’s, to have played a leading role in the adaptation of the reformed script to coinage.

### *Umayyad manuscripts of the Qur’an*

The centralization, standardization and spread of coin issues, in fact, recalls the movement from the diversity of Hijazi to the structural uniformity of Kufic. At the beginning of his chapter on calligraphy, al-Nadīm writes:

The first person to write Qur’anic manuscripts in the early days and to be known for the beauty of his calligraphy was Khālīd ibn Abī al-Hayyāj, and I have seen a Qur’an in his own hand. Sa’d chose him to write copies of the Qur’an, poetry and reports for al-Walīd ibn ‘Abd al-Malik. He is the one who wrote in gold the inscription which is in the *qibla* of the Prophet’s mosque, peace be upon him, from *‘al-shams wa duḥāhā’* until the end of the Qur’an. It is said that ‘Umar ibn ‘Abd al-‘Azīz said to him: ‘I want you to write me a manuscript on this model.’ So he wrote it and decorated it, and ‘Umar started to look over it and admire it, but its price was too high, so he returned it.<sup>62</sup>

‘Abd al-Malik’s son and successor, al-Walīd (r. 705-15), ordered the rebuilding of the Prophet’s mosque at Medina around 706. The work was carried out by his governor of the city, ‘Umar ibn ‘Abd al-‘Azīz (who would reign as caliph between 717 and 720). Like the Dome of the Rock and the Great Mosque of Damascus, the building was adorned with an inscription in gold mosaic.<sup>63</sup> Although Nadīm’s account cannot be taken word for word,<sup>64</sup> it suggests that the calligraphers who worked on these projects came to produce, under Umayyad patronage, Qur’anic manuscripts *based on the same model*, which they also *decorated*. This idea finds a clear resonance in the material record.

A first stage of the underlying transformation is heralded by ‘Marcel 13’ (Saint Petersburg), a manuscript found in the nineteenth century at the Mosque of ‘Amr (Fustat) by Jean-Joseph Marcel and recently rediscovered by Déroche.<sup>65</sup> The surviving folios (now 37 x 31 cm) represent one-quarter of the whole Qur’an, an unusually large fragment for this period. The script indicates that, as at the Dome of the Rock, we are lying but one small step ahead of Hijazi. Being based on a loose and probably early version of the interline system, the calligraphy is more angular than Hijazi, yet more curvilinear than Kufic (Figure 50).<sup>66</sup> The upright strokes have a tendency to slightly slant to the right, as if a scribe accustomed to Hijazi had been trying to write them. But as in Kufic, the letters follow precise definitions also shared by at least two other manuscripts: Arabe 330c (BNF), which is of comparable size, and the smaller Umayyad Qur’an of Damascus (TIEM ŞE321).<sup>67</sup>

In these manuscripts, the diacritical signs are no longer ovoid dots, but dashes that tend to be slightly thickened. Red dots indicate the vocalization in a manner that would become the norm in Kufic: above the line for short ‘a’ (*fatha*); at the level of the line for short ‘u’ (*damma*); and below it for short ‘i’ (*kasra*); pairs of red dots in the same positions also mark the indefinite case ending (*tanwīn*).<sup>68</sup> The notation of medial *alif* is more complete than in Hijazi, but less so than in classical Kufic.<sup>69</sup>

The layout, likewise, directly prefigures Kufic. There is no ruling, yet the attention devoted to the text box is revealed by the use of line-end fillers and elongation to justify the lines. Both Marcel 13 and Arabe 330c have twenty-five parallel and equidistant lines

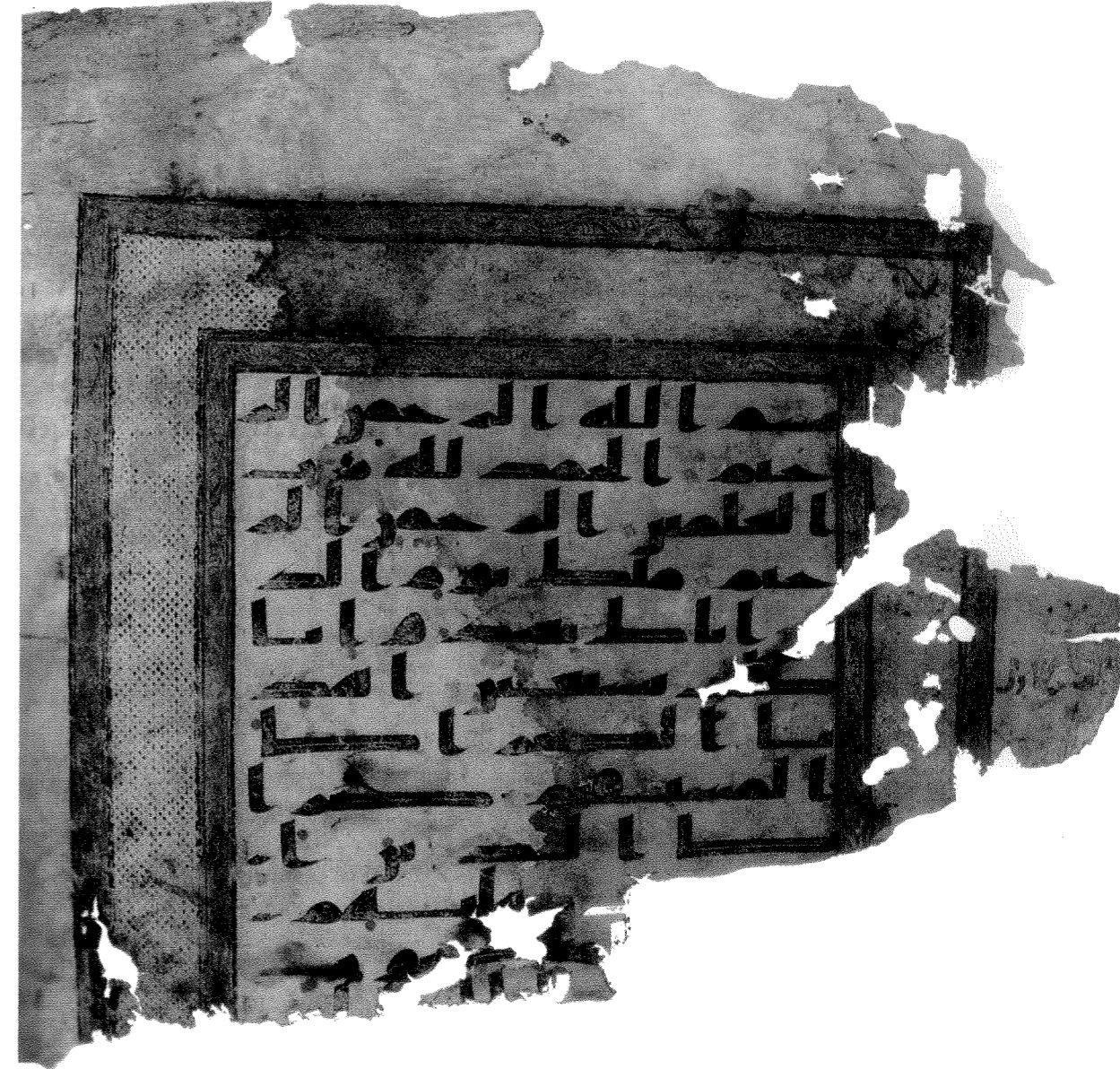


throughout, whereas they vary slightly in number in the Damascus Qur'an.<sup>70</sup> The quires, where they can be reconstructed, originally consisted of quinions arranged with hair facing flesh, as in Kufic.<sup>71</sup> This group of manuscripts thus represents, in every sense of the word, the root stage of the Kufic tradition, still permeated by Hijazi, yet in the process of establishing new norms.

An indication of provenance may be derived from the text of Marcel 13. According to Islamic tradition, after the first 'Uthmānic codex was collected in Medina, it was copied and sent to the major cities of the empire: Mecca, Kufa, Basra and Damascus. But minor variants subsisted between the five codices, with the result that different schools developed in these cities, which also had different verse counts. Historically, from the ninth century onwards, variations of these two types have been recorded and ascribed to the above cities by several authors.<sup>72</sup> The geographical divisions suggested by these sources find a confirmation in Marcel 13, which consistently follows one tradition – that of Damascus – in respect to both variants and verse counts.<sup>73</sup> This raises the possibility of a production in greater Syria, an idea which also finds a resonance in the decoration.

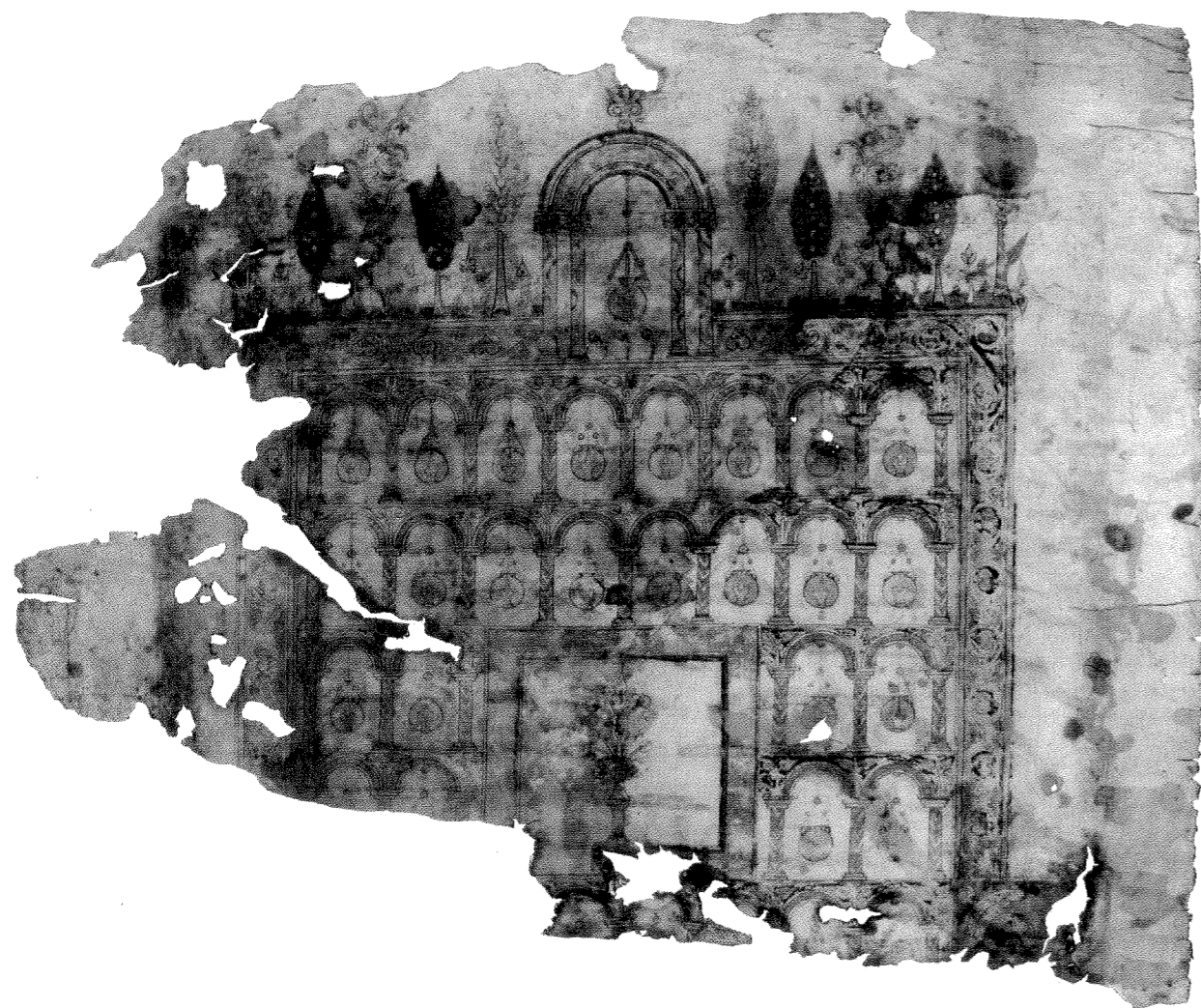
The three manuscripts are adorned, at the beginning of some suras, by horizontal ornamental bands which are almost literal citations of the mosaics at the Dome of the Rock. In Marcel 13, they are particularly refined: a close parallel with the monument can be noted in the cornucopiae with their scrolling vines, the multi-coloured polygonal designs with little spikes also framed in vines, the small protruding leaves and clusters of grapes, the rounded vases with two handles from which plants expand or the pointed semi-abstract vegetal motif topped by a smaller motif of the same shape (Figure 51).<sup>74</sup>

Similar observations can be extended to the illumination of Arabe 330c and the Damascus Qur'an.<sup>75</sup> The three manuscripts also share a distinctive final *lām*, *yā'*, *qāf* and *kāf* which find their closest parallel at the same monument and in the milestones of 'Abd al-Malik.<sup>76</sup> Taken as a whole, the underlying combination of script and decoration directly mirrors that at the Dome of the Rock. If the calligraphers involved at the monument also wrote Qur'anic manuscripts, they would have looked like these: Marcel 13 and its sister manuscripts are likely to be products of 'Abd al-Malik's scribal programmes.



This idea is reinforced by their stylistic anteriority to a second key witness of the underlying evolution: the famous Umayyad Qur'an from Sanaa. This manuscript has been scientifically dated to the turn of the eighth century: a radiocarbon analysis has pointed to a key period between AD 657 and 690,<sup>77</sup> and an unpublished chemical test has suggested a date between 700 and 730.<sup>78</sup> This broad time range, between the late seventh and early eighth century, is consistent with its script and decoration.

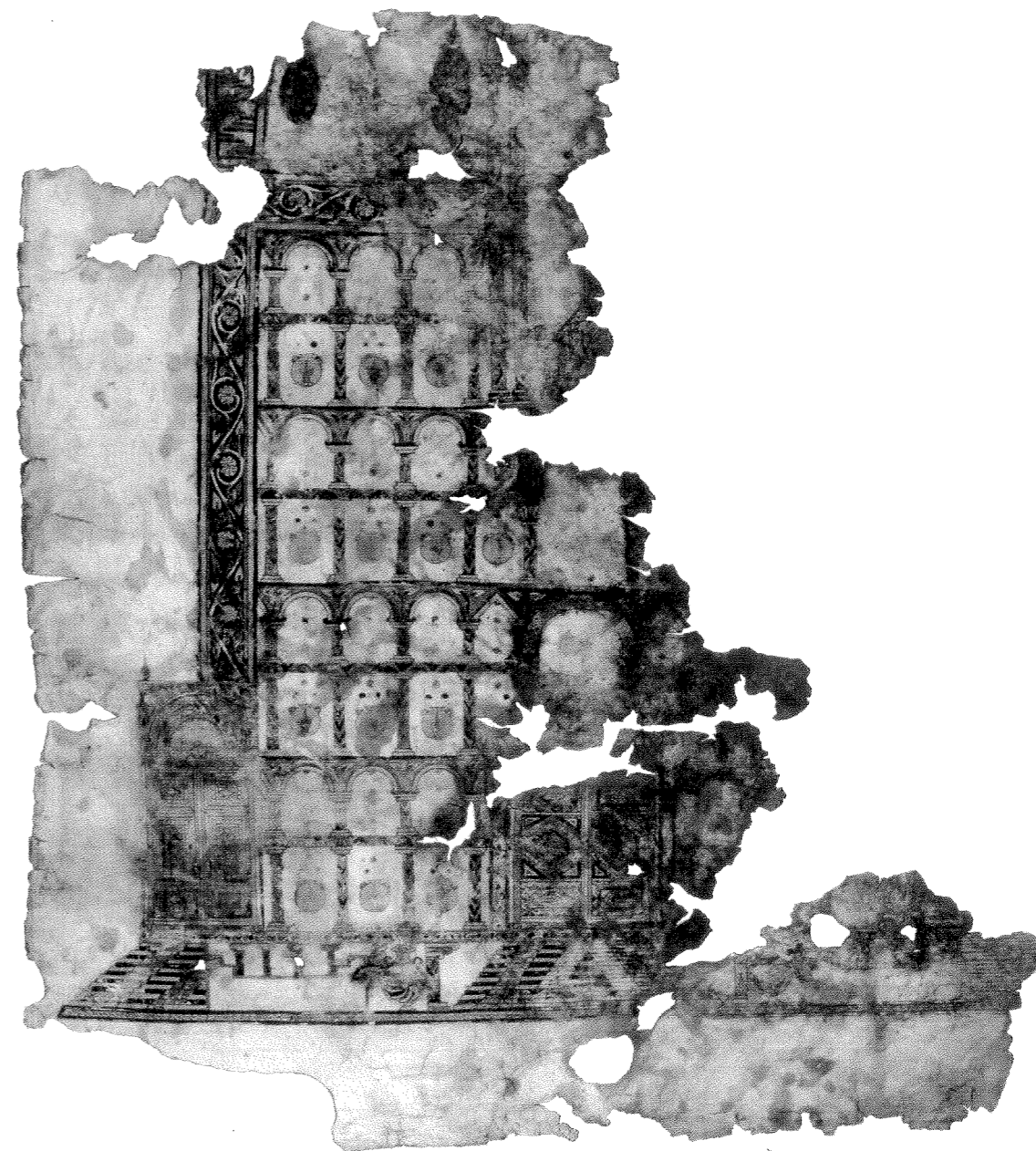
52. Sanaa Qur'an. Verso of the third illumination (beginning of the Qur'an, Sūrat al-fātiha).



53. *Sanaa Qur'an.*  
Third illumination.

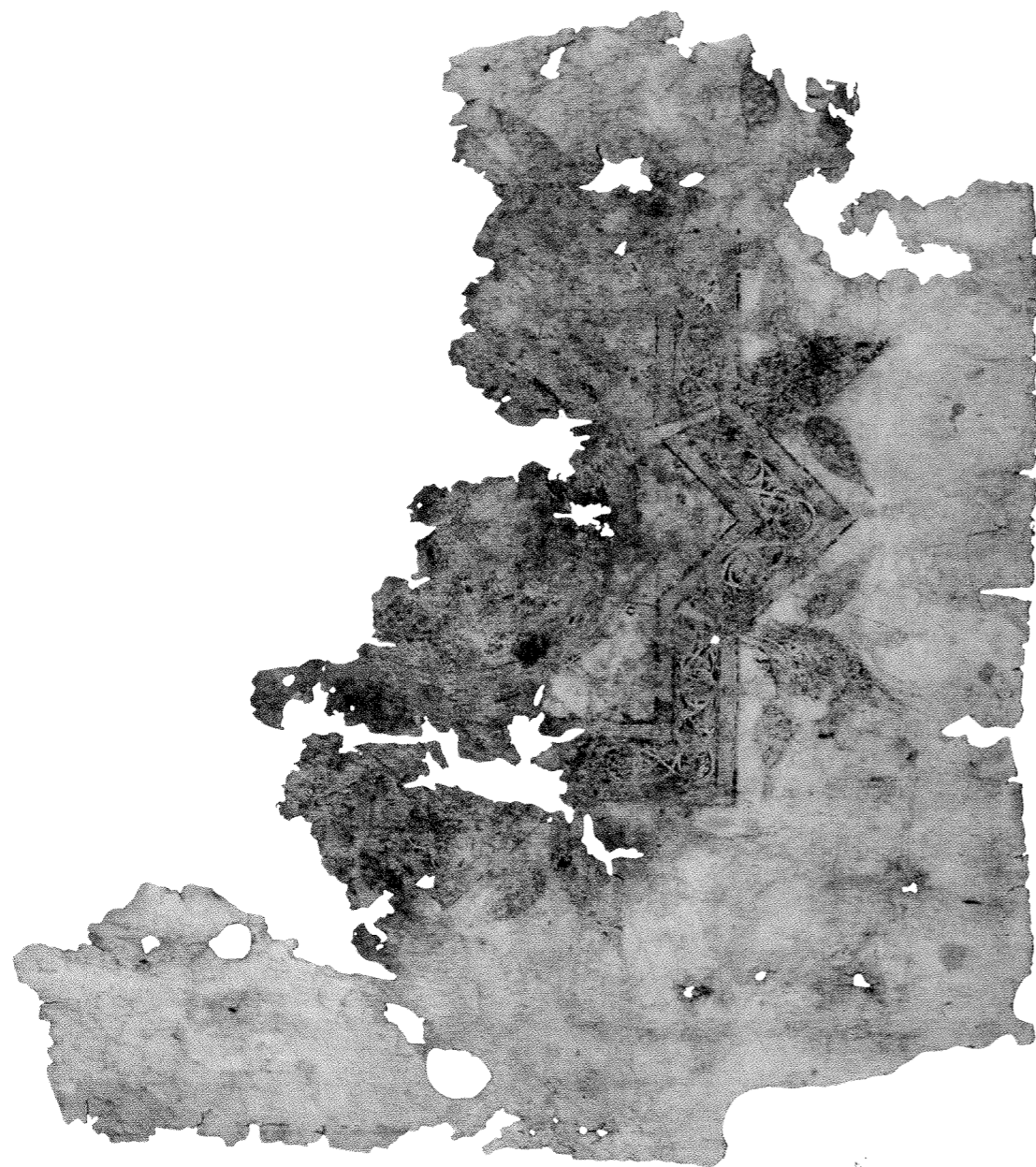
Whereas Marcel 13 still had transitory features inherited from Hijazi, the Sanaa Qur'an is fully anchored in the Kufic tradition. Its calligraphy is typical of style C.Ia, with a remarkably regular pattern of interline use.<sup>79</sup> The sharp, slightly forced angularity of the letters might reflect a recent codification. There are red vocalization dots, thin diacritical dashes and the text box is strictly built upon proportional principles.<sup>80</sup> The illumination is spectacular. It consists of three full pages which originally opened the book, immediately followed by the beginning of the Qur'anic text (they are shown backwards from page 82, in the order of the Arabic manuscript).

On the first page (Figure 55) is a circle framed by a double square, with trees. By flipping over this page, the reader discovers



54. *Sanaa Qur'an.*  
Second illumination  
(verso of opening page).

two extremely refined depictions of monuments, flattened at ground level into the form of a square (Figures 53, 54). These two images are explicitly architectural: the arches are round and, on the right-hand side, they stand on two levels, as at the Great Mosque of Damascus. Their texture, like that of the illumination in the text, consists of geometrically organized vegetal motifs reminiscent of Umayyad art, be it at Damascus, the Dome of the Rock, the Aqṣā or the desert



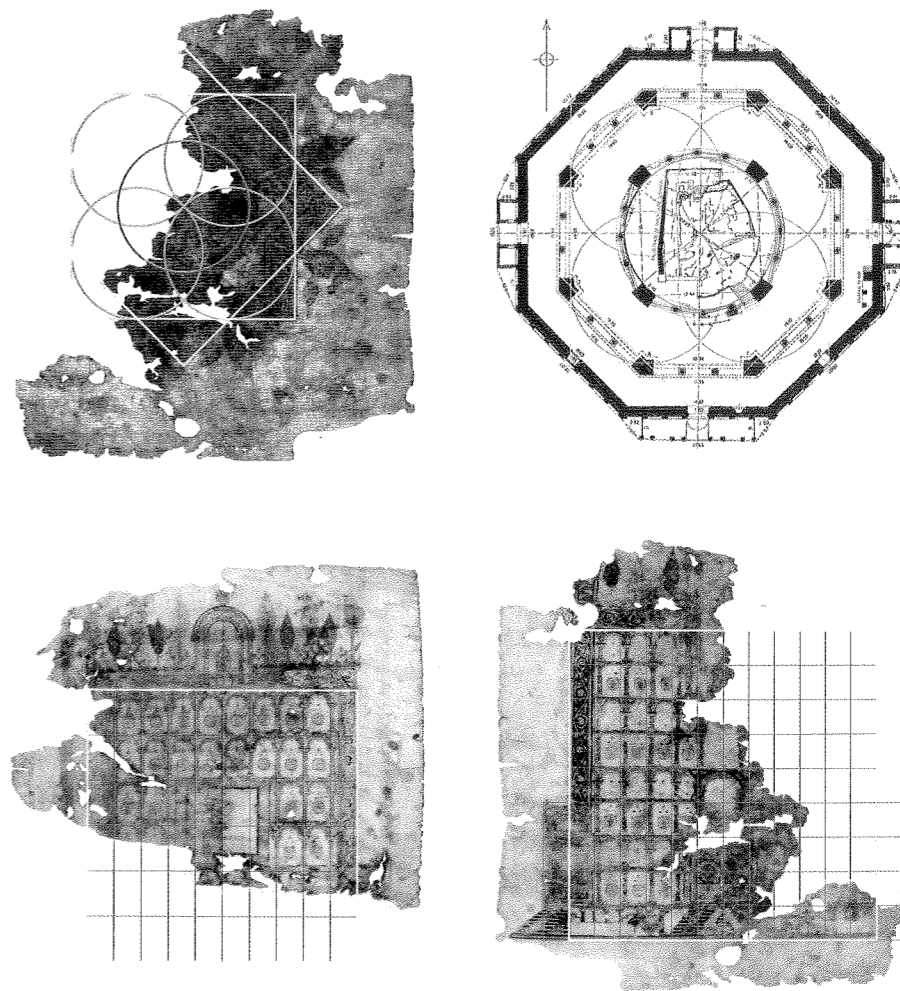
castles.<sup>81</sup> As in other Umayyad art, the semiotics of style have been transformed: whereas in Late Antique manuscripts, architecture formed a backdrop to the text or figural painting, here it has become the main decorative theme.<sup>82</sup> Grids of vertical rectangles define the practical articulation of the design (Figure 56).

The two square buildings face each other, conveying an implicit meaning. Several features reveal that they are mosques. On the right-hand side, we see a nave leading to a pulpit, the *minbar*, and ending in

55. *Sanaa Qur'an*.  
Opening page – first  
illumination.

a prayer niche, the *mihrāb*. The large vase by the central double gate could be linked to ritual ablutions. On the top right-hand corner is also a tower with a flight of steps, the minaret.<sup>83</sup>

The axial nave was probably introduced into mosque architecture under al-Walid: the manuscript is thus unlikely to be earlier than his reign. Al-Walid's mosques of Damascus and Medina also had four minarets, which were a distinguishing, if not unique, feature in this period. At Medina they were built with the mosque, whereas in Damascus they were inherited from the Roman *temenos*.<sup>84</sup> These towers were located, as in the illumination, at the corners of their respective buildings. Of these two monuments, only the mosque of Damascus had a wide axial nave, so our first image may contain a reference its prayer hall.<sup>85</sup>



56. *Sanaa Qur'an*.  
Geometrical structure  
of the illumination.

The building on the left side of the double-page spread (Figure 53) has an inner courtyard with a column or pedestal holding a flower vase, but no axial nave, minaret or pulpit. The niche at the top closely echoes that on the facing page, which implies that this is also a mosque (the hanging lamps, presumably mosque lamps, are also the same across both pages). The lack of more specific features makes it inherently difficult to relate to a known model.<sup>86</sup>

The opening page presents a more abstract type of decoration, but one which turns out to be based on the same figure as the ground plan of the Dome of the Rock (Figure 56). This figure, the double square with circle, was also common in Late Antique decoration, especially mosaic; and it occurs in some later, completely abstract, Kufic frontispieces.<sup>87</sup> Is it purely decorative in the Sanaa Qur'an, or does it contain a more concrete reference? Across all three illuminations are slender trees carrying fruit, as well as vine scrolls. Their style recalls the mosaics at the Great Mosque of Damascus,<sup>88</sup> which might again suggest an affinity with the reign of al-Walid. Ibn Jubayr, who visited the Mosque of Medina in 1184, also reports that its mosaics contained 'depictions of different types of trees, their branches loaded with fruit.'<sup>89</sup> In the Qur'an, paradise is repeatedly depicted as a garden abounding in fertile trees and gushing water. For instance:

Such as fears the Station of his Lord, for them shall be two gardens

O which of your Lord's bounties will you and you deny?

Abounding in branches

O which of your Lord's bounties will you and you deny?

Therein two fountains of running water

O which of your Lord's bounties will you and you deny?

Therein of every fruit two kinds

O which of your Lord's bounties will you and you deny? ...

And besides these shall be two gardens

O which of your Lord's bounties will you and you deny? ...

Therein fruits, and palm-trees and pomegranates

*Excerpts from Qur'an LV, 46-68 (trans. A.J. Arberry)*

In the two square buildings, the trees lie at the back of the *qibla* wall, towards which prayer was directed. In Antiquity, the dome was also a symbol of the heavens. Shortly before 536, Choricius could thus

write about the church of Saint Sergius at Gaza (like the Dome of the Rock, a domed octagonal building):

To gaze up at it, you will require a neck accustomed to stretching upward, so high is the roof above the ground, and with good reason, since it imitates the visible heaven.<sup>90</sup>

A Syriac hymn written in the sixth century for the cathedral of Edessa (another domed octagonal building) also proclaims:

It is an admirable thing that in its smallness  
it should resemble the great world  
Not in size but in type ...  
Its ceiling is stretched like the heavens ...  
And furthermore it is adorned with golden mosaic,  
as the firmament is with shining stars.  
Its high dome is comparable to the heaven of heavens ...  
Exalted are the mysteries of this Temple concerning the heavens  
and the earth: in it they are represented schematically.<sup>91</sup>

In the opening illumination, the trees stem from the central circle, whereas they would have shown more clearly if rooted in the double square. Their position appears to reflect the paradisaical symbolism of the trees and dome, echoed by that of the *qibla* in the other pages. The texture of the double square is the same as in the mosque walls overleaf so that it, too, probably represents a wall. Although it is less explicit than the others, this page may thus point to another actual building: the Dome of the Rock. As at the Dome of the Rock, each large fruit tree is surrounded by two smaller ones that stem from the same trunk.<sup>92</sup> Taken as a whole, the illuminations of the Sanaa Qur'an combine two layers of meaning with remarkable subtlety: the decorative themes, backed by concrete details, are a celebration of Umayyad religious architecture, while the latter's symbolism is also transposed to the page.

The wealth, refinement and massive format (originally at least 51 x 47 cm) of the Sanaa Qur'an suggest a patron of the highest rank.<sup>93</sup> In previous centuries, the canon tables that opened Greek and Syriac liturgical manuscripts had been framed in architectural motifs. These manuscripts were part of the ritual and iconography of their religious buildings which, in turn, they mirrored in their

pages. The Sanaa manuscript was, in all likelihood, illuminated by outstanding artisans trained in Byzantine (or Syriac) scriptoria, and it may likewise have been intended for use in a mosque. This is called to mind by its physical features, and also finds a resonance in texts. Al-Samhūdī (d. 1506) records this passage given by Ibn Zabāla (d. early ninth century) on the authority of his teacher, the famous jurist Mālik ibn Anas (d. 796):

Al-Ḥajjāj ibn Yūsuf sent *maṣāḥif* to the capital cities (*ummahāt al-qurā*). He sent a large one to Medina, and he was the first to send *maṣāḥif* to the cities. This *muṣḥaf* was in a box (*ṣandūq*) on the right-hand side of the column (*uṣṭuwāna*) that was made to indicate the tomb of the Prophet, peace be upon him. It would be opened on Friday and Thursday, and people would recite from it for the morning prayer.<sup>94</sup>

In a different *khbar*, Mālik asserts that the use of Qurʾans for recitation at the mosque was introduced by al-Ḥajjāj.<sup>95</sup> The numismatic evidence has already pointed to Wāsiṭ, rather than Damascus, as the key centre for the diffusion of the reformed script for coinage. It is conceivable that the governor of Iraq also played a significant role in the evolution of Qurʾanic manuscripts. A second early source, Ibn Shabbah (d. 878) thus states that al-Ḥajjāj ‘wrote *maṣāḥif* and sent one to Medina.’<sup>96</sup> A fourteenth-century historian, Ibn Duqmāq, also writes about a famous Cairene manuscript known in his day as the ‘Qurʾan of Asmā’:

The reason why this *muṣḥaf* was written is that al-Ḥajjāj ibn Yūsuf al-Thaqafī wrote *maṣāḥif* and sent them to the *amṣār* [military capitals], and one of them was sent to Egypt. This caused the anger of ‘Abd al-‘Azīz ibn Marwān, who was then governor of Egypt for his brother ‘Abd al-Malik. He said: ‘He sends a *muṣḥaf* to a *jund* [military district] where I reside!’ So he commissioned the *muṣḥaf* which is still in the mosque today.<sup>97</sup>

Ibn Duqmāq does not give the source for this account, though he has generally been noted for the seriousness of his documentation.<sup>98</sup> Like Mālik before him, he refers to the ritual function of the manuscript: ‘It used to be carried from the palace of ‘Abd al-‘Azīz to the mosque every Friday morning and read, then returned to its place.’<sup>99</sup>

The exceptional character of the Sanaa Qurʾan should not conceal the fact that it belongs to a larger scriptural group. At least four comparable manuscripts in style C.Ia have been published.<sup>100</sup> Like it, they are vertical, of very large size (about 40 x 30 to 50 x 40 cm), with the same number of lines (twenty in all five cases) and frequent rectangular text frames (a feature which is otherwise rare, especially in early Kufic). A giant codex in the same style, which may be slightly later, also contains rows of arches in its decoration bands (Figure 57).<sup>101</sup> Even more remarkable is a Qurʾan in style C.II where the full-page illumination is framed by four rows of horseshoe arches (Figure

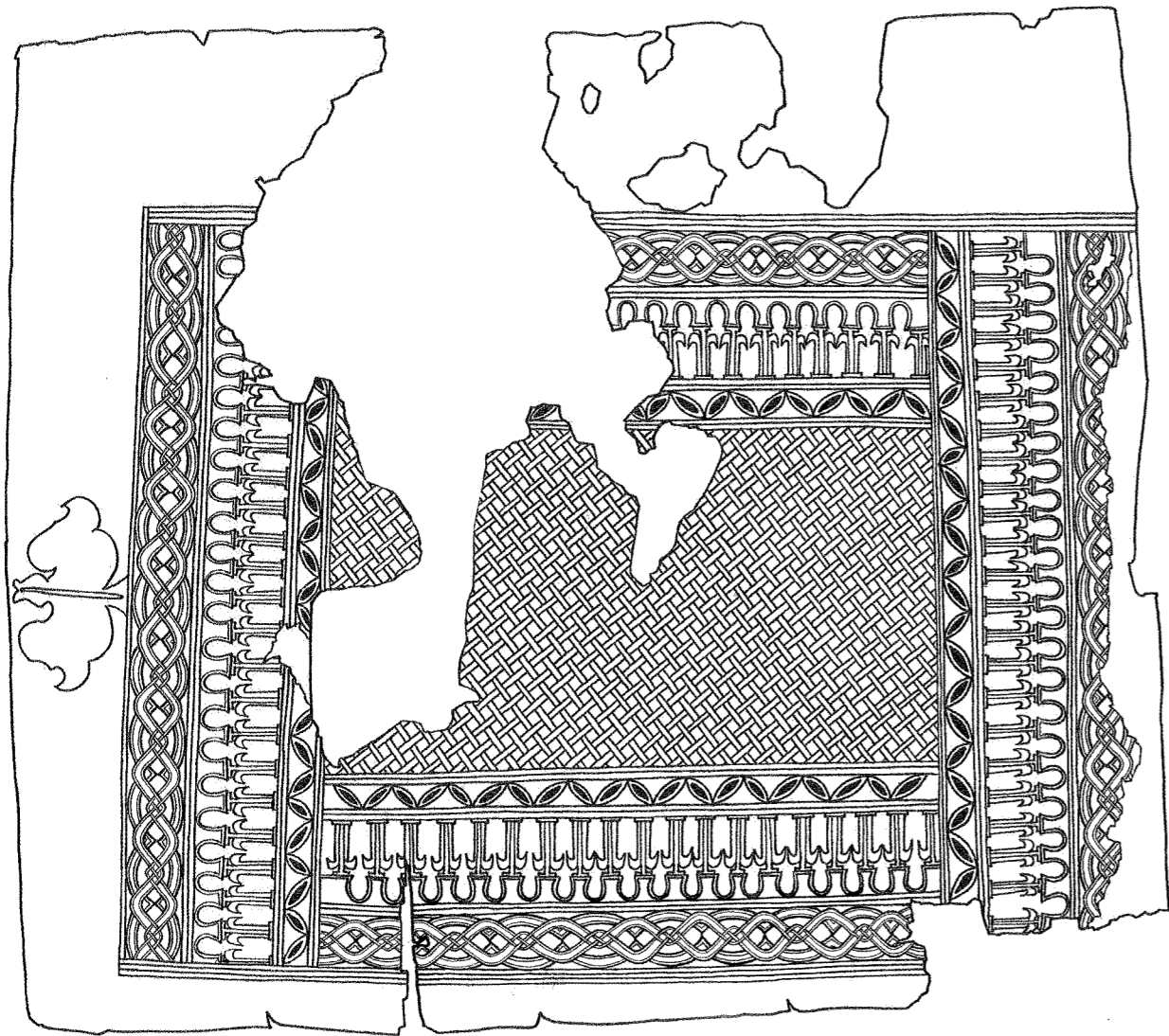
57. Giant Qurʾan in style C.Ia (BNF Arabe 324c, 53.7 x 62 cm).



58).<sup>102</sup> As in the Sanaa manuscript, this architectural decoration has been flattened into the form of a square, but here the ground and border are ornamented with geometrical patterns: at this stage of evolution, the limit between the concrete and the abstract had become blurred, before the latter completely prevailed in C.III and D. Since this type of illumination is not unique to the Sanaa Qur'an, it is probable that others from the same group initially carried full-page architectural illuminations.

Despite an unrivalled wealth of execution, this manuscript thus remains consistent with a family of large manuscripts reflecting a

58. Illumination of a Qur'an in style C.II with architectural and abstract motifs (21 x 29.2 cm).



high level of patronage.<sup>103</sup> Their production may have begun with 'Abd al-Malik, al-Ḥajjāj and al-Walid, but it was probably taken over by other members of the Umayyad ruling elite. A variety of patrons is suggested by the number of these manuscripts that survive, and also by the aforementioned accounts of Ibn Duqmāq and al-Nadīm involving 'Abd al-'Azīz ibn Marwān and his son 'Umar. One can also note this testimony from al-Dānī (982-1053):

I have seen (*waṣala ilayya*) an old mosque Qur'an (*mushaf jāmi' 'atīq*) written at the beginning of the caliphate of Hishām ibn 'Abd al-Malik in the year 110 – the date was written at the end where it said 'This was written by Mughīra ibn Mīnā in *rajab* of the year 110 [October–November, AD 728].' The vowels, *hamzas*, *tanwīn* and *tashdīd* were all marked by red dots, as we have related was the practice of early vocalizers in the East.<sup>104</sup>

This 'mosque Qur'an' from the reign of Hishām may well have been of the kind evoked above.

#### *Economy and ideology in early Kufic*

Spectacular as they were, the experiments of the Umayyads with script and scripture were almost bound to elicit a conservative reaction. Shortly before the introduction of the epigraphic *dīnār*, in 76/696 and 77/697, al-Ḥajjāj had minted an issue of silver Arab-Sasanian coins to which he added the words 'In the name of God – There is no God but God – Muḥammad is the messenger of God' around the obverse and his name in the central field (Figure 59).<sup>105</sup>

According to al-Balādhurī (d. 892), these coins became known as *makrūha* ('reproved', 'detested') either because they provoked the condemnation of religious scholars (the *fuqahā'*, also referred to as



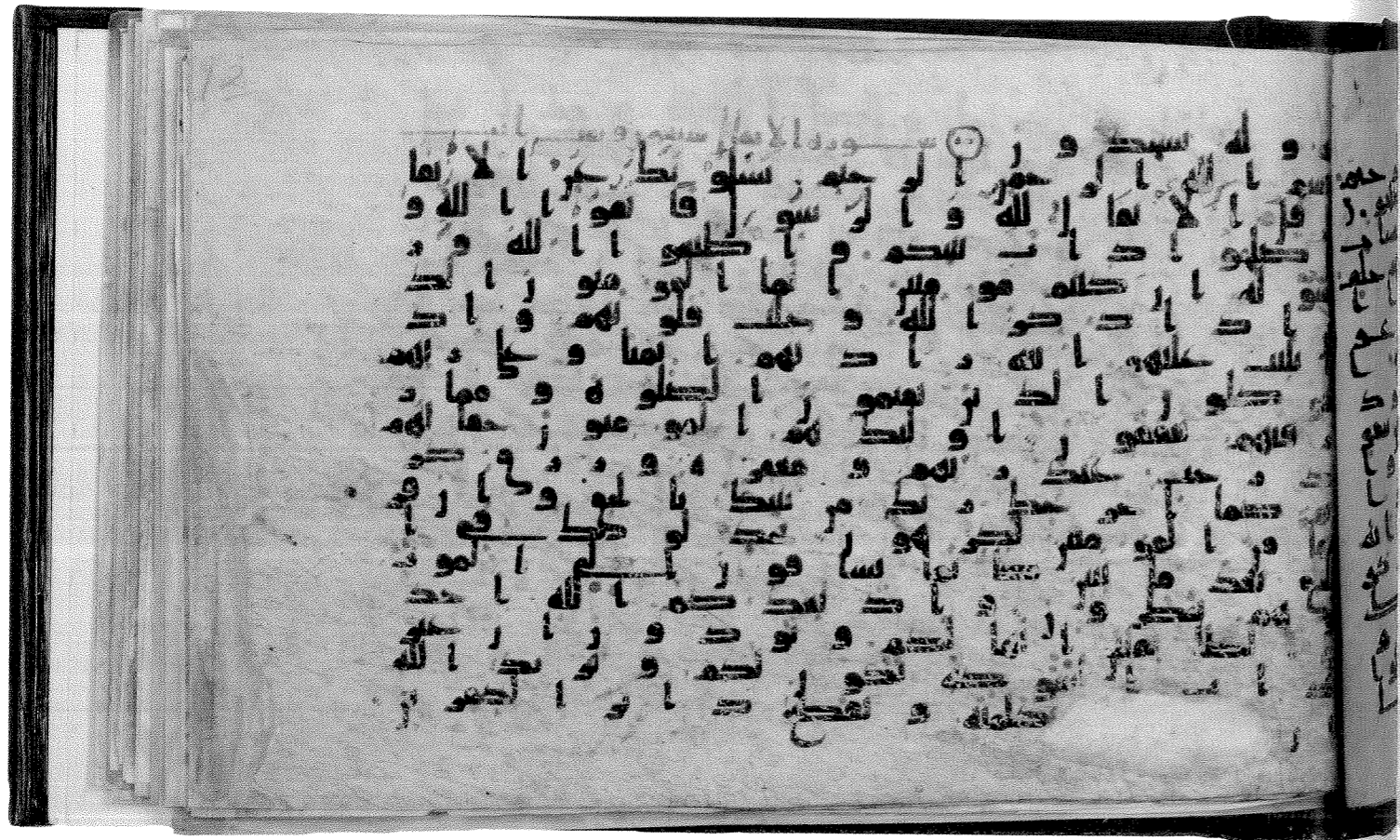
59. Silver coin from Bishāpūr (Iran, 77/697).



'ulamā'); or because their lighter weight standard was resented by non-Arabs.<sup>106</sup> Similar reports are given by two later historians, al-Māwardī (d. 1058) and Ibn al-Athīr (d. 1233), who explain that the 'ulamā' rejected the new coins because Qur'anic verses were inscribed on them while they might be handled by the ritually impure.<sup>107</sup> For the same reason, the earliest epigraphic *dīnārs* may also have been called 'makrūha', though the formulation used by Balādhurī is ambiguous in this respect.<sup>108</sup>

In a letter attributed to al-Ḥasan al-Baṣrī (c. 642-728), a famous preacher, 'Abd al-Malik is also criticized in these terms for his attitude towards the Qur'anic text: 'The book of God, O Commander of the faithful, has been revealed in its proper places; do not alter it or interpret it falsely.'<sup>109</sup> Several oral traditions recorded by Ibn Abī Dāwūd (844-929) suggest that religious scholars of the early period rejected the adornment of the Qur'an with gold and silver, the habit

60. Qur'an in style B.II, with sura title in red ink (Khalilī QUR48, 11 x 17.8 cm).



of placing the manuscripts in the *qibla* of mosques, and possibly the notation of short vowels.<sup>110</sup> But given their mode of transmission and their contradictions, these accounts require to be handled with caution.<sup>111</sup> At any rate, the underlying orientation is confirmed by Mālik ibn Anas, who forbade the use of gold, the embellishment of the Qur'anic text and the use of Qur'anic manuscripts for recitation at the mosque, attributing the latter innovation to al-Ḥajjāj.<sup>112</sup> These proscriptions seem directly contradicted by Qur'ans in style C, their rich illumination and their ties with architecture.

As we have seen earlier, two other early Kufic styles – B.I and B.II – had also begun to develop by the early eighth century. Their lifespan was relatively long. One massive manuscript in B.II has been carbon-dated to around the eighth century.<sup>113</sup> Two others carry, in their margins, the record of births that happened between 843 and 863, which shows that they were already in existence by those dates. A third Qur'an in the same style is also preserved with a *waqfiyya* of 884, but this document, again, only indicates the latest date at which it may have been written, its *terminus ante quem*.<sup>114</sup> One other aspect of B.II seems to confirm that it was still written in the ninth century: the frequent occurrence of sura titles in golden D.I (the typical script of that period). In manuscripts that exhibit this feature, the verse markers and decorative roundels are also reminiscent of D.I.<sup>115</sup>

Let us, for the time being, concentrate on those items which, being devoid of either type of decoration, are most likely to represent the earlier phase of this development. Their verse markers are either nonexistent or very modest: typically, a hand-drawn circle containing a simple motif.<sup>116</sup> The beginning of a new sura is normally marked just by a title in red ink (Figure 60) though simple decorative motifs sometimes occur (Figure 61). The use of gold is extremely rare.<sup>117</sup> Whereas manuscripts in C.I were vertical, those in B.Ib are more frequently square or oblong, before the latter format completely prevailed in B.II. Page size was small in B.II (generally between 15 x 20 and 20 x 25 cm) and larger in B.Ib (about 25 x 30 cm), but still less so than in C.

The relative simplicity of this stylistic group contrasts with the wealth observed in C. This difference could be related to patronage: official manuscripts on the one hand, copies produced for private use or small religious institutions on the other. The few preserved Hijazi

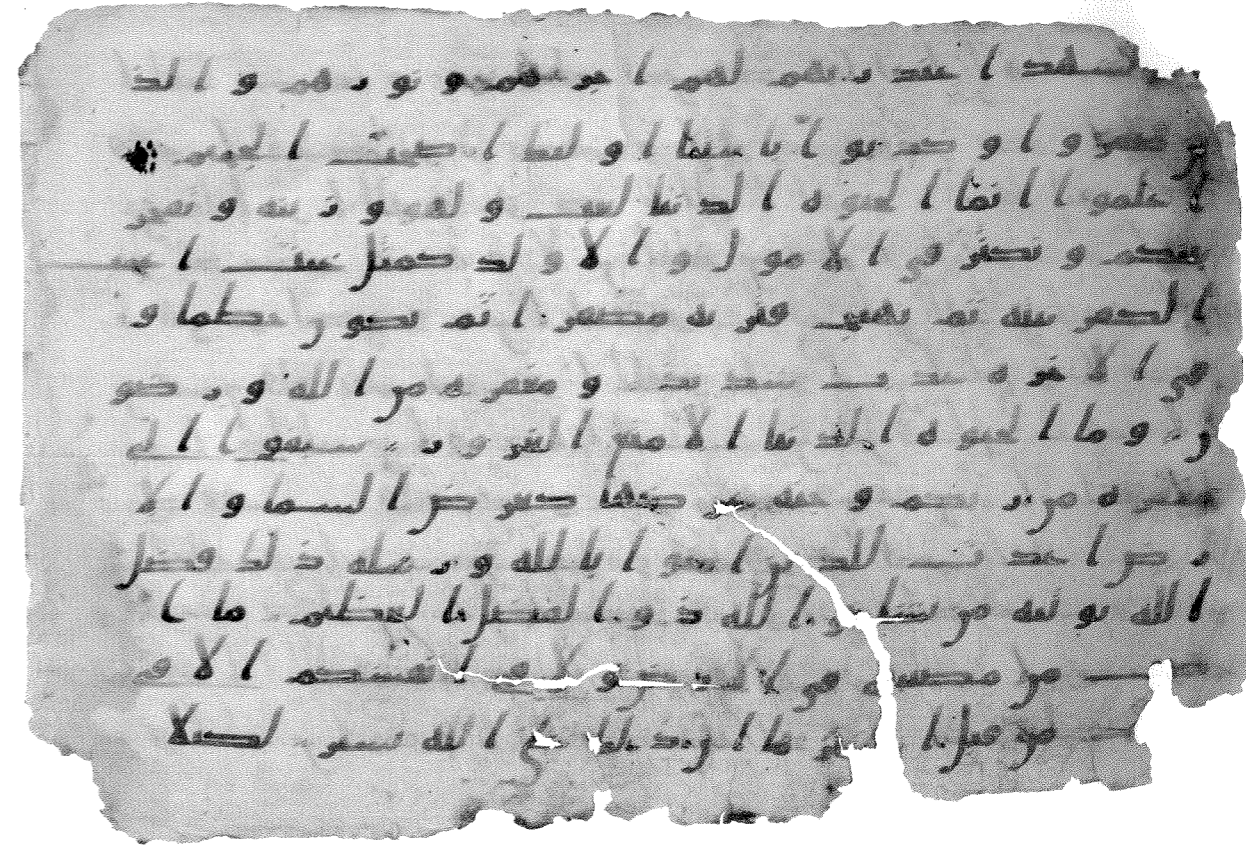


61. Decoration from two Kufic Qur'ans in style B.I. (top) Khalili KFQ50, total page size 14.2 x 16.5 cm. (bottom) KFQ27, total page size 47 x 33 cm.

fragments in horizontal format support this idea, as they tend to be of relatively small size (around 10 x 20 cm). But economic constraints do not suffice to explain the sobriety that is often observed in practice, since more elaborate decoration could still have been attempted, even with lesser means. Some of these small, austere Qur'ans probably reflect the ethos of religiously conservative circles.

Another expression of this trend may be observed in two fragments, BNF Arabe 326a and Khalili KFQ34, which may originally have belonged to the same manuscript.<sup>118</sup> Both of them are written in an antiquated Hijazi style resembling that of Arabe 328a, whilst their geometrical layout, oblong format and horizontal levelling of the script are typical of Kufic (compare Figure 20 and Figure 62).<sup>119</sup> Together with the complete absence of vocalization and colour, this suggests a conscious reference to the Hijazi past and the oldest written form of the Qur'an.<sup>120</sup>

Kufic was developed at the turn of the eighth century, in the context of the state-building programmes of the caliphs 'Abd al-Malik and al-Walīd and their governor al-Ḥajjāj. The geometrical codification of the *script* happened in or shortly after 692, probably beginning in the realm of monumental mosaic inscriptions, with a special role



62. Horizontal Qur'an in Hijazi script (Khalili KFQ34, 17.5 x 25.5 cm).

being credited to the Dome of the Rock. Between that date and the beginning of al-Walīd's reign, in 705, it spread to different media and was consistently displayed as a vehicle of the public image of the new religion and state. In *manuscript*, the foundations of the Kufic tradition were also laid between these two dates. An initial phase of official commissions linked to architectural programmes was shortly followed by the spectacular development of a fully fledged Kufic calligraphy which adorned the pages of sumptuous Qur'ans that were sent to major mosques of the empire by the authorities. Such lavish codices may have continued to be produced for later members of the Umayyad ruling elite. They, in turn, appear to have triggered a conservative reaction in some religious circles, which was partly reflected in the use of different calligraphic styles and formats.

## On Calligraphy and Proportion

Beneath the historical growth of calligraphy lies the question of its meaning. By contrast with the tangible evidence of manuscripts, we are here dealing with something of a more elusive nature. A fundamental difficulty arises from the lack of Arabic sources that address this subject in any direct manner until the tenth century. Yet it is possible, by considering both content and context, to shed some light on the rationale behind the geometrical codification of the Qur'anic page and its implications.

### *The architecture of the page*

The rise of Kufic was, as we have seen, intimately related to Umayyad architectural programmes, notably at the Dome of the Rock. This building's architects belonged to a Late Antique building tradition that finds its roots in the Classical period. In the *Ten Books on Architecture*, the only Classical treatise to survive on this subject, Marcus Vitruvius Pollio (c. 75-25 BC) writes:

Eurythmy is beauty and fitness in the adjustments of the members. This is found when the members of a work are of a height suited to their breadth, of a breadth suited to their length and, in a word, when they all correspond symmetrically. Symmetry is the proper agreement between the members of the work itself, and relation between the different parts and the whole general scheme, in accordance with a certain part selected as standard.<sup>1</sup>

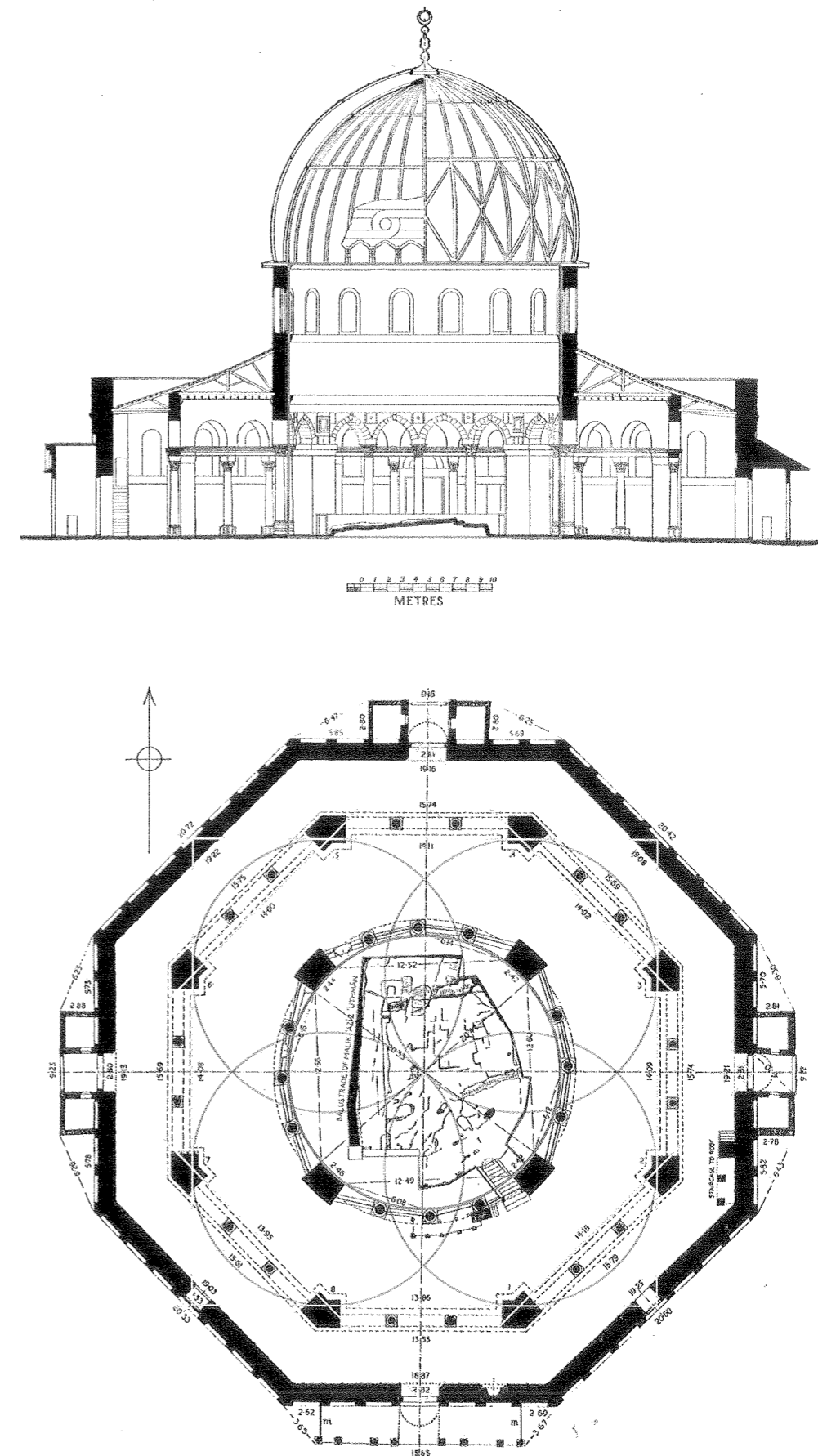
This standard part, Vitruvius adds, can be selected from 'the thickness of a column, from a triglyph, or even from a module.' The principle of 'order' thus stems from 'the selection of modules from the members of the work itself and, starting from these individual

parts of members, constructing the whole work to correspond.’ The analogy with the Qur’anic page, where the thickness of the pen simply replaces that of the triglyph or column, is striking in its exactitude. This correspondence may be less fortuitous than it at first appears.

The sense of harmony that one feels upon entering the Dome of the Rock has been expressed by many visitors, medieval and modern.<sup>2</sup> The reconstruction of its original design is an arduous task because here, as in almost any building, several apparently viable schemes can ‘fit.’ The Parthenon in Athens and the Pyramid of Giza have thus been the subject of conflicting interpretations for well over a century.<sup>3</sup> Likewise, different schemes have been put forward for the Dome of the Rock.<sup>4</sup> Rather than enter into detail, it will be sufficient, for our present purposes, to outline some of the design’s most basic elements.

At the heart of both the ground plan and elevation lies the same cubical cylinder (drawn in red on Figure 63). In the elevation, it defines the width and height of the drum before giving rise to the dome, whereas the ground plan is based on a double octagon centred on the cylinder’s circular base. The underlying figure, the double square with circle, can be obtained through several different, but geometrically equivalent, methods (I have drawn it, here, with circles, but straight lines could equally have been used).<sup>5</sup> It is conducive to a potentially infinite outward growth from the central circle and square into a succession of larger circles and squares. The ground plan and elevation are thus based on a proportional expansion from the core area around the sacred rock.

In Ancient terms, the monument could be said to have ‘order’, ‘eurythmy’ and ‘symmetry.’ Judging from the published material, the idea of a module seems applicable: for example, the lintel height is approximately equal to the column width at the base.<sup>6</sup> Architecturally, the Dome of the Rock was heir to an early Christian building type with a centralized design: the martyrium. Like the basilica, the martyrium finds its roots in the late Roman period, and several modern studies of surviving buildings have suggested that they were based on proportional principles.<sup>7</sup> However, these attempts are hindered by the methodological difficulty evoked above. We are lucky to possess, in these circumstances, descriptions which can inform us about contemporary perceptions of architectural design. Choricus,



63. The Dome of the Rock. Ground plan and elevation.

the rhetorician we have cited earlier, writes about the church of Saint Sergius at Gaza, a domed octagonal building:

[The columns] display a uniform harmony both in themselves and in their relation to each other ... Nothing here outdoes its opposite, all the elements face each other in equal and symmetrical form.<sup>8</sup>

Around 536-48, he observed about the recently dedicated basilica of Saint Stephen, also at Gaza:

Its width is such as the length requires, its length is dictated by the width, and the height of the roof proportionate to both. This, namely the proportion of the fabric, is its first and greatest glory.<sup>9</sup>

In *De aedificiis* (c. 554), Procopius of Caesarea (a historian) thus evokes the church of Hagia Sophia, in Constantinople:

Its breadth and length have been so fittingly proportioned that it may without impropriety be described as being both very long and extremely broad.<sup>10</sup>

Evagrius (a lawyer) wrote another account of Hagia Sophia after its dome had collapsed in 558 and been rebuilt in 563. Having praised its 'wonderfully great proportions', he sets out to give several of its dimensions 'in order to make clearer the wonderful qualities of this building.' Despite some difficulties of interpretation, his measurements appear to be genuine;<sup>11</sup> but they provide an idea of scale rather than an understanding of the design. Evagrius notably omits the building's most essential element: the central circle, with its 100-foot diameter, which lies at the heart of the ground plan and is used again in the elevation. This raises the question of our texts' relation to architectural practice.<sup>12</sup>

In these and contemporary descriptions, the geometrical jargon of the architects is frequently cited in relation to structure, but it appears as relatively alien to the writers themselves. Thus Choricus writes about the dome of Saint Sergius at Gaza:

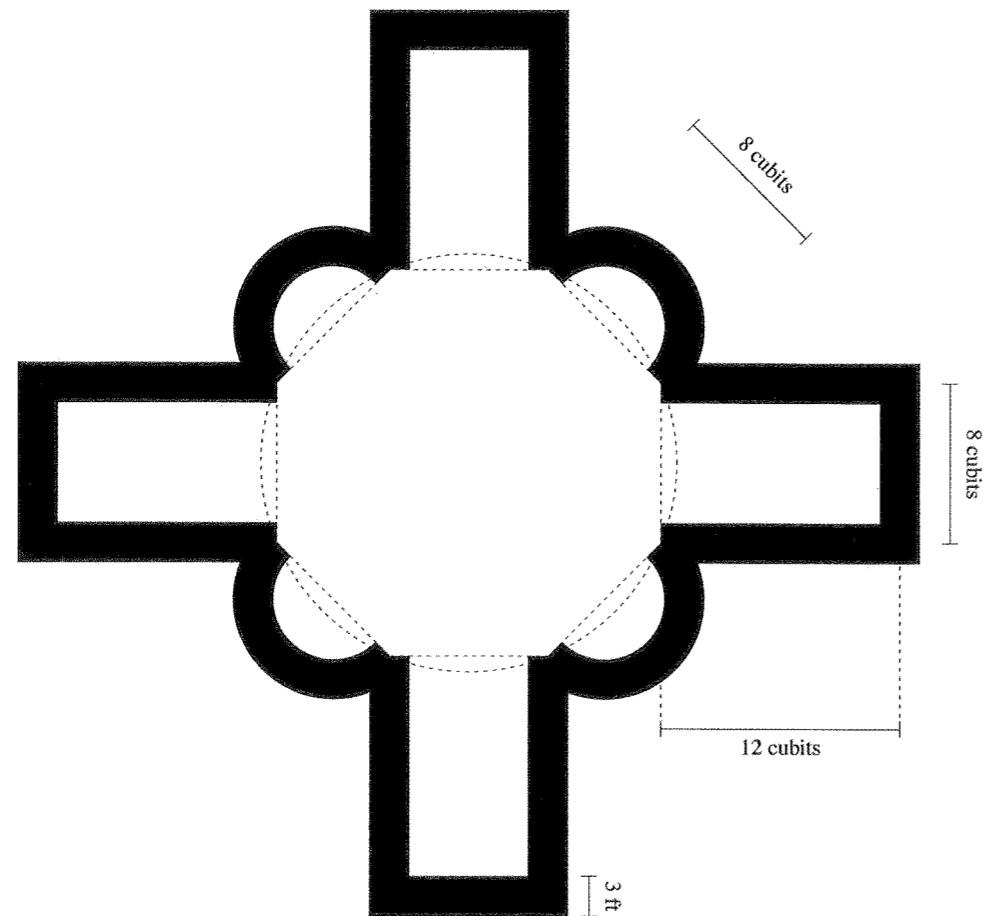
So as not to disdain the art of the architects, we may say, as they would, that a segment of a cylinder has been set up vertically

on the ground and that it is surmounted by the quarter of a hollow sphere.<sup>13</sup>

At Hagia Sophia, Procopius twice recalls the jargon of these 'specialists',<sup>14</sup> as does Agathias (c. 531-80) in his discussion of the rebuilt dome.<sup>15</sup> Paulus Silentarius, in a poem for the same church's rededication (c. 563), also says about 'triple spaces of circles cut in half': 'Men of the craft, in their technical language, call these crowning parts conches.'<sup>16</sup> These authors seem to have had more or less direct points of contact with the architects, and were thus able to learn some of their vocabulary. One can detect a gradation of architectural knowledge from writer to writer, which tends towards the terminology of the craft itself. And so it is with proportion: Choricus, again, reveals a relative mastery of the underlying concepts by referring not only to 'symmetry', but also to the proper arrangement of the columns and their relation to each other (in Classical architecture, the columns and intercolumnation were based on proportional principles).<sup>17</sup> Evagrius, by contrast, only uses 'proportion' as a general term for 'harmony.' Procopius, with his awareness of the proportioning of width and breadth, lies between these two extremes. The sources, again, seem to reflect the practice of the craft, which was more or less clearly understood by each individual author.

One further testimony can bring us somewhat closer to the actual design process. In a letter to the bishop of Iconium (modern Konya), Saint Gregory of Nyssa (c. 335-94) presents his plan to build a cruciform martyrion in his city, offering his correspondent a detailed outline of its structure.<sup>18</sup> At the core of the building, he says, lies a regular octagon with sides 8 cubits long inscribed in a circle. Four of these sides extend into rectangular bays in a proportion of 3:2 (their length is therefore equal to 12 cubits). The quarter-circles that also stem from the inner octagon are 8 cubits in diameter. The thickness of the external walls is 3 feet.<sup>19</sup> The elevation starts, above the arches, with an octagonal wall 4 cubits high 'for the due proportion of the superimposed windows.'<sup>20</sup> The height of the whole building is proportioned to its width in an unspecified manner, and topped with a conical roof, the size of which is not given. This description is accurate enough to attempt a sketch of the ground plan (Figure 64).<sup>21</sup>

The formal features of the building closely echo those of surviving monuments, like the martyrion of Qal'at Sem'an in Syria (c. 480-90).<sup>22</sup>



64. Sketch of a martyrium, as described by Saint Gregory of Nyssa.

Rather than being an observer's account, this text appears to reflect the collaboration between Gregory and the architects, which relates it to the very fabric of the building. It shows that simple ratios were indeed used in architectural design; that proportional principles inherited from the Classical period were perpetuated; and that, if the need arose, a non-specialist could become acquainted with them. A comparable dynamic may have been at play among craftsmen at the Dome of the Rock. The layout of its mosaic inscription resulted, as we have seen, from a close collaboration between calligraphers and mosaicists, which probably lies at the root of the script's interline codification. Likewise, when it came to manuscripts, an architectural rationale seems to have been applied to the layout. This is primarily reflected in the formal construction of the page, to which we have

already alluded; the rectangular grids that were placed at the basis of Qur'anic illumination also resonate with the preparatory work of geometrical mosaic and architectural design (Figure 65).<sup>23</sup>

Moreover, the Kufic tradition was pervaded by a remarkable awareness of vision. Scribes used a technique that allowed them to write highly accurate pages without leaving any ruling traces that would disturb their visual order. In some of the Hijazi and early Kufic manuscripts that were ruled, we also see that the grid extends to the height of one line above the first line of text.<sup>24</sup> This additional ruling is, technically speaking, unnecessary: the top baseline would in itself be sufficient to obtain a regular rectangular layout, as in Greek, Syriac or Coptic manuscripts. It seems to reflect a concern for the adherence of the calligraphy to the text box rectangle, as confirmed by other aspects of Kufic layout. The lines begin in a

65. Mosaic decoration from the Dome of the Rock (repaired).



rigorous vertical alignment; in order to equal them out at the end, two special techniques were introduced: the line-end fillers and horizontal elongation of the letters (*mashq*).<sup>25</sup>

Kufic was thus underpinned, from its very origins, by close attention to the visual impact of calligraphy, its geometrical consistency and regular adherence to the proportioned text box.<sup>26</sup> Such concerns were not only absent from Hijazi, but also from earlier scribal traditions. They were, on the other hand, part and parcel of Classical architecture. Vitruvius, for example, writes that at its top, a column should normally have a thickness equal to five-sixths of its value at the base.<sup>27</sup> Diminution, he explains, was meant as an aesthetic adjustment to natural ocular distortion:

For the eye is always in search for beauty, and if we do not gratify its desire for pleasure by a proportionate enlargement in these measures, and thus make compensation for ocular deception, a clumsy and awkward appearance will be presented to the beholder.<sup>28</sup>

Underlying this passage is an awareness of the impact of the well-proportioned object on the viewer's soul; elsewhere, Vitruvius also says that beauty is reached 'when the appearance of the work is pleasing and in good taste, and when its members are in due proportion according to correct principles of symmetry.'<sup>29</sup> A similar perception of architecture was still commonly held in Late Antiquity: it underlies the early Christian descriptions cited above without the need to be explicitly stated – except, for example, when Procopius writes that Hagia Sophia 'boasts ineffable beauty, for it subtly combines its mass with the harmony of its proportions.'<sup>30</sup> The same basic ideas probably continued to exist among architects of the early Umayyad period.<sup>31</sup> Kufic thus appears to have been based, in its founding principles, on a literal 'architecture of the page': the transposition of architectural principles to the small and flat surface of parchment leaves. These principles may have been spelled out, in the early stages, as a few simple sentences shared by craftsmen, without philosophical elaboration. But they were also backed up by a surviving trickle of intellectual substance.

### *Proportion in Plato's Timaeus*

Geometry and proportion were perceived, at least since the days of Plato, as eminent sources of beauty. This worldview was upheld in the Christianized world of Late Antiquity and reappeared in some of the earliest Arabic scientific writings. The codification of Kufic emerged in the intervening period, in a context where some of the underlying ideas were still being transmitted in texts. Let us, first of all, try to understand the significance of these notions in an Ancient perspective.

Before the days of Plato, the Greeks made an extraordinary discovery: musical consonance was based on simple numerical ratios, the most fundamental of which were 1:1 (the unison), 9:8 (the tone), 4:3 (the fourth), 3:2 (the fifth) and 2:1 (the octave). These observations have traditionally been attributed to Pythagoras; they certainly left a deep imprint on the Pythagorean school.<sup>32</sup> Thus there emerged the idea that, beyond their quantitative value, number and proportion represented an absolute reality, related to higher spheres of being. Beyond musicology, proportion and numerical ratios entered such diverse fields of science as astronomy (in the relation between the heavenly spheres), anatomy (the proportions of the human body) and medicine (the balance between the four qualities and humours).

The earliest detailed discussion of these notions and their wider implications was offered by Plato in *Timaeus*, his cosmological dialogue, which would also become one of his best known works in early Islam.<sup>33</sup> Its stated purpose is to provide a 'likely account' of how the divine craftsman (the Demiurge) came to shape what had no order – the initial chaos of creation – into harmonious order. This, Plato writes, He began to do by relating each small part to the whole through the 'best bond', which 'really and truly makes a unity of itself together with the things bonded by it': proportion (§31c).<sup>34</sup> In the microcosm, it was notably used to link the four elements (fire, earth, air and water), making the universe a 'symphony of proportion' (§32c). In turn, the macrocosm was given the geometrical shape that is 'most complete and most like itself': the sphere (§33b). The God placed the world's soul at the centre of this sphere and covered the whole body outside with it.

Of what substance was the world's soul made? Initially, there were three mixtures of divisible and indivisible essences: Being, Sameness, and Difference – a distinction which echoes the Ancient cognitive principle, 'like knows like.'<sup>35</sup> The Creator made them into a single mixture, which He redivided 'into as many parts as His task required, each part remaining a mixture of the Same, the Different, and of Being' (§35b). The relationships between these parts were ruled by a series of numerical ratios inspired by the musical scale, which Plato explains in great detail (§§35b-36b).<sup>36</sup> The underlying conception of proportion was thus ultimately derived from music.<sup>37</sup> The Demiurge then created the lesser gods and prepared the substance with which they were to beget living things. Although He used the same ingredients as previously, 'these were no longer invariably and constantly pure, but of a second and third grade of purity.'

When He had compounded it all, He divided the mixture into a number of souls equal to the number of the stars and assigned each soul to a star. He mounted each soul in a carriage, as it were, and showed it the nature of the universe (§§41d-e).<sup>38</sup>

Man, having been made from a substance of lesser purity than the cosmos, was imperfect, but at the same time carried within him the distant imprint of divine perfection. At birth, the descent of the soul into the body disrupted its inner revolutions: '[the souls] twisted every which way the three intervals of the double and the three of the triple, as well as the middle terms of the ratios of 3:2, 4:3 and 9:8 that connect them' (§43d). Hence the affinity between our perception of the universe and the deeper layers of our being:

For there is a kinship between them, even though our revolutions are disturbed, whereas the universal orbits are undisturbed. So once we have come to know them and to share in the ability to make correct calculations according to nature, we should stabilize the straying revolutions within ourselves by imitating the completely unstraying revolutions of the God (§47c).

Sound and hearing are, in this perspective, channels through which the soul can be attuned to its original state by the effect of harmony:

Harmony, whose movements are akin to the orbits within our souls, is a gift of the Muses ... to bring order to any orbit in our souls that has become unharmonized (§47d).

Beside hearing, Plato underlines the importance of sight, which he says has 'proved to be a source of supreme benefit to us' (§47a). Elsewhere, he explains that the head was modelled upon the universe and that the eyes, linking the fire of the soul to that of the cosmos, were the first organs to be fashioned by the gods (§45b). If the body, as he later explains, can be cured through a correct balance of foodstuffs, so the soul will benefit from the perception of proportioned objects. Geometry and proportion, in this perspective, will have a profound impact on the beholder.

#### *Artisans and intellectual circles in early Islamic times*

In the first centuries of the Christian era, *Timaeus* was commented upon and discussed by several of the last towering figures of Ancient science, such as Plutarch (c. 45-125), Nicomachus of Gerasa (late first to early second century), Galen (second century) and Proclus (c. 410-485).<sup>39</sup> These works and the original dialogue would all become known in early Islam (Galen's paraphrase of *Timaeus* is, for instance, preserved only in Arabic).<sup>40</sup> By the seventh century, this living tradition had all but disappeared, largely as a result of hostile Christian policies towards 'pagan' learning, which intensified with the reign of Justinian (527-65).<sup>41</sup> Yet in the period to the rise of Islam, Classical learning and books were relatively well preserved in Syria, Palestine and Egypt, and Alexandria in particular remained an active intellectual centre.<sup>42</sup> The translation into Syriac of Greek works on logic, grammar, then philosophy and science which had begun around the fifth century, also reached its peak towards the time of the Muslim conquest.<sup>43</sup>

In the early years of Mu'āwiya's reign as caliph, *Timaeus* was directly cited by one Syriac author. Severus Sebokht (d. 667), who originally came from Nisibis, was a monk and then bishop at the convent of Qenneshre, on the northern Euphrates.<sup>44</sup> His scientific treatises show familiarity with Aristotle, Theon of Alexandria and Ptolemy, and even suggest a knowledge of Indian arithmetics; among their diverse subjects are the astrolabe, geography, climatology and astronomy.<sup>45</sup>



In an epistle of 662, Severus, irritated by the self-sufficiency of the Greeks, also quoted the opening of Plato's work (§§22b-c), where an Egyptian priest says to Solon that they are 'ever children.'<sup>46</sup> This suggests that the original text, or at least part thereof, was known in Syriac circles at that date.

One of Severus's disciples, Jacob of Edessa (d. 708), who was also educated at Alexandria, reached the peak of his career in the reigns of 'Abd al-Malik and al-Walid. Jacob is best known as the author of a grammar which expounded a new Syriac vocalization system – intriguingly, at about the same time that red dots were being introduced for the same purpose in Arabic.<sup>47</sup> Another of his works, the *Hexameron*, was composed towards the end of his life. In it, he presented a scheme of creation which drew heavily on Ancient science, comparing the earth to a large palace or city built by an architect. In the chapter on 'man, whom God created in his own image, crafting him like a wonderful macrocosm within this microcosm [i.e. the body]', he also portrays the human body as an 'elevated and solid tower' or a 'palace', being the magnificent work of the divine 'architect' or 'artist.'<sup>48</sup> These scattered fragments of evidence show that something of the tradition heralded by *Timaeus* was being perpetuated at the time of the Arabic script's codification. Whether it also reached the realm of artisans may hardly be known, but we can perceive the continuing relevance of the underlying worldview in the society ruled by the Umayyads.

As the art of calligraphy developed in the eighth and ninth centuries, so did the body of Ancient knowledge about proportion and sense perception that was translated into Arabic.<sup>49</sup> The relationship, if any, between these two developments remains elusive. It seems plausible that many calligraphers practised their art as a purely technical skill acquired during their training. This must have been particularly true of Muslim traditionalists who rejected innovations related to the form of the Qur'an and tended to adopt a hostile stance towards the Classical heritage.<sup>50</sup> Yet, given the lack of information about the craft as a whole until the tenth century, we do not know to what extent Qur'anic scribes belonged to this social group. Al-Nadīm, our main source on this subject, gives the names of only a few Abbasid calligraphers, without much elaboration.<sup>51</sup> This is nearly all that has thus far been gleaned from texts. The absence of Qur'anic

calligraphers and their art from secretarial manuals of the ninth century suggests that their milieu was separate from the court, to which this literary genre is related. It seems probable that some of them were artisans, perhaps grouped as a corporation in major cities, although this dimension of the craft still needs to be explored.<sup>52</sup>

The idea that proportion can have a harmonizing impact on the soul emerged at an early stage in Arabic texts. Al-Kindī (c. 800-70), in his five extant musical treatises,<sup>53</sup> relates proportion and the musical scale to the heavenly spheres and the soul. This is expressed notably through aphorisms such as this one, attributed to an unnamed philosopher:

When the essence of the soul is attuned to the numbers of [musical] composition, and the notes of the musician's melodies are balanced, and the movements of their strokes and silences are proportioned, the natures, souls and spirits delight from their accord, proportion and harmony ... For the charm of natural things results from proportion in their structure, and from the beauty of the composition of their parts.<sup>54</sup>

Like the Ancients, al-Kindī thought that the potency of proportion could be felt not only through sound, but also through other senses. He thus notes that the influence of 'the mixture of colours on the soul through sight' will be felt, like that of harmonious musical notes through hearing, 'if it conforms to what we have shown' in music.<sup>55</sup> For instance the assembly of black, red, yellow and white will move our noble quality (*al-quwwa al-karamiyya*).<sup>56</sup> This approach recalls both Aristotle's *De sensu* in its treatment of colour and Plato's *Timaeus* for the effect on the soul.<sup>57</sup> Linguistic evidence suggests that al-Kindī's circle was connected with Yaḥyā ibn al-Biṭrīq (fl. early ninth century), who was responsible for a (lost) Arabic version of *Timaeus*.<sup>58</sup> The colour scheme evoked here also echoes that of the early Qur'anic page: black (or dark brown) calligraphy over a white background, with red vocalization. Yellow dots were occasionally used to mark certain orthographic signs or variants,<sup>59</sup> this colour could also be associated with the gold used for illumination. This analogy may be coincidental, but it points to the possibility of a shared perspective.

In the alchemy of Jābir ibn Ḥayyān (probably the production of a whole school active between the eighth and tenth centuries),<sup>60</sup>

proportion is also discussed in concrete detail as an organizing principle in the structure of matter. As shown by Paul Kraus, some theoretical aspects of the corpus bear the imprint of *Timaeus*; Plato's work is, in fact, directly quoted at least once (§27d) by Jābir.<sup>61</sup> In *Kitāb al-khawwās*, he also gives numerous practical recipes, notably of inks, which outwardly suggest a living link with the realm of artisans. While markedly different in outlook,<sup>62</sup> Jābir's alchemy and the writings of al-Kindī share an affinity with the realm of practitioners and a concrete interest in proportion which distinguish them from the mainstream of the translation movement. Like other early Arabic writings that deal, in some way, with *Timaeus* or proportion, they also have in common a relation to what Gerhard Endress called the 'gnostic, Hermetic "sub-culture" of popular Hellenism.'<sup>63</sup> Their exact relation, if any, with artisans remains to be understood. Did their social circles interact? How genuine are the recipes given in the texts?<sup>64</sup> At this stage, we can only note that some of their ideas seem to represent the cultural background of calligraphy as a craft.

### *Calligraphy as music: the tenth century*

The tenth century was a time of intellectual maturation during which the notion of proportion and its broader implications became increasingly common knowledge.<sup>65</sup> Al-Rāzī (c. 854-925 or 935), the famous physician and alchemist, was also well versed in musical theory and performance. He is cited by several writers as the author of a work on a *Kitāb aflūṭarkhūs fī tafsīr kitāb ṭīmāwūs*, which suggests he had studied the commentary devoted by Plutarch to the *Timaeus* scale.<sup>66</sup> Al-Rāzī is also quoted by al-Ghuzūlī (d. 1412) as having said:

When beautiful pictures contain, apart from their subject, beautiful, pleasant colours – yellow, red, green and white – and the forms are reproduced in exactly the right proportions, they heal melancholy humours and remove the worries to which the human mind is prone, as well as gloom of spirits. For the mind is refined and enobled by the contemplation of such pictures.<sup>67</sup>

In the same period, the relevance of proportion to calligraphy was openly discussed by Ibn al-Haytham (c. 965-1039). In his *Optics*, he explains that while the individual properties of visible objects, such

as colour, shape, size or number, exist individually, they will 'also produce beauty by being joined with one another': 'For a beautiful script is one whose letters have beautiful-looking shapes and are beautiful in composition with one another – which is perfect beauty in a script.'<sup>68</sup> Proportionality and harmony (*al-tanāsub wa'l-ī tīlāf*) are, in his view, overarching sources of beauty. In the body, for example, 'proportionality alone may produce beauty, provided that the organs are not in themselves ugly, though not perfect in their beauty.'<sup>69</sup> This, he says, is also true in the realm of writing:

Calligraphy is not beautiful unless its letters are proportionately arranged in their forms, dimensions, positions and order. And the same is true of all visible objects which are combinations of various parts.<sup>70</sup>

Ibn al-Haytham finds no need to justify the impact of proportion on the soul and explain the mechanism whereby beauty operates its effect on the viewer, at a time when these had become widely accepted notions. An even more significant testimony, from the perspective of calligraphy, had come a generation earlier with the 'Epistles of the Brethren of Purity' (*Rasā'il ikhwān al-ṣafā'*). The brotherhood behind this work was active some time between the 920s and 960s. Abū Ḥayyān al-Tawḥidī (c. 930-1023) gives the names of four of its authors, two of whom he knew personally.<sup>71</sup> All four were active Ismā'īlīs from Basra.

The *Rasā'il* are a work of encyclopedic scope which draws from a wide range of sources, among them Plato, the Pythagoreans, the Jābirian corpus and, in music, al-Kindī.<sup>72</sup> Number (arithmetic) and form (geometry) lie at the basis of their gradation of knowledge. Their treatment of mathematics culminates, in the fifth epistle, with music. The universal relevance of musical proportion is made clear by the repeated references to it, in different contexts, throughout the *Rasā'il*.<sup>73</sup> It is restated at the outset of the epistle devoted to the subject:

Music, an art which combines the bodily and the spiritual, is the art of composition through the knowledge of proportion. Our purpose in this epistle is not to teach about singing and entertainment ... but the knowledge of proportion and the way to compose, which together lie at the root of proficiency in all arts.<sup>74</sup>

Music, for the Ikhwān, is a unique craft in that the substance worked upon is not material, but spiritual: the souls of the listeners. Among its realms of application is the art of calligraphy:

The most accomplished objects and perfect composites are those which are built, in the assembly of their parts, upon the best proportions. And one further example of this is the art of writing, which is the most noble of all arts.<sup>75</sup>

Whatever the language may be (Arabic, Persian, Syriac, Coptic, Hebrew, Greek or Indian), the fundamental precept remains the same: at the basis of the letters stand the straight line and circle.<sup>76</sup> Most of all:

The most correct, perfect and beautiful calligraphy is that which is arranged according to the most noble proportion in its layout (*waḍʿihā*) and the dimensions of its letters in relation to one another.<sup>77</sup>

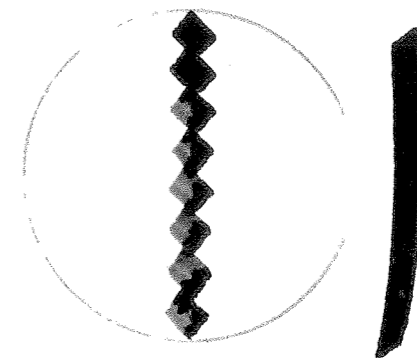
The principles involved are clearly musical: ‘the best proportions are 1, 3:2, 4:3, 5:4 and 9:8’, that is, the unison, fifth, fourth, third and tone.<sup>78</sup> The Ikhwān do not explain their concrete application, but only refer to the fractions added to one (a half, a third, a quarter and an eighth) in the same scale for their letter descriptions. This discrepancy, as we shall see, reflects a time of profound transformation for the craft as a whole. The Ikhwān allude to the presence of a calligrapher among their ranks: the *muḥarrir al-ḥādhiq al-muhandis*. Their statements about calligraphy will thus be made on the authority of people of the craft (*‘ma qālahu ahl ḥādhihi al-ṣināʿa’*). One of the men behind the *Rasāʾil*, Zayd ibn Rifāʿa, was indeed quoted as the author of a ‘Book on the Art of Calligraphy’ (*‘Kitāb fi ṣināʿat al-khatt’*) by al-Ṣafadī, in the fourteenth century.<sup>79</sup>

Two problems are posed by this text. First, the Ikhwān are not referring to Qur’anic calligraphy. The art of writing, they say, ‘is the pride of ministers, secretaries and littérateurs in courtly circles.’<sup>80</sup> We shall soon return to this point. Second, the epistles were composed in a century throughout which calligraphy underwent major changes. Traditional Kufic, in that period, was falling out of use to be gradually replaced by the New Style and, eventually, cursive.<sup>81</sup> Which script type are they referring to? A confrontation of their

descriptions with the manuscript evidence will help us address this question. Although the explanations are not detailed, they suffice to determine the general shapes of the letters and the approximate size of their strokes (Table 3).

Traditional Kufic is ruled out from the outset, if only because of the shape of its *alif* and its total lack of large circular forms. On the other hand, the letters in both the New Style and proportioned cursive follow two basic shapes, the straight line and circle. All other halfway curves have been more or less suppressed. Both types are therefore essentially compatible with the Ikhwān’s description. This, for a start, renders their distinction between Qur’anic and non-Qur’anic scripts less relevant to this analysis, since from the advent of the New Style, the differences between them started to fade away.

All the Ikhwān’s descriptions are applicable to the New Style. By contrast, two of them, representing five letters, are incompatible with proportioned cursive. The width of *ṣād*, *dād*, *ṭāʾ* and *zāʾ* should be equal to the height of the *alif*: this feature is typical of Kufic and the New Style; it does not appear in cursive, where the width of these letters is much shorter (about half the height of the *alif*— see Figure 75). The lower stroke of final *yāʾ* should also have, in the flattened form, the (inverted) shape of a *dāl*. This is the case in the New Style, whereas in cursive, the angle of aperture differs markedly between these two forms.<sup>82</sup> Additionally, in the New Style, the head of *fāʾ*, *qāf*, *wāw*, *mīm* and *hāʾ* has the same triangular shape, whereas in cursive it can be divided into three groups: (a) *fāʾ*, *qāf* and *wāw*; (b) *mīm*;



66. The *alif* as letter standard.

Letters	Ikhwān al-Ṣafā'	Kufic	New Style	Proportioned Cursive
<i>Alif</i>	Width = $\frac{1}{8}$ height	N. Variable and with lower return	Y	Y
<i>Bā', tā', thā'</i>	Width = <i>alif</i> height Head = $\frac{1}{8}$ <i>alif</i> height	Y	Y	Y
<i>Jim, hā', khā'</i>	Upper stroke = $\frac{1}{2}$ <i>alif</i> height Lower curve = $\frac{1}{2}$ circle	N. No circular returns (sometimes curved)	Y	Y
<i>Dāl, dhāl</i>	Like the bent/curved height of the <i>alif</i>	N. Normally longer than <i>alif</i> height	Y	Y
<i>Rā', zā'</i>	$\frac{1}{4}$ circle	N. No curve	Y? Sometimes angular and possibly shorter	Y? Sometimes angular and possibly shorter
<i>Ṣīm, shīm</i>	Heads = $\frac{1}{8}$ <i>alif</i> height upwards Lower part = $\frac{1}{2}$ circle	N. No curve	Y	Y
<i>Ṣād, dād</i>	Width = <i>alif</i> height Interstice = $\frac{1}{8}$ <i>alif</i> height Lower curve = $\frac{1}{2}$ circle	N. No curve and interstice unusual	Y	N. Width < <i>alif</i> height
<i>Ṭā', zā'</i>	Width = <i>alif</i> height Interstice = $\frac{1}{8}$ <i>alif</i> height Height = of <i>alif</i>	N? Interstice unusual	Y	N. Width < <i>alif</i> height
<i>ʿAyn, ghayn</i>	Upper curve = $\frac{1}{4}$ circle Lower curve = $\frac{1}{2}$ circle	N. No circular form	Y? Various shapes. Upper curve sometimes with an angle	Y? Upper curve not a quarter circle, but a small semicircle
<i>Fā'</i>	Width = <i>alif</i> height Head = $\frac{1}{8}$ of <i>alif</i> height, in rounded shape	N. Head is a thick mass rather than a curved line; return often longer	Y	Y

Letters	Ikhwān al-Ṣafā'	Kufic	New Style	Proportioned Cursive
<i>Qāf</i>	Lower part = $\frac{1}{2}$ circle Head = $\frac{1}{8}$ of <i>alif</i> height, in rounded shape	N. No circular form	Y	Y
<i>Kāf</i>	Width = <i>Alif</i> height Interstice = $\frac{1}{8}$ <i>alif</i> height Upper stroke = $\frac{1}{4}$ <i>alif</i> height	N. Upper stroke of same height as <i>alif</i>	Y	Y (except final form)
<i>Lām</i>	Height = of <i>alif</i> Width = $\frac{1}{2}$ <i>alif</i> height	Y? Width sometimes shorter ( $\frac{1}{4}$ <i>alif</i> )	Y? Width sometimes shorter ( $\frac{1}{4}$ <i>alif</i> )	Y? Width tends to be longer ( $\frac{3}{4}$ <i>alif</i> )
<i>Mīm</i>	Curve = $\frac{1}{4}$ circle Head = $\frac{1}{8}$ of <i>alif</i> height, in rounded shape	N? Final curve only in D.Vc, where occasional	Y	Y
<i>Nūn</i>	Curve = $\frac{1}{2}$ circle	N. No curve	Y	Y
<i>Hā'</i>	Head = $\frac{1}{8}$ of <i>alif</i> height, in rounded shape	N. A thick mass rather than a curved line	Y	Y
<i>Wāw</i>	Curve = $\frac{1}{4}$ circle Head = $\frac{1}{8}$ of <i>alif</i> height, in rounded shape	N	Y	Y
<i>Yā'</i>	Like the <i>dāl</i> , with backward return width = <i>alif</i> height or Lower curve = circle	N	Y	N. No correspondence with shape of <i>dāl</i>

Table 3. Analysis of the letter forms described by Ikhwān al-Ṣafā'.\*

\* Ikhwān 1999: I, 220-1.

(c) *hāʾ*. The Ikhwān al-Ṣafāʾ describe the heads of all five letters as a single shape.

The Ikhwān, then, are clearly referring to the New Style. But the affinity of this stylistic family, in the geometrical codification of the letters, with proportioned cursive, is also revealed by this comparison. On the other hand, in style and layout, the New Style still largely belongs to the Kufic tradition. It thus represents, in all senses of the word, the transitory stage between traditional Kufic and proportioned cursive.

When they first emerged, the principles of Kufic calligraphy were probably conceived as a literal ‘architecture of the page’: the application of architectural principles to the pen, parchment and scribe’s craft. The underlying aesthetic conceptions, ultimately derived from Antiquity, may have been reduced to a few simple ideas in the Umayyad period. But the craft and intellectual tradition had parallel roots which were almost bound to meet, as each expanded and matured. Such an interaction may conceivably have begun at an early stage, but the earliest written evidence of it dates from the tenth century. By then, we observe, with the Ikhwān al-Ṣafāʾ, a process whereby learned circles give philosophical elaboration to calligraphy, while the craft itself informs written descriptions of the script. But this testimony also reflects a period of profound, multi-faceted change.

## Towards the Codification of Cursive

The tenth century was a time of major transformation for the whole of Arabic writing. From Kufic, there was a gradual move towards a new aesthetic of the letter shapes, marked by its angularity and by the accentuated thinness of the strokes. Its formal features have been defined by Déroche, who called it the ‘New Style’ and divided it into two main categories: NS.I and NS.III (see Appendix).<sup>1</sup> This stylistic family, sometimes designated by other names, such as ‘broken cursive’ or ‘semi-Kufic’,<sup>2</sup> was gradually replaced by the cursive styles which lie at the basis of modern calligraphy. Beyond this general sequence, much remains to be discovered about the relationship between each step and its predecessor. Where can we detect strong elements of continuity, and where are the breaks with the past?

### *The New Style*

Several features of the New Style find antecedents in the Umayyad period. In the copper plaques at the Dome of the Rock (Figure 37), the script is based on the combination of straight lines and circles, but of variable size: the major innovation of the new codification would be to unify them into a single scheme, based on the height of the *alif*. A direct forerunner of the New Style appears a few decades later in a wall inscription from Antinoë, in Egypt (Figure 67). Its script is typical of NS in all its main features: the S-like shape of independent *alif* with its widened top and angular lower return; the projection of final *alif* under the line; the approximately circular shape of final *nūn*; or the thin sinusoidal tail of final *mīm*.<sup>3</sup>

This unexpected resemblance to tenth-century NS brings us to question its date, which was read as 117/735 by Bernhard Moritz.<sup>4</sup>

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#### CHAPTER FOUR

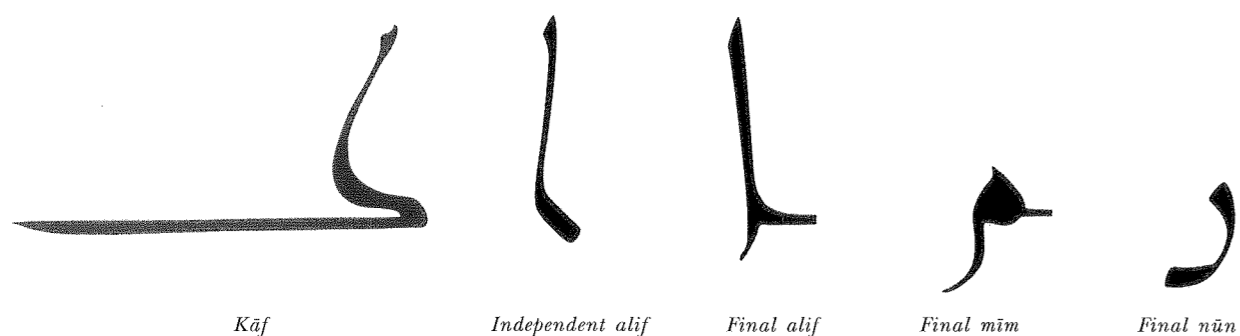
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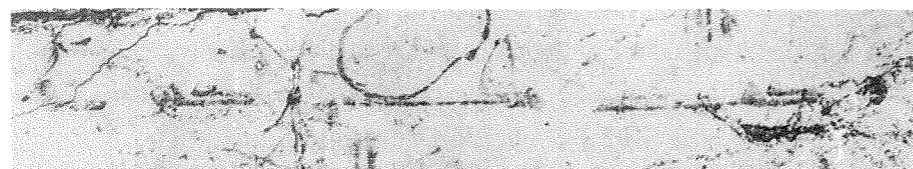
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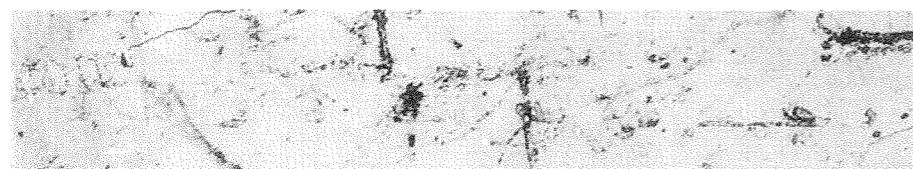
This unexpected resemblance to tenth-century NS brings us to question its date, which was read as 117/735 by Bernhard Moritz.<sup>4</sup>



The text, which largely consists of Qur'anic verses, contains this sentence (line 6):



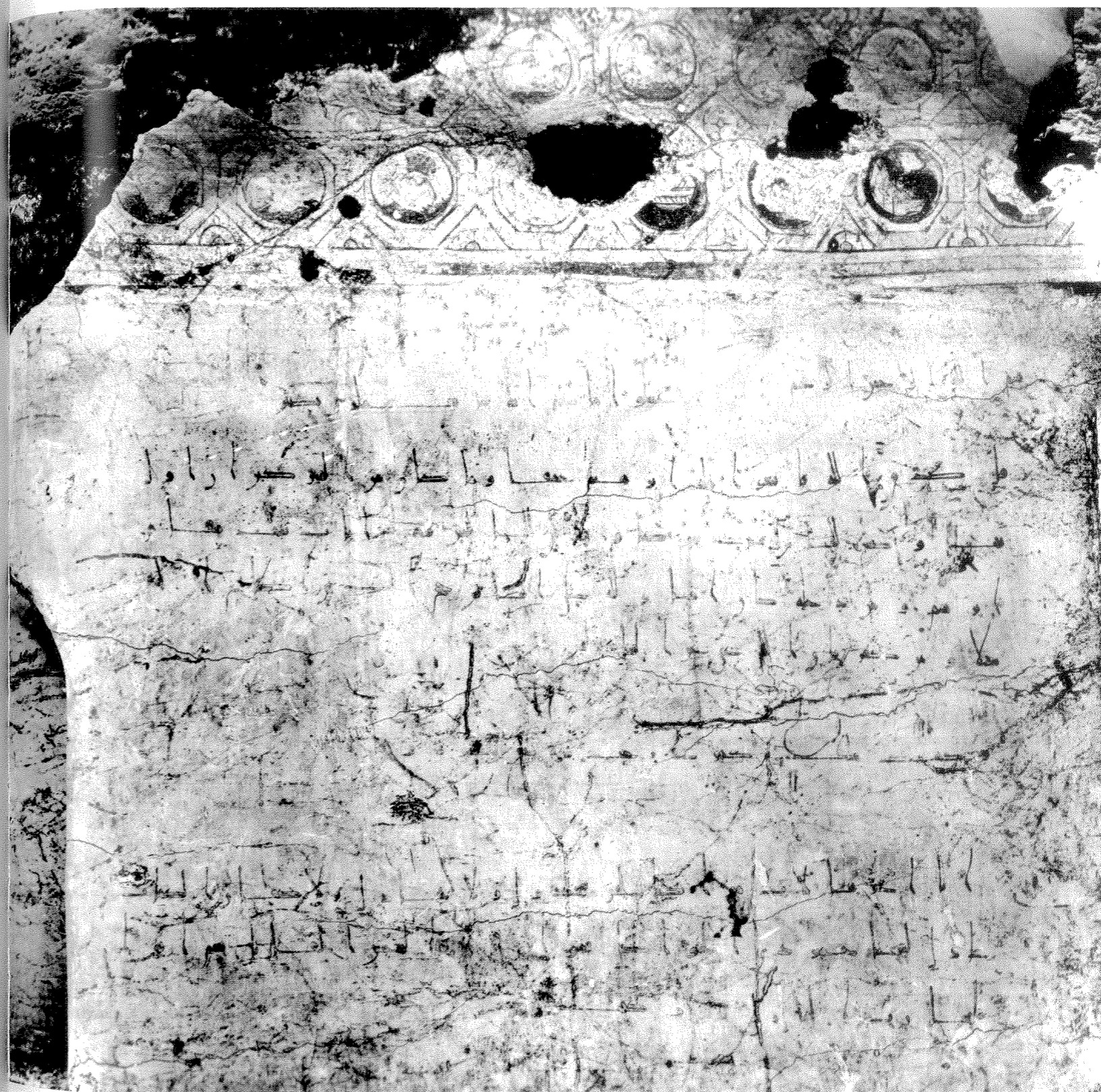
'*Wa kataba malik bin kathir [kuthayr?] fi...*' ('Malik ibn Kathir [Kuthayr?] wrote in...').



'...*rajab sanat sab' ashra wa ma'a*' ('... [the month of] rajab of the year 117')

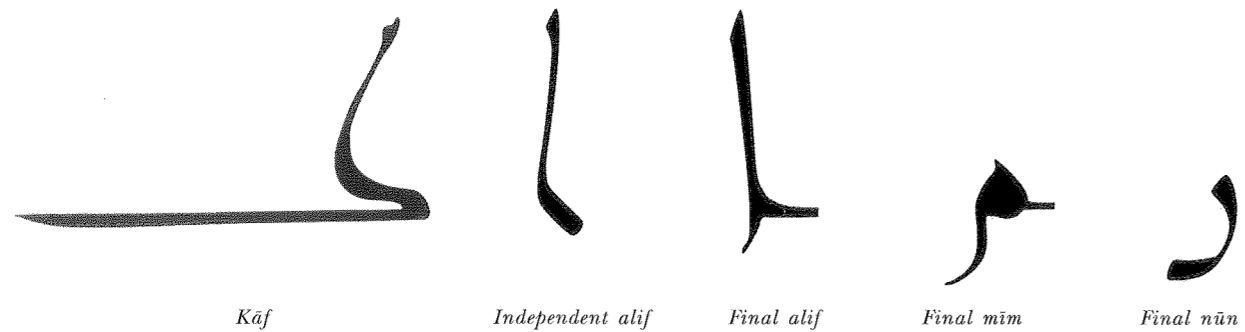
The whole line is clearly legible in all its parts, except between the end of *sab'* ('seven') and the beginning of *wa ma'a* ('and a hundred'). In this damaged part, an isolated *ha'* can be made out before '*wa*', at the same distance from it as the space between words. The only multiple of ten which, in Arabic, ends with this letter, is '*ashra*' ('ten'). The faint letter that precede it appear to confirm this reading: the initial shape could be the lower stroke of a '*ayn*'; the final shape seems to be a '*ra'*'; they are joined by a long baseline stroke, which might have belonged to a '*shin*'.

The Antinoë text is therefore to be dated 117/735. Indeed, its final *kāf* exhibits a slanting vertical stroke and asymmetrical base that still denote the legacy of Hijazi.<sup>5</sup> The text used to adorn the walls of

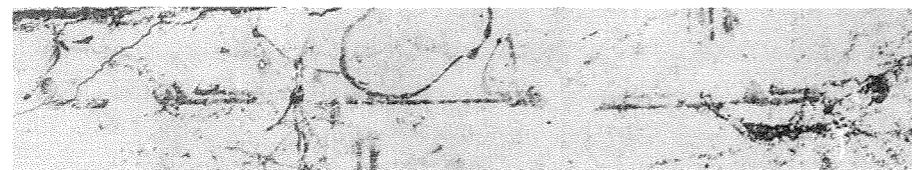


67a. (facing page) Wall inscription from Antinoë (Egypt, Rajab 117/ July-August 735).

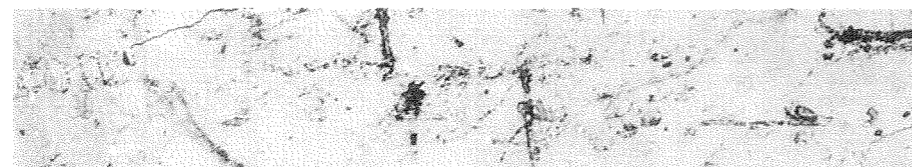
67b. (this page) Drawing of key letter shapes (top) and close-up of line 6 (middle).



The text, which largely consists of Qur'anic verses, contains this sentence (line 6):



'*Wa kataba malik bin kathir [kuthayr?] fi...*' ('Malik ibn Kathir [Kuthayr?] wrote in...').



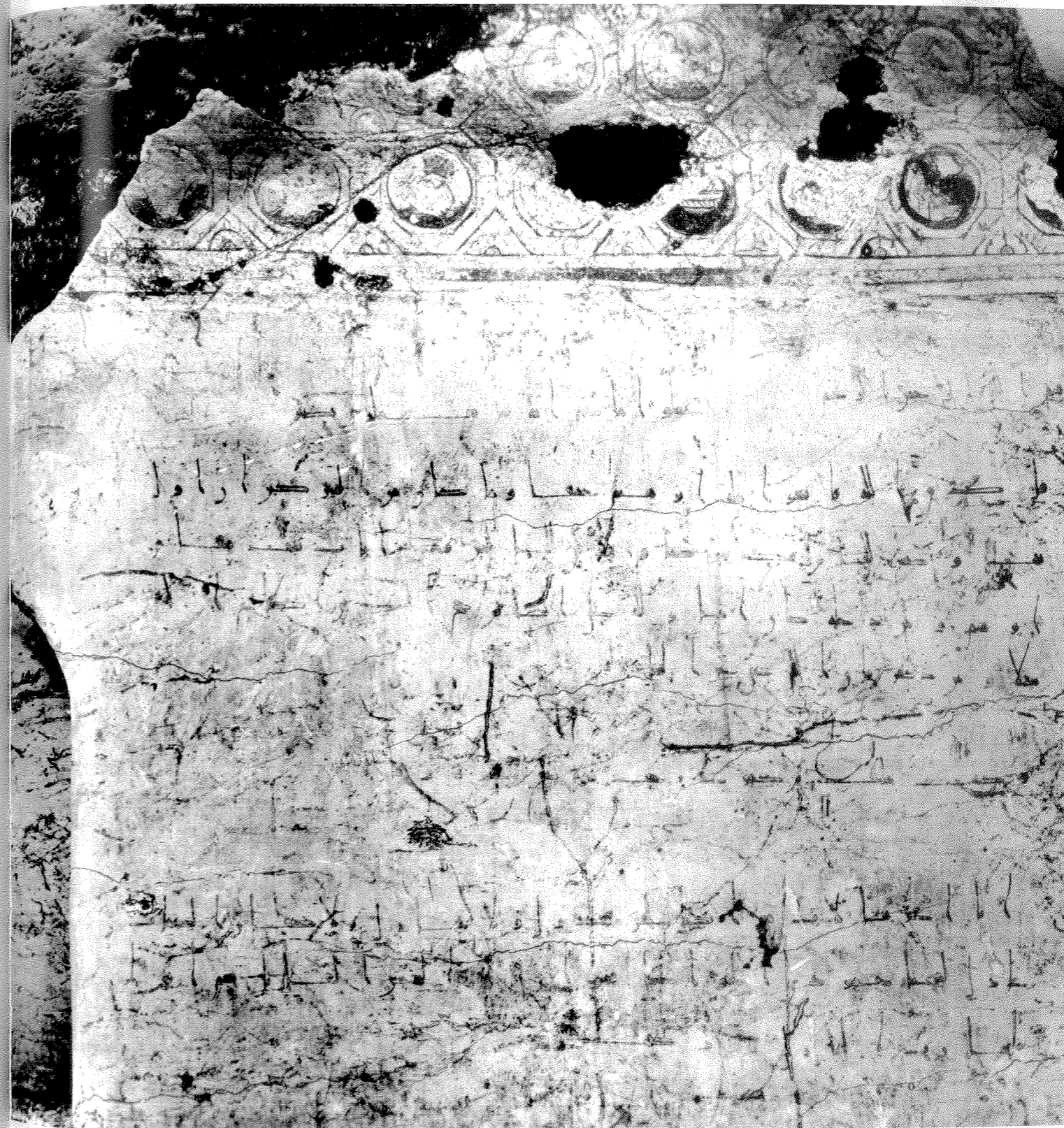
'...*rajab sanat sab' ashra wa ma'a'*' (... [the month of] rajab of the year 117')

The whole line is clearly legible in all its parts, except between the end of *sab'* ('seven') and the beginning of *wa ma'a'* ('and a hundred'). In this damaged part, an isolated *hā'* can be made out before '*wa*', at the same distance from it as the space between words. The only multiple of ten which, in Arabic, ends with this letter, is '*ashra*' ('ten'). The faint letter remains that precede it appear to confirm this reading: the initial shape could be the lower stroke of a '*ayn*'; the final shape seems to be a '*rā'*'; they are joined by a long baseline stroke, which might have belonged to a '*shīn*'.

The Antinoë text is therefore to be dated 117/735. Indeed, its final *kāf* exhibits a slanting vertical stroke and asymmetrical base that still denote the legacy of Hijazi.<sup>5</sup> The text used to adorn the walls of

67a. (facing page) Wall inscription from Antinoë (Egypt, Rajab 117/ July–August 735).

67b. (this page) Drawing of key letter shapes (top) and close-up of line 6 (middle).



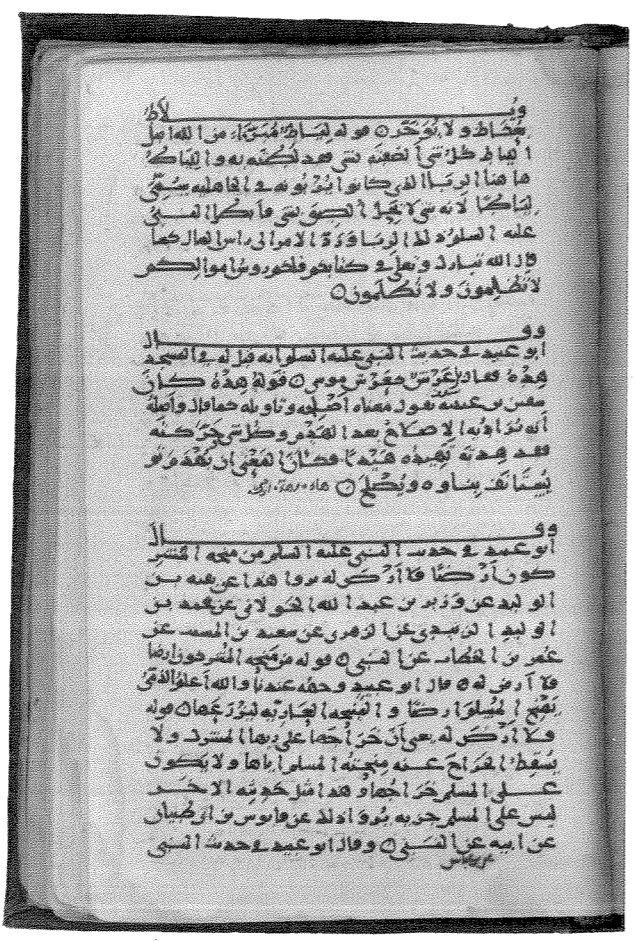


a house in Antinoë (Nile Valley) and above it are decorative friezes that are also reminiscent of Late Antique painting. It is not inscribed, but written in ink: its author, Malik ibn Kathīr (or Kuthayr), must have been a calligrapher used to working on papyrus or parchment. Surprisingly, this suggests that NS had already been established, perhaps as a chancery script, by the late Umayyad period. This idea is confirmed by a permit issued in 112/731 which, although less finished in style, has comparable scribal features.<sup>6</sup>

In the following century and a half, secular book hands greatly expanded their stylistic range. In the surviving items, several key ingredients of the New Style can frequently be detected, but their execution remains loose. Thus in a document written in 182/799 by a *mawlā* (client) of the Abbasid caliph Hārūn al-Rashīd (r. 786-809), several letters end in a markedly round shape, but this does not approximate to a circle.<sup>7</sup> The same is true of a copy of the *Gharīb*

هذا من سيرة علي بن ابي طالب  
من اهل البيت  
عليه السلام  
وآله  
الطاهرين  
الطيبين  
الطاهرين  
الطاهرين

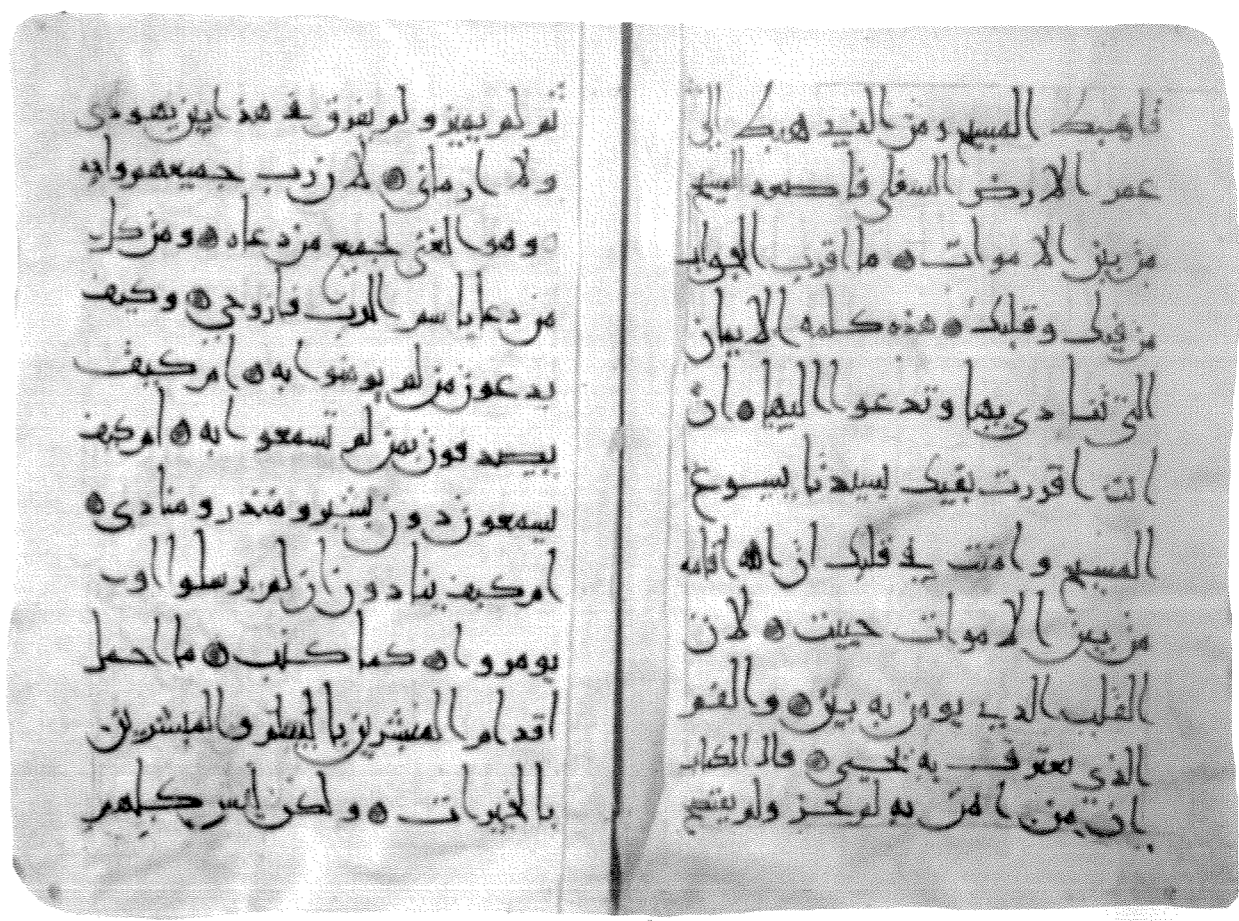
68. Manuscript of Ibn Sallām's *Gharīb al-ḥadīth* (252/866, 28.2 x 17.3 cm).



*al-ḥadīth* dated 866, where the letters tend to follow more precise definitions, but not in geometrical terms (Figure 68). In this text, vocalization is indicated by small signs inspired by Arabic letter shapes – a convention which became increasingly widespread from the tenth century onwards. This, together with the complete notation of diacritics and the use of paper, makes the manuscript a precursor of tendencies that would gain momentum in the following decades.<sup>8</sup>

The earliest attested use of a comparable script for the Qur'an occurs in the so-called 'Khayqānī Qur'an' (Figure 70). According to a note in Persian, the manuscript was corrected in 292/905 by Aḥmad ibn Abī al-Qāsim al-Khayqānī, so it must have been written shortly before that date, probably in Iran. Its calligraphy, which is markedly distinct from Kufic, can be compared with book hands of the same period, for example an undated Arabic Bible from Sinai (Figure 69).<sup>9</sup> But some fundamental differences distinguish even these visually

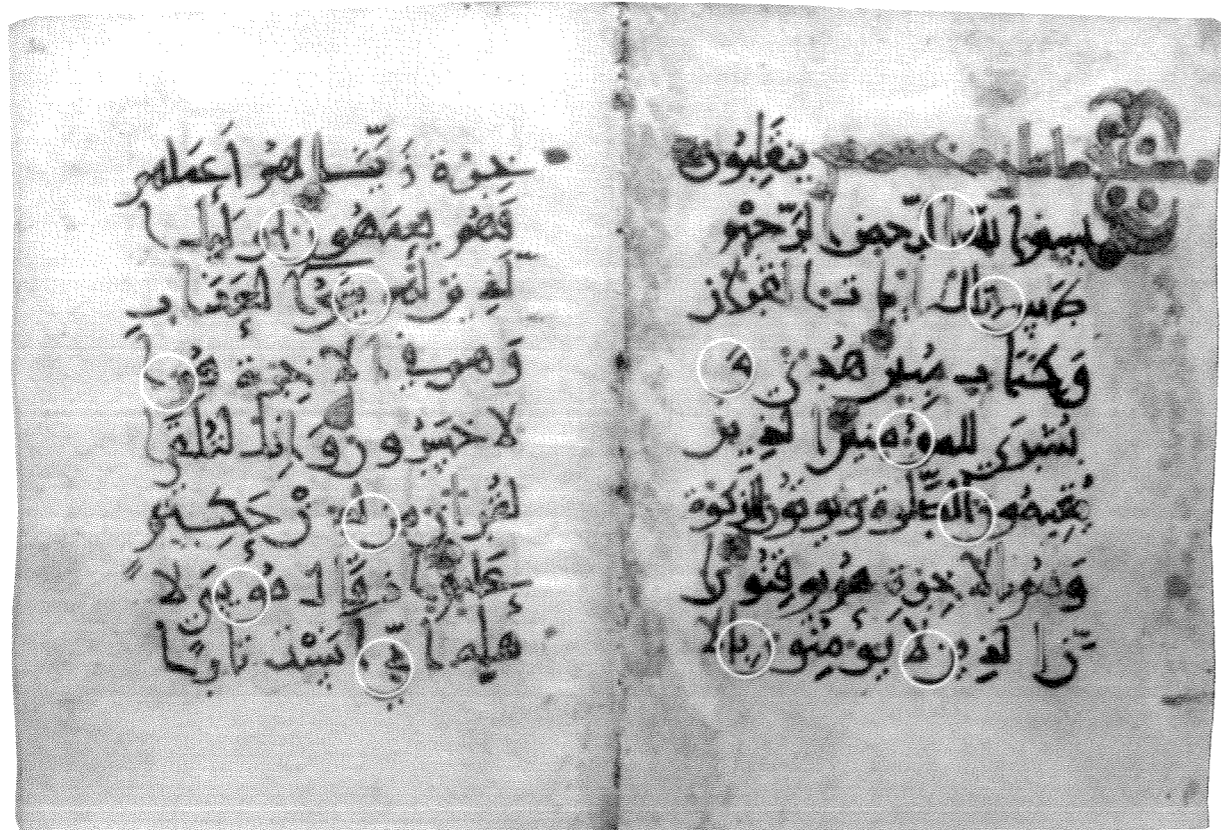
69. Arabic Bible held at the monastery of Saint Catherine, Mount Sinai (ninth/tenth century, 26.7 x 18.5 cm).



akin items. Unlike its Christian counterpart, the Khayqāni Qur'an is devoid of ruling and has a stable number of carefully laid out lines per page.<sup>10</sup> In the Sinai Bible, the independent *alif* and rounded letter endings vary significantly in size and even shape.<sup>11</sup> By contrast, the Qur'an manuscript seems to be undergirded by a more formal geometry of the letters.

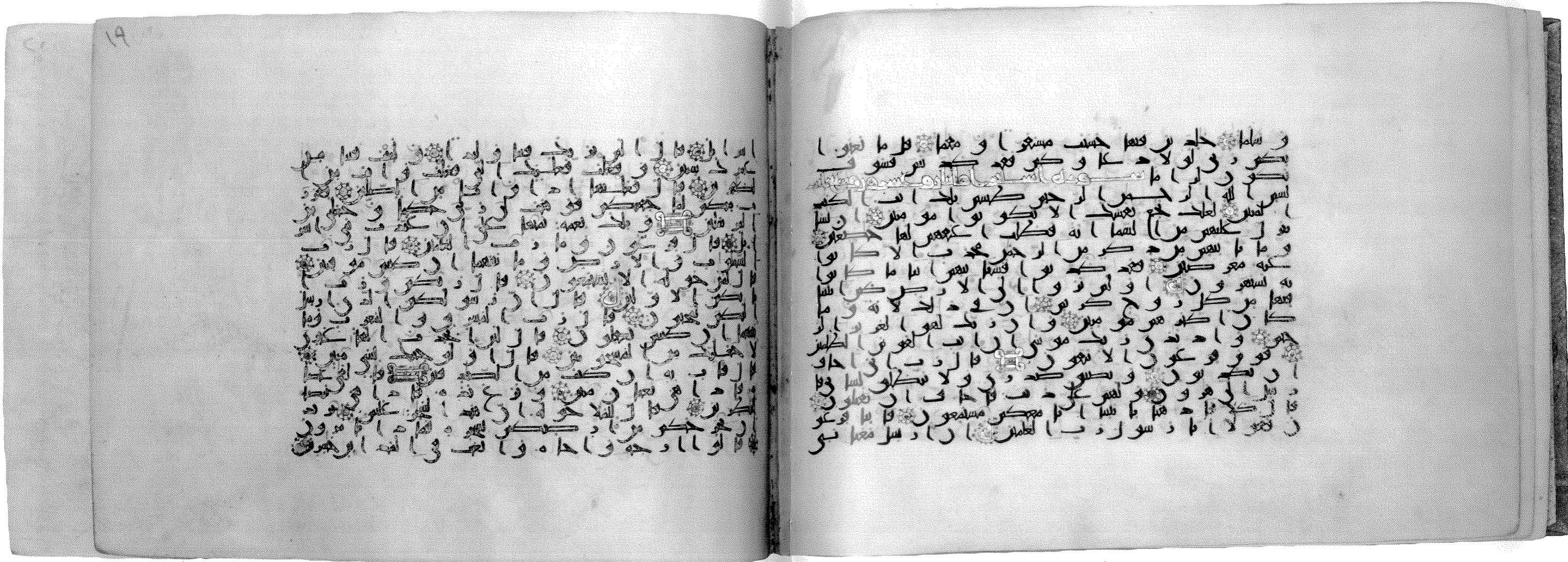
In order to substantiate this impression, we have superimposed, in Figure 70, an identical *alif* line (orange) on various tall letters, and the corresponding circle (yellow) on rounded endings (both elements are shown together in the first line of text). The results are conclusive: the height of the *alif* is, overall, regular, while the final *wāw*, *nūn*, *sīn* and *yā'* tend towards the strict form of the same semicircle, with a diameter approximating the height of the *alif*.<sup>12</sup> This suggests that a codification of the script on the basis of the *alif* and circle had happened by 905. The vocalization and diacritics are also complete, using the conventions already encountered in the *Gharīb al-ḥadīth* of 866. The text box layout is comparable to that of earlier Qur'ans,

70. The Khayqāni Qur'an (probably Iran, 905 or earlier, 12 x 9.2 cm). The *alif* height is indicated in orange and the corresponding circle in yellow.



Date	Content/name	Place of origin	Writing material	Format	Illustration
902	New Testament	Jerusalem	Parchment	Vertic.	Vajda 1958: Pl. 4
Circa 905	'Khayqāni Qur'an'	Iran?	Parchment	Vertic.	Figure 70
937	'Shanbak Qur'an'	Egypt	Parchment	Vertic.	Déroche 1983b: Pl. IV-b
Before 954 (?)	<i>Ḥadhf min nasab quraysh</i> Al-Sadūsī (2nd c. AH) Genealogy	Iraq?	-	Vertic.	Sayyid 1998: 28
956	<i>Mawāqif</i> Al-Niffārī (d. 965 or 977) Mysticism	-	Paper	Vertic.	Figure 73
970	<i>Mukhtaṣar</i> Al-Zuhri (d. 857) Law	-	-	Vertic.	Munajjid 1960: Pl. 18
972	'Qur'an of Ibn Shādhān'	Iran	Paper	Vertic.	Tabbaa 1991: Figs. 8-9
975	<i>Al-ḥidāya wa'l-dalāla</i> Ibn 'Abbād (d. 995) Theology	-	-	Vertic.	Munajjid 1960: Pl. 19
983	'Palermo Qur'an'	Sicily	Parchment	Horiz.	Figure 71
986	<i>Akhbār al-naḥwiyyīn al-baṣriyyīn</i> Al-Sirāfī (d. 979) Grammar	-	-	Vertic.	Munajjid 1960: Pl. 22
993	'Isfahan Qur'an'	Iran	Paper	Horiz.	Figure 72
998	'Saffār Qur'an'	-	Paper	Vertic.	Tabbaa 1991: Figs. 10-11

Table 4. Dated tenth-century manuscripts in the New Style.



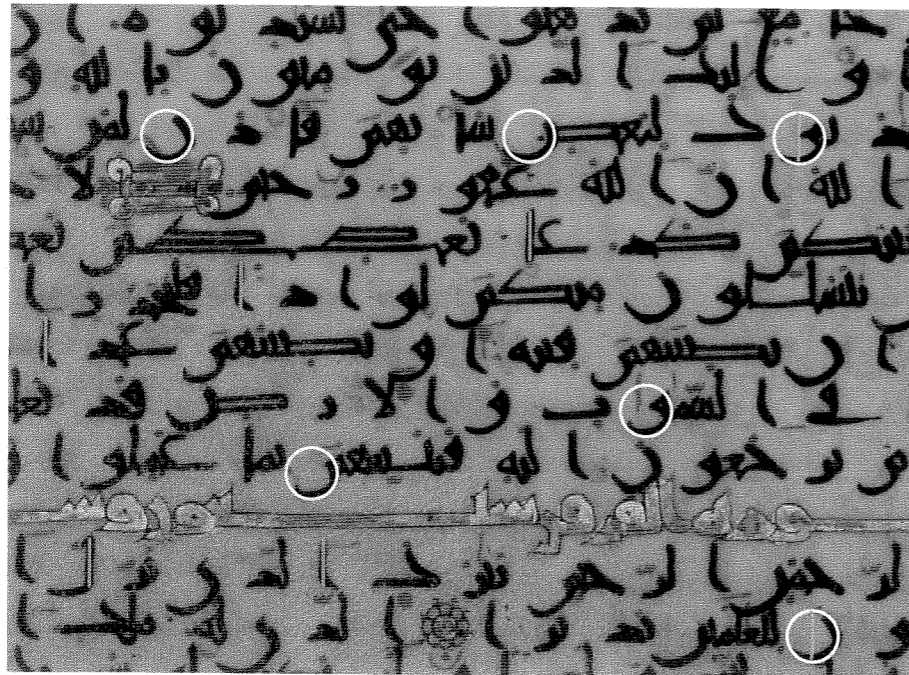
with the difference that the idea of interlines is completely absent. In the sura title, we witness an uneasy attempt to imitate style D, which suggests that the scribe was not trained in Kufic.<sup>13</sup>

At least twelve NS manuscripts, half of them Qur’anic, have been dated to various parts of the tenth century (Table 4). Until 937 (the ‘Shanbak Qur’an’), these remain broadly akin in style to earlier secular documents; but from the 950s onwards, the articulation of the strokes acquires the geometrical stylization that is typical of later NS. This new aesthetic of the script can thus be observed in a genealogical treatise possibly copied by al-Najayramī, an Iraqi scribe who died in 954,<sup>14</sup> and in an autograph manuscript of the *Mawāqif*, a

mystical treatise by al-Niffarī, written in 956 (Figure 73).<sup>15</sup> Thereafter, it becomes a permanent feature of dated manuscripts. The mature form of the New Style may thus have begun to spread between the 930s and early 950s.

In that phase of development, the *alif* and circle remained at the basis of some manuscripts, such as the Palermo Qur’an (Figure 71). In others, like the Isfahan Qur’an, the same stylistic features were reinterpreted, giving rise to a sharper, more angular calligraphy (Figure 72).<sup>16</sup> This division roughly equates with that between styles NS.III (which tends to be more circular) and NS.I (which is marked by its angularity). The ties with Kufic were particularly strong in

71. The Palermo Qur’an (372/983, 17.6 x 25 cm).



NS.I, which shares several letter forms with style D.Vb: the lower return of *alif*, the upper curve of *tāʾ/kāf* and the shape of some *lām-alifs*.<sup>17</sup> In some NS.I manuscripts, the body of the letters and height of the *alif* also correspond to regular vertical levels: there, the old interline system of Kufic may have been maintained and adapted to the increasing thinness of the strokes, perhaps by reducing the grid to its most essential elements.<sup>18</sup>

Both NS.I and NS.III inherited from Kufic the notation of their diacritics, which consist of dashes, whereas dots would again prevail in cursive; and of their vocalization, marked by coloured dots that were, at times, combined with some of the modern signs attested in the *Gharīb al-ḥadīth* of 866.<sup>19</sup> Sura titles in D.I were common in both NS.I and NS.III: their accomplished execution stands in sharp contrast to the hesitant style observed in the Khayqānī Qurʾan (Figure 70).<sup>20</sup> The decoration and illumination of mature NS were also largely based on Kufic models. They continued to naturally evolve throughout the tenth century, with a tendency towards sharper forms, as in the script.

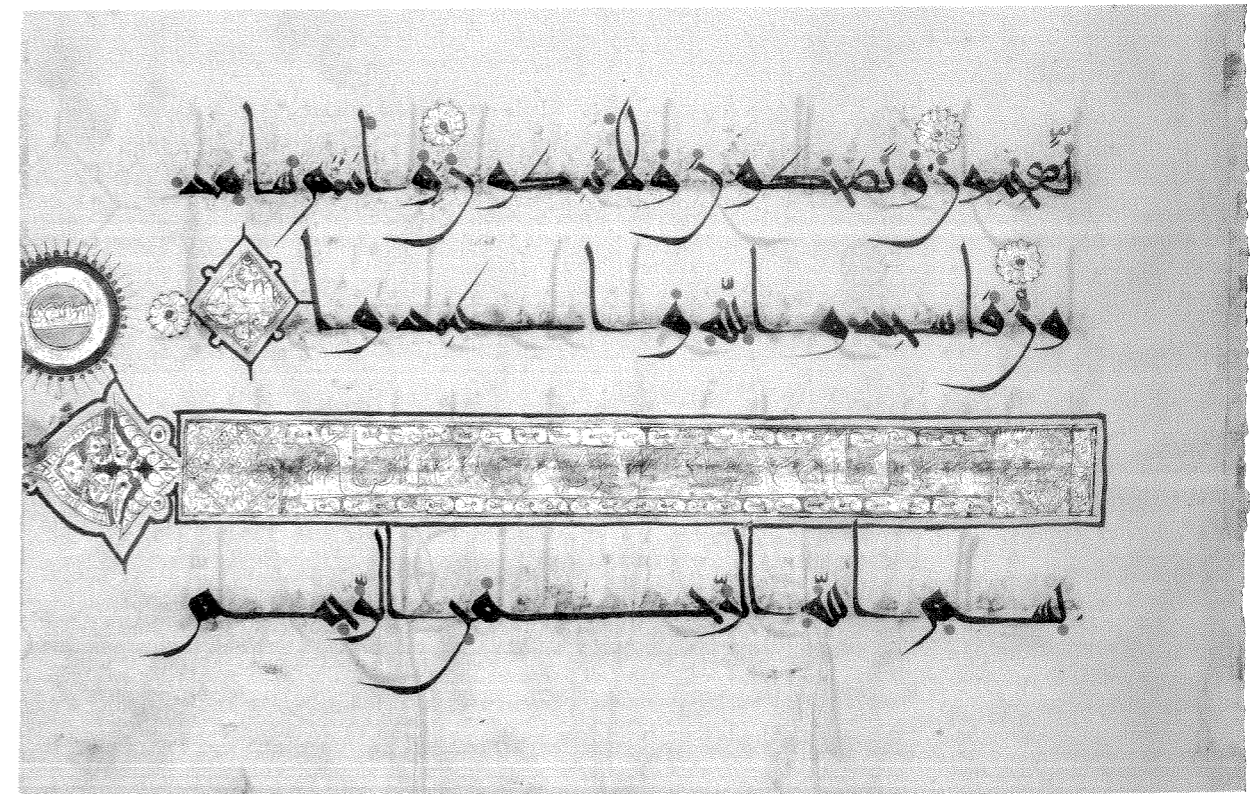
The vertical format became predominant, although several late tenth-century manuscripts, such as the Palermo and Isfahan Qurʾans, are still horizontal. The page and text box continued to be laid out according to the Kufic rule, but with less exacting precision than

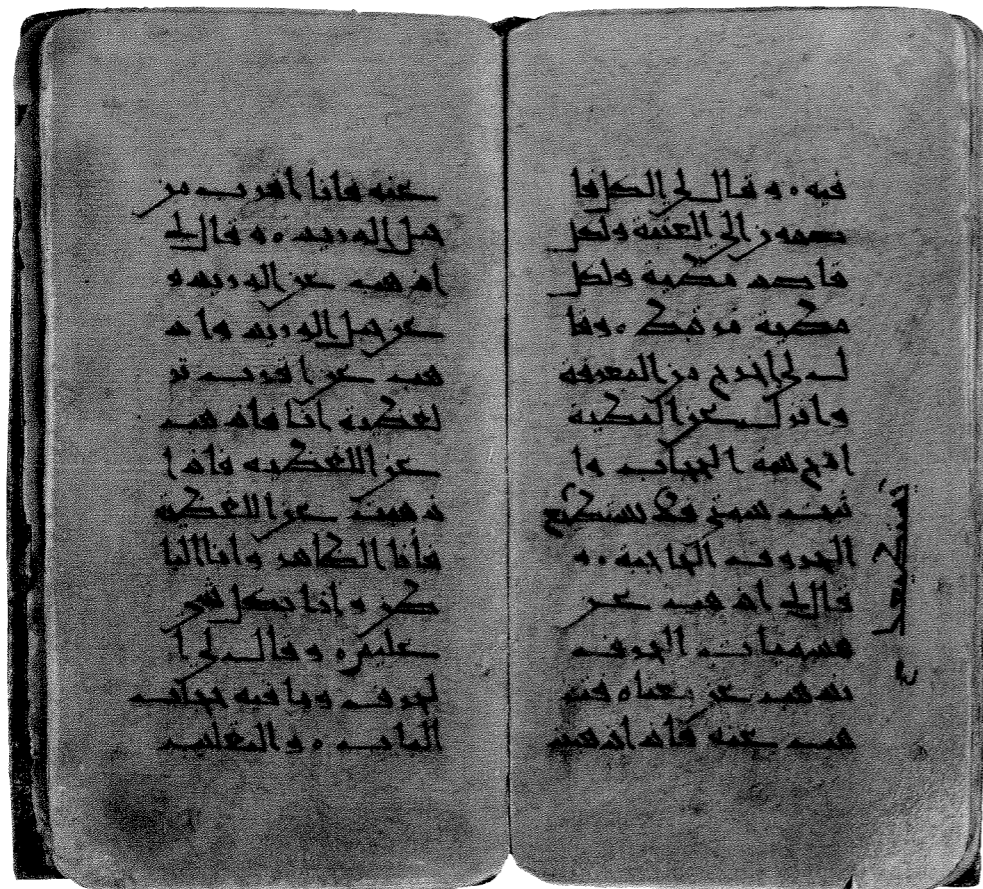
71b. The *alif* and circle in the Palermo Qurʾan.

before.<sup>21</sup> The size of Qurʾanic manuscripts was also expanded to a wider range than in Kufic, from very small to very large, and more options became available for the composition of quires.<sup>22</sup> Another innovation was the introduction of paper, which gradually replaced parchment as a writing material. Paper, a Chinese invention, was first produced in Baghdad during the reign of Hārūn al-Rashīd (786–809), according to texts.<sup>23</sup> In the following decades, its use begins to be attested for secular books (Figure 68). By the tenth century, the mastery of the technology by Muslim craftsmen allowed them to produce a creamy paper of superb quality which must have been deemed suitable to receive the Qurʾanic text.

Fundamentally, the mature form of NS thus reflected the convergence of everyday secular scripts with traditional Kufic calligraphy, from which the cornerstones of geometry, proportion and the thickness of the pen were notably inherited. Despite strong elements of continuity, the underlying process opened a hitherto deeply structured tradition to new norms and influences. This change, in turn, was to have lasting consequences.

72. The Isfahan Qurʾan (Ramadhān 383/ October–November 993, 23.9 x 33.8 cm).



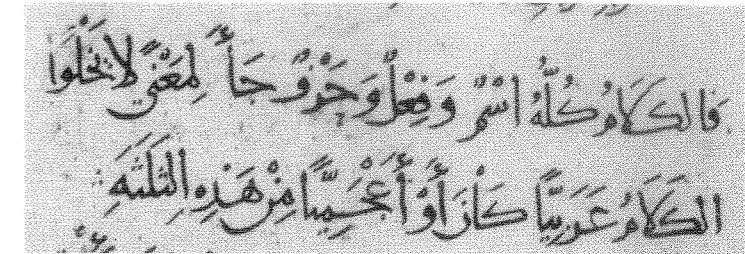
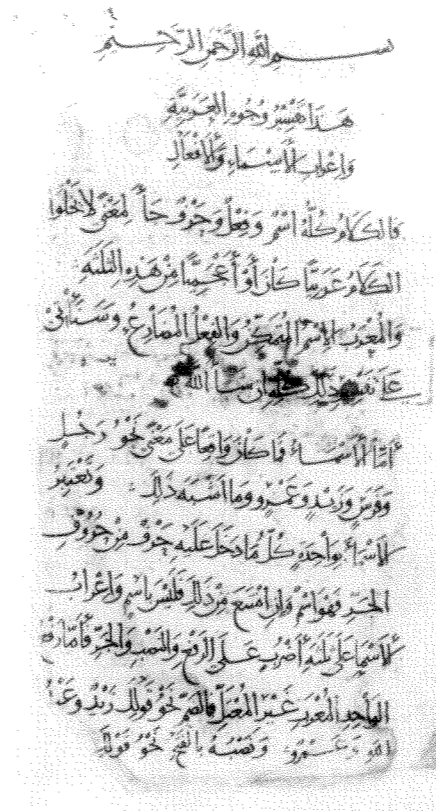


The growth of cursive

In the second half of the tenth century, cursive began to evolve along the lines initiated by the New Style. Until 959, there is no evidence, among dated cursive documents, of the influence of the new codification.<sup>24</sup> That year, a copy of the *Muqtaḍab fī al-naḥw*, a grammatical treatise by Abū Saʿīd al-Sīrāfī (d. 979), was completed by Muḥalhil ibn Aḥmad al-Baghdādī (Figure 74). According to an autograph note on the opening page, the text was then corrected by the author himself.<sup>25</sup>

The letters, including *alif* and rounded finals, vary in size, yet they are more closely codified than in earlier cursive. The influence of the New Style can be felt in several of their shapes: note, for example, the light sinuosity of independent *alif*; the angularity of the head of *wāw* and of some final *nūns* and *yā's*; or the curved upper stroke of *jīm*. This manuscript marks the beginning of an important trend:

73. Autograph manuscript of the *Mawāqif*, a mystical treatise by al-Niḥfārī (344/956, 20.5 x 11 cm).



the appropriation by cursive hands of the principles first defined in NS. No such perfected cursive calligraphy occurs again, in the published record, until the year 1000. In several cursive manuscripts dated between 969 and 993, the letters do begin to tend towards the straight line and circle, yet there is no stylization of the strokes along geometrical lines.<sup>26</sup> The layout, in all cases, is regular but still relatively loose in terms of justification and adherence to the baselines.

The mechanism of diffusion of the new script form remains to be fully understood. In what context did it first emerge? How fast was its spread? We can only note, for now, that even the few dated manuscripts mentioned above cover, between them, a wide range of subjects, from grammar and hadith to mathematics, astronomy and the Christian scriptures.<sup>27</sup> This broad social setting makes the matter all the more difficult to elucidate.

The earliest surviving Qurʾān in a cursive style was written around the year 1000 by Abū al-Ḥasan ʿAlī ibn Hilāl, known as Ibn al-Bawwāb (Figure 75).<sup>28</sup> Its features mark a decisive advancement

74. Manuscript of the *Muqtaḍab fī al-naḥw*, a grammatical treatise by Abū Saʿīd al-Sīrāfī (33.5 x 18.8 cm). This copy was written by Muḥalhil ibn Aḥmad al-Baghdādī and corrected by the author in 347/959.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

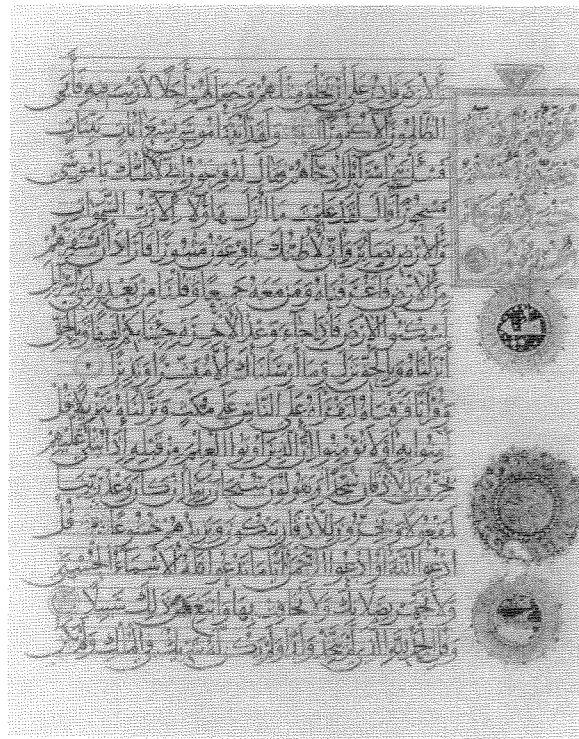
سورة الحجرات

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
الحمد لله رب العالمين الرحمن الرحيم ملك يوم الدين اياك نعبد واياك نستعين اهتدنا الصراط المستقيم صراط الذين انعمت عليهم غير المغضوب عليهم ولا الضالين

سورة الحديد

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
الحمد لك الكتاب لا ريب فيه هدى للمتقين الذين يؤمنون بالغيب ويقيمون الصلاة ومما رزقناهم ينفقون والذين يؤمنون بالانزال اليك وما انزل من قبلك وبالاخرة هم يوقنون اولئك على هدى من ربهم واولئك هم المفلحون

كفر واسيوا عليهم انذرتهم انهم لا يؤمنون ختم الله على قلوبهم وعلى سمعهم وعلى ابصارهم غشاوة سخطهم عذاب عظيم ومن التائين من هلك اثمنا بالله وباليوم الآخر وما هم بمؤمنين يخادعون الله والذين امنوا وما يخادعون الا انفسهم وما يشعرون في قلوبهم مرض فزادهم الله مرضا ولهم عذاب اليم بما كانوا يكذبون واذا قيل لهم لا تفسدوا في الارض قالوا انما نحن مصلحون الا انهم هم المفسدون ولا يمشيرون واذا قيل لهم امنوا كما امن ابناؤكم التائين قالوا انؤمن كما امن السفهاء الا انهم هم السفهاء ولا يعلمون وازاد الفوا التائين امنوا قالوا امنا واذا خلوا الي شياطينهم قالوا الهممكم انما نحن مستهزون الله يبشركم بنبيه وهم يبغون في طغيانهم يعمهون اولئك الذين اشتروا الضلالة بالهدى فما ربحت تجارتهم وما كانوا آمنين به مما هم يمشون كما مثل الذي استوفى نارا فلما اصابته ما جعل خوله اذهب الله بنورهم وتركهم في ظلمات



76. Geometry and calligraphy in the Qur'an of Ibn al-Bawwāb.

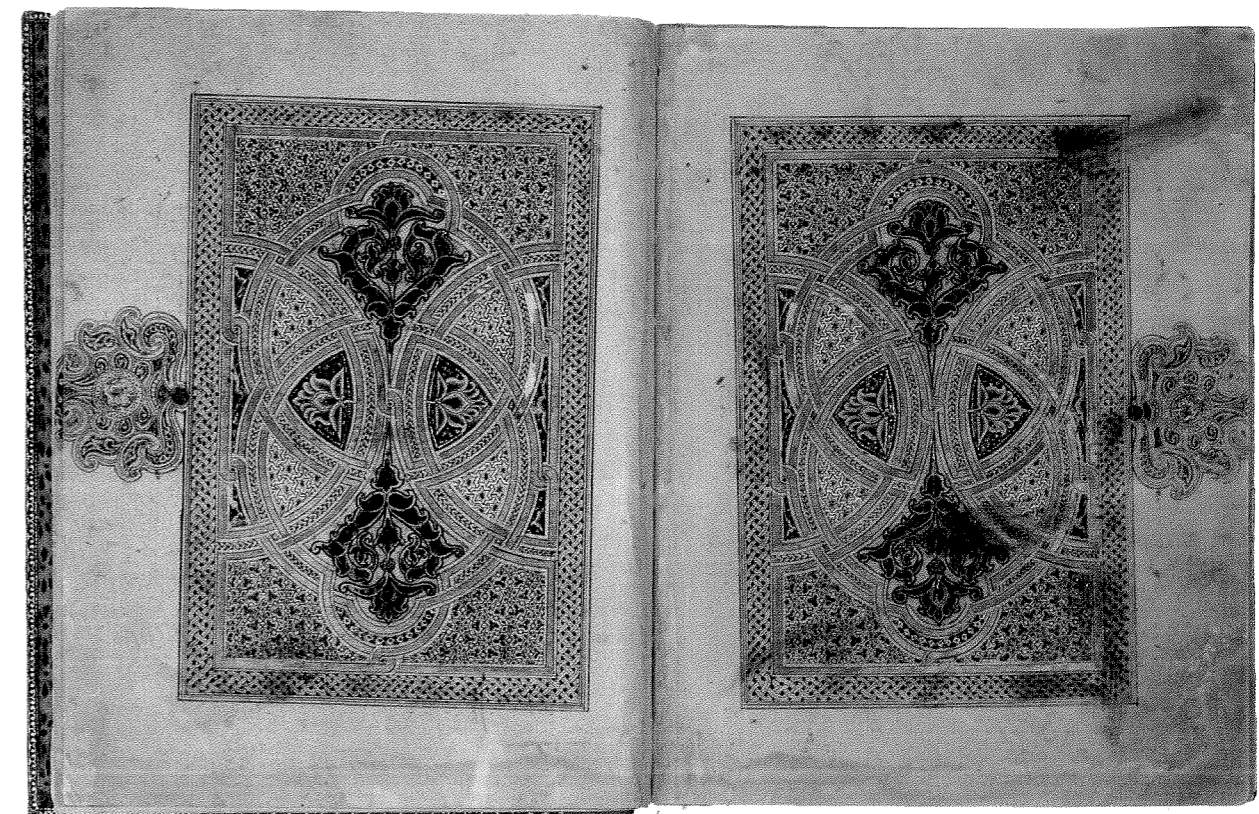
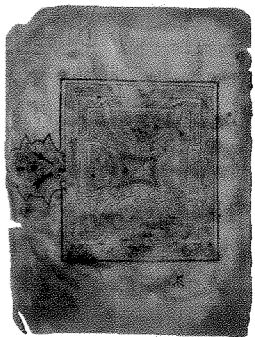
over the forms observed in earlier cursive: the angularity of NS has been relinquished, yet the letter shapes are rendered with minute precision and mastery. The script gives the overall impression of a harmonious combination of approximately straight lines (*alif* and the like) and curved strokes of regular shape and size (*wāw* and *rā'* being close to a quarter-circle, while final *mīm* and *nūn* consist of a large curve that is slightly inclined in relation to the line). At the same time, the body of the compact letters, the top of the tall ones and the bottom of the lower strokes each seem to correspond to a regular vertical level, which suggests that the older interline system of Kufic was not completely abandoned, but rather brought down to its simplest expression (Figure 76). The tall letters can faintly slant and bend, and the calligrapher allows himself the freedom to depart from the strict geometry of the New Style. Rather than the literal transposition of the new codification to cursive, the Qur'an of Ibn al-Bawwāb manifests its simplification and subtle adaptation to the natural flow of the hand.

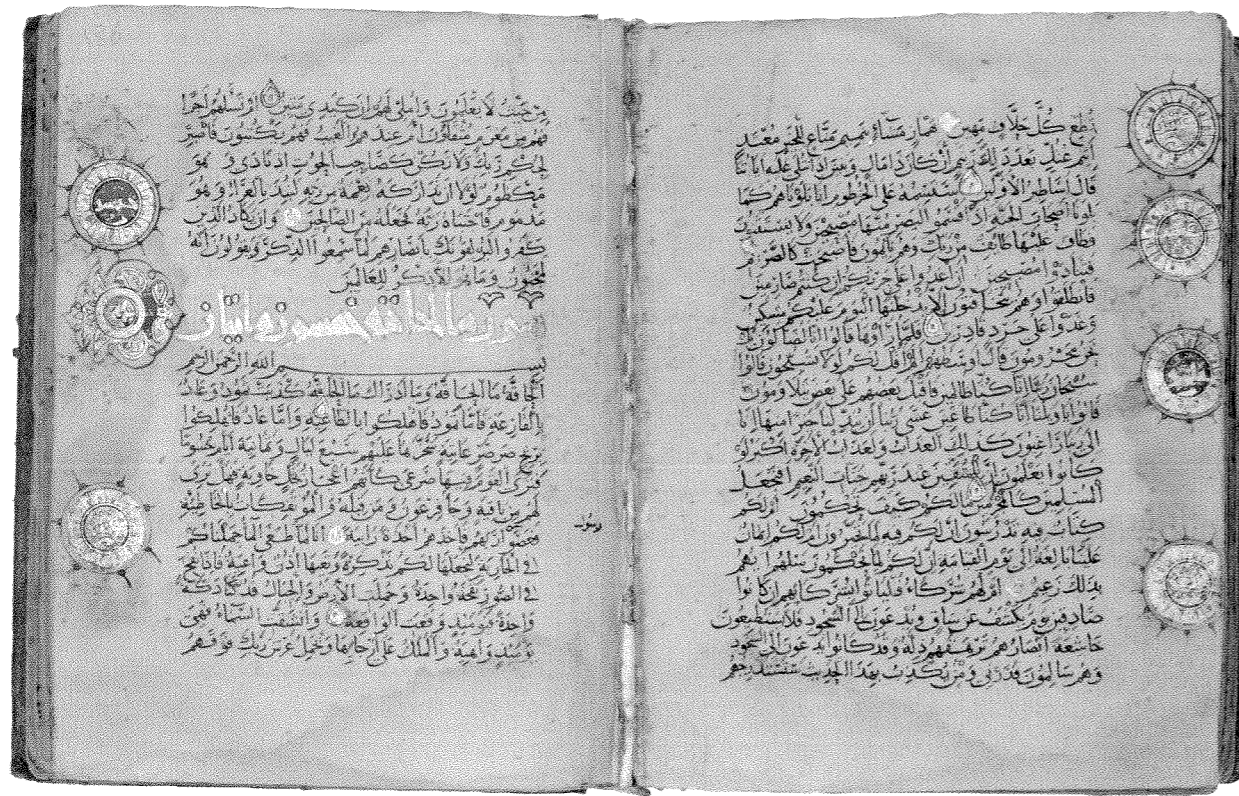
The manuscript is related to earlier Qur'anic calligraphy by several of its aspects. The layout is based on a regular grid of fifteen

lines per page which also serves to position sura headings; a stable ratio of text box height to width seems to prevail.<sup>29</sup> Many features of the decoration are closely reminiscent of Kufic, for instance the interlaced framing motifs, marginal rosettes, palmettes and roundels; and even, in places, the double square with circle (Figure 79). So is the geometrical structure of the full-page illuminations, which are themselves mostly akin to earlier examples (Figure 77). Some other motifs are not attested in the earlier record, such as the verse markers in the form of a drop (Figure 75), or the complex illumination of some pages, based on interlacing octagons.<sup>30</sup> Another notable innovation is the introduction of a monumental cursive script for decorative purposes, as in the sura titles of the opening page.

Even these features, however, do not represent a break from earlier Qur'anic calligraphy, but rather an elaboration upon existing devices, marked by its naturalistic tendencies. Thus the rosettes are usually built upon a central circle surrounded by a repeat motif, as in earlier Qur'ans (Figure 79): the main change is in the vegetal form sometimes taken by this ornament (for example, in the lower-right

77. Illumination from a manuscript in D.V (top) and the Qur'an of Ibn al-Bawwāb (bottom).

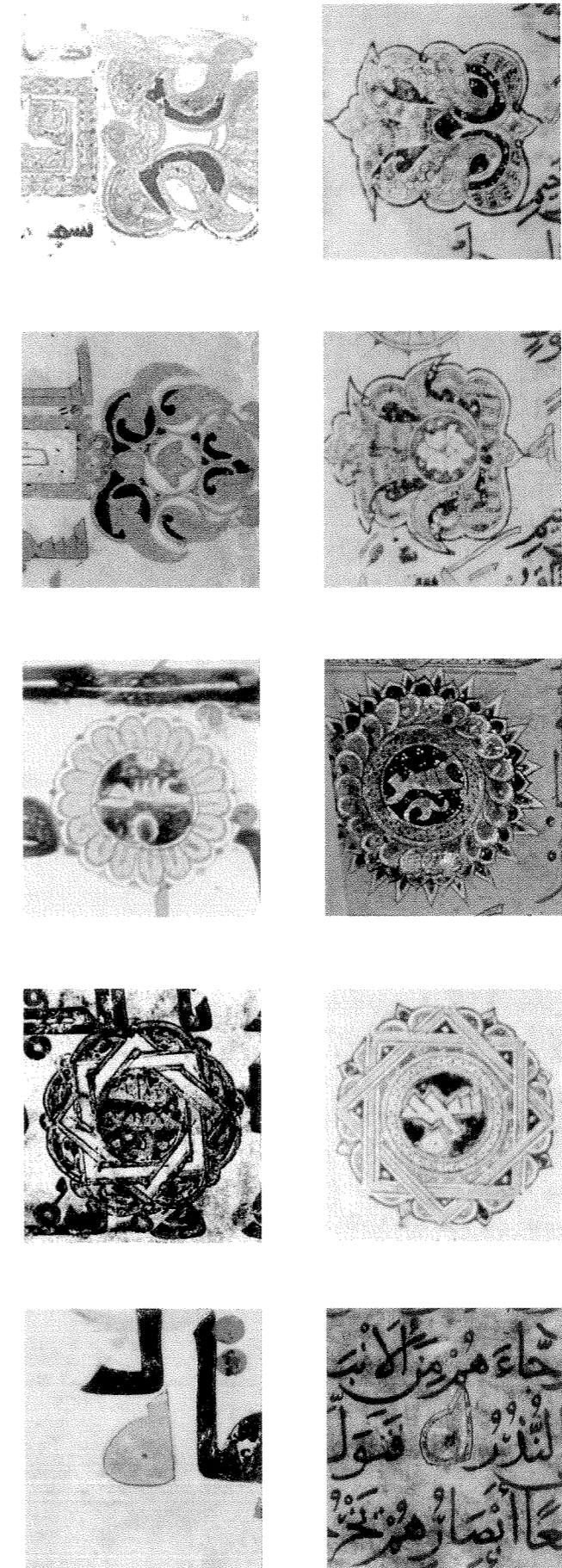




78. Qur'an written in cursive calligraphy, probably in the early eleventh century (Khalili QUR284, 14 x 11 cm).

corner of Figure 75). Monumentalized, gilded cursive is essentially the adaptation of its Kufic equivalent, and it appears in the same positions: as an ornament for the illumination or for sura titles. The Qur'an of Ibn al-Bawwāb, in the end, represents a major novelty mainly in terms of its cursive script. Its other features, notably the geometry of the page and decoration, are more or less closely related to earlier Qur'anic calligraphy.

Similar remarks can, in fact, be extended to cursive Qur'anic calligraphy of the eleventh century. The lines remained parallel, equidistant and laid out in a regular number within manuscripts. Text box proportions may still have been used.<sup>31</sup> At the level of decoration, the basic motifs inherited from Kufic (rosettes, illumination patterns, golden or coloured sura titles framed in a rectangle extending into marginal palmettes) continued to be employed, whilst undergoing a natural evolution in form, comparable in its pace to that of previous centuries. The New Style remained largely in use for sura titles and other decorative devices (Figure 78); it is even marginally present in the Qur'an of Ibn al-Bawwāb (see the rosettes in Figure 75).<sup>32</sup>



79. Decorative devices in the Kufic tradition (left) and the Qur'an of Ibn al-Bawwāb (right).



The degree of scribal continuity between Kufic and proportioned cursive is therefore stronger than has generally been recognized. In fact, by comparison with the New Style, the step that was made is small, but important: the elevation of cursive, through its supple codification along the lines initiated with NS, to the rank of Qur'anic calligraphy. Rather than a revolution, it appears as a groundbreaking evolution. The overall pattern is, surprisingly, recalled by Ibn Khallikān (d. 1282) in his biography of Ibn al-Bawwāb:

It was Abū 'Alī ibn Muqla who first took the present system from the writing employed by the people of Kufa and brought it out under its present form. He had therefore the merit of priority, and it may be added that his handwriting was very elegant; but to Ibn al-Bawwāb pertains the honour of rendering the character more regular and simple, and of clothing it in grace and beauty.<sup>33</sup>

The process described echoes the material record: the system used in Kufic was transferred to secular book hands, gradually giving rise to a new paradigm of proportioned calligraphy which reached its full maturity at the time of Ibn al-Bawwāb (d. 1022 or 1031). However, one point made here remains problematic: Ibn Khallikān is the first writer known to have ascribed the invention of the 'proportioned script' to Ibn Muqla, and this over three centuries after the latter's death.

### *The role of Ibn Muqla*

Abū 'Alī ibn Muqla (886-940) was the vizir of the Abbasid caliphs al-Muqtadir, al-Qāhir and al-Rāḍī for six years between 928 and 936.<sup>34</sup> The beauty of his writing and that of his brother Abū 'Abdallāh (892-949) were noted by several authors in the tenth century. One of their contemporaries, Ibn 'Abd Rabbih (860-940) mentioned the vizir among other penmen who worked at the service of different caliphs, adding that 'his calligraphy is characterized by excellence.' According to Ibn Taghrī Birdī (d. 1470), al-Ṣūlī (d. 946) also said he had not seen a vizir who was a better penman than Abū 'Alī since the days of al-Qāsim ibn 'Ubaydallāh (d. 904). In the 980s, al-Nadīm, who had seen manuscripts in their hands, praised the beauty of both brothers' handwriting, putting more emphasis on Abū 'Abdallāh.<sup>35</sup>

While it seems beyond doubt that the two brothers were accomplished penmen, there is no indication, here, that they were responsible for a reform of the script, as noted many years ago by Nabia Abbott.<sup>36</sup> A further early source has come into print since her work on the subject: the *Risāla fī 'ilm al-kitāba* by Abū Ḥayyān al-Tawḥīdī (c. 922 or 932-1023).<sup>37</sup> More than a technical treatise, it is a collection of aphorisms and anecdotes on calligraphy. At the beginning of the epistle, Tawḥīdī asserts that contemporary styles were handed down in an uninterrupted chain of transmitters from the companions of the Prophet 'unto Ibn Muqla, [Yāqūt] and others who modified them according to their own judgement.'<sup>38</sup> Ibn Muqla appears, like in earlier texts, as one in a long line of calligraphers, and as particularly prominent in his own age. Tawḥīdī also cites one sentence by 'the accurate expert' (*al-mudaqqiq al-fāḍil*), Ibn Muqla, about the reed.<sup>39</sup> However, we cannot be certain that even these fairly common remarks were indeed his, since similar aphorisms appear under other names in this treatise and in others.<sup>40</sup>

The epistle continues with a discussion of the way to write individual letters. As noted by Franz Rosenthal, it is not clear from the text itself whether this section should also be attributed to Ibn Muqla.<sup>41</sup> In either case, it does not deal with geometry but rather with the loops within letters and the connections between them. Only in relation to *ṣād*, *kāf*, *ṭā'* and similar letters does it mention the need to preserve their 'proportionality and equality' (*al-tanāsub wa'l-tasāwī*).<sup>42</sup>

An aphorism further down the line might come closer to the point. During a conversation between the author and another *kātib*, Abū 'Abdallāh ibn al-Zanjī, in Azerbaidjan, the latter praised the superior skill of their colleagues in Iraq, and so Tawḥīdī asked his opinion about the handwriting of Ibn Muqla. He received this response:

He is 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.<sup>43</sup>

The reference to the bees, which is Qur'anic,<sup>44</sup> may contain an allusion to the geometrical character of his writing, or it could simply refer to his natural predispositions. Tawḥīdī's more open references to the geometry of the script, on the other hand, do not involve Ibn Muqla.<sup>45</sup> The author also records words heard from a certain Ibn al-Zuhri, who

he says had in been in contact with Ibn Muqla, Ibn al-Zanjī and the Banū Thawāba. These prescriptions are, again, mainly about the connections between letters, with only the following remark at the end:

The decisive factor is the ability to keep the end of the lines straight, to make even the beginnings of the letters, to preserve order and arrangement (*al-tansīq*), to avoid precipitation, to show forcefulness while letting oneself go and to let one's hand go while using a forcefully compact writing.<sup>46</sup>

These comments, directly recorded from a reputed acquaintance of Ibn Muqla, refer only to the most elementary aspects of layout, without going much further than, say, Ibn Durustawayh a century earlier.<sup>47</sup> On the whole, Tawhīdī, like his contemporaries, perceived Ibn Muqla as an outstanding calligrapher of his age. He gives two separate references which, even if we put them together, may or may not imply that the vizir played a role in the geometrical codification of the script.

The association of the Ibn Muqla brothers with the proportioned script only explicitly appeared three centuries later, with Ibn Khallikān, and became common knowledge thereafter, as documented by Abbott.<sup>48</sup> The earliest textual fragments on calligraphy attributed to Ibn Muqla are possibly those found in al-Qalqashandī (c. 1355-1418).<sup>49</sup> Interestingly, as in later manuscripts of treatises ascribed to the same author,<sup>50</sup> these passages only state the number of strokes in each letter, and their successive shapes: horizontal (*munsatīh*), vertical (*muntasīb*), curved (*muqawwas*), bent [to the right] (*mustalqin*), slanting [to the left] (*munkab*).<sup>51</sup> These excessively vague descriptions vary significantly between the various surviving versions.<sup>52</sup> Nowhere is the thickness of the pen mentioned; only for two letter shapes do we find a mention of the *alif* and circle, as well as a very basic reference to proportion (which is itself of uncertain reading):

*Rāʾ* consists of a curved stroke, corresponding to one quarter of the perimeter of the circle which has the *alif* as its diameter in a proportion determined by thought (*fi nisba muqaddara fi al-fikr*). *Nūn* consists of a curved stroke corresponding to half a circle in a proportion determined by thought.<sup>53</sup>

Qalqashandī (and, in our age, Ahmad Maher Rayef) had to complement these impractical guidelines with further comments,

primarily by the Ikhwān al-Ṣafāʾ, in order to produce an informative description of the script.<sup>54</sup> The attribution of this apparently archaic treatise to the tenth century is plausible, and many of Qalqashandī's quotations of other extant works are authentic. On the other hand, its subject matter remains far below a codification based on geometry, proportion and the thickness of the pen. Furthermore, one cannot be certain that this or another *Risāla* was indeed written by Ibn Muqla. The silence of contemporary sources, especially the *Fihrist*, on anything related to a treatise by either brother is conspicuous: if it did exist and was so influential as to change the whole of contemporary calligraphy, why was it never mentioned by them, even in passing? Why did Nadīm extensively cite a treatise by Ibn Thawāba (a famous *kātib* also mentioned by Tawhīdī), but not Ibn Muqla?<sup>55</sup> Why did the only possible allusion linking him to geometry arise in an informal conversation between two scribes, briefly inserted in the middle of a long epistle?

This silence raises the possibility of a conflation: an anonymous treatise, which had circulated among scribes in the tenth century, later became attributed to Ibn Muqla, in the same way that manuscripts of this period came to carry his name. That it may initially have been confidential is suggested by the fact that the Ikhwān al-Ṣafāʾ presented their scribal rules as the knowledge of 'people of the craft' reported by a *'muḥarrir ḥādhiq*.<sup>56</sup> This would have been unnecessary if established manuals had existed.

In fact, we have already observed that the essence of the 'proportioned script' had already been established by 905. At that time, Abū 'Alī ibn Muqla would have been only about nineteen years old, and his brother Abū 'Abdallāh, thirteen. This leaves us with two possibilities: either they contributed to the stylistic refinement of the New Style; or they played no fundamental role in the transformation of script. In any case, neither Ibn Muqla brother was responsible for the codification of the letters on the basis of the *alif* and circle. Were it not for the influence of much later authors, this idea would not even have entered the minds of modern scholars. It seems that, having been singled out by their contemporaries as great penmen of the age, they gradually came to have their name associated with the underlying scribal evolution.

### *Calligraphy and the breakdown of the empire*

The tenth century was a period of political fragmentation and social change in the Islamic world. In the West, the Fatimids, a dynasty that claimed descent from Ismā'īl, son of the imam Ja'far, established their rule over North Africa in 909, before conquering Egypt in 969. The Fatimids, who sought to challenge Abbasid supremacy and propagate the Ismā'īli creed, soon declared themselves as caliphs (a third claim to the same title was, in turn, laid by the Umayyads of Spain in 929). One might wonder whether this state of affairs had any resonance in the realm of calligraphy. In his work on the Sunni revival and its impact on the arts, Yasser Tabbaa has thus argued that the rise of the New Style was related to the official endorsement of the Seven readings of Ibn Mujāhid by Ibn Muqla; while in the next generation, the emergence of cursive calligraphy was part of the reassertion of Sunni orthodoxy by the Abbasids, notably the caliph al-Qādir; the Fatimids, in turn, would have adopted a distinct approach to calligraphy, marked by a rejection of contemporary trends.<sup>57</sup> Before turning to this historical background, a few words ought to be said about a longstanding issue which became exacerbated in that period: the variant readings of the Qur'an.

According to Muslim tradition, after the official recension of the Qur'an was promulgated by 'Uthmān, several codices with divergent texts, notably that of Ibn Mas'ūd (d. 653), remained in existence, despite the caliph's order to have them destroyed.<sup>58</sup> The variants they contained concerned the skeleton of the text and may, in places, have had an incidence on meaning. In the early decades of Islam, only the consonants, long vowels and, to some extent, the diacritics could be included in the written form of Arabic.<sup>59</sup> The text of the Qur'an, as attested in Hijazi manuscripts, thus left a number of essential orthographic signs, such as the short vowels (*ḥarakāt, niqāt*), doubling of consonants (*shadda*) and glottal stop (*hamza*), unrecorded.

In the Umayyad period, the short vowels began to be noted in some manuscripts, using a system based on red dots placed under, below or on the line.<sup>60</sup> This layer of notation, however, did not have the same definitive and official status as the skeleton of the text, the 'Uthmānic *rasm*. Variants relating to this and other orthographic features thus developed in the eighth century, and became attached

to the names of different readers. Though they were not of much significance to the meaning of the text, they did considerably matter for recitation. One reading, that of Ḥafṣ (d. 796) after his teacher 'Āṣim (d. 745), eventually prevailed in the Cairo edition of 1923, the standard version of the Qur'an today.<sup>61</sup> But in the ninth century, many more also existed and several were sometimes recorded side by side in manuscripts. Pre-'Uthmānic variants also remained in circulation, despite attempts by the authorities to suppress them.<sup>62</sup>

At the close of that period, Ibn Mujāhid (d. 936), a religious scholar, established a list of seven canonical readings which, being based on the 'Uthmānic *rasm*, also followed certain criteria of authoritative transmission and correct grammar. At his instigation, two Qur'anic reciters were brought to trial in 934 and 935.<sup>63</sup> The first, Ibn Miqsam, had advocated the recitation of any grammatically correct reading, as long as it followed the 'Uthmānic *rasm*. The second, Ibn Shannabūdh (or Shanbūdh, Shanabūdh), had gone even further by reading and teaching the pre-'Uthmānic recensions of Ibn Mas'ūd, Ubayy ibn Ka'b and others. As vizir of the Abbasids, Ibn Muqla was present at the latter trial and Ibn Shannabūdh was flogged after refusing to recant before him.

These events have sometimes been interpreted as an official endorsement of Ibn Mujāhid's readings by Abbasid authorities.<sup>64</sup> But as shown by Christopher Melchert, their ideological rationale is less transparent than may appear. Beside the fact that personal rivalries were at stake in the trials, the Seven readings are never mentioned in their accounts: the heart of the matter rather seems to have lain in the repression of some particularly disputable practices.<sup>65</sup> Significantly, several authors after Ibn Mujāhid were able to compile lists of up to ten readings (and sometimes even fourteen) without stirring up controversy: this would not have been easily acceptable, had the Seven become an official canon.<sup>66</sup> Thus even though Ibn Muqla was involved in several anti-Shi'ite actions, his role in the long process leading to the establishment of a standard Qur'anic text should not be overplayed.<sup>67</sup>

When we look at the manuscript record, it seems just as difficult to associate the New Style with an assertion of Sunni orthodoxy. The essence of the 'proportioned script' had come into existence before the breakdown of the Abbasid empire. While some manuscripts

in the New Style and the early stages of cursive were made for or written by Sunnis, others had Shi'ite patrons or scribes. For example, the *Muqtaḍab fī al-naḥw* copied by Muḥalhil in 959 (Figure 74) was commissioned by one Abū al-Ḥusayn Muḥammad ibn al-Ḥusayn al-'Alawī: although the man is unknown, his name clearly suggests a Shi'ite persuasion.<sup>68</sup> The broad social ramifications of NS also run against the idea of a given ideological inclination: among dated examples alone, its use is attested for mystical writings, legal, grammatical, scientific and historical treatises as well as Bibles.<sup>69</sup>

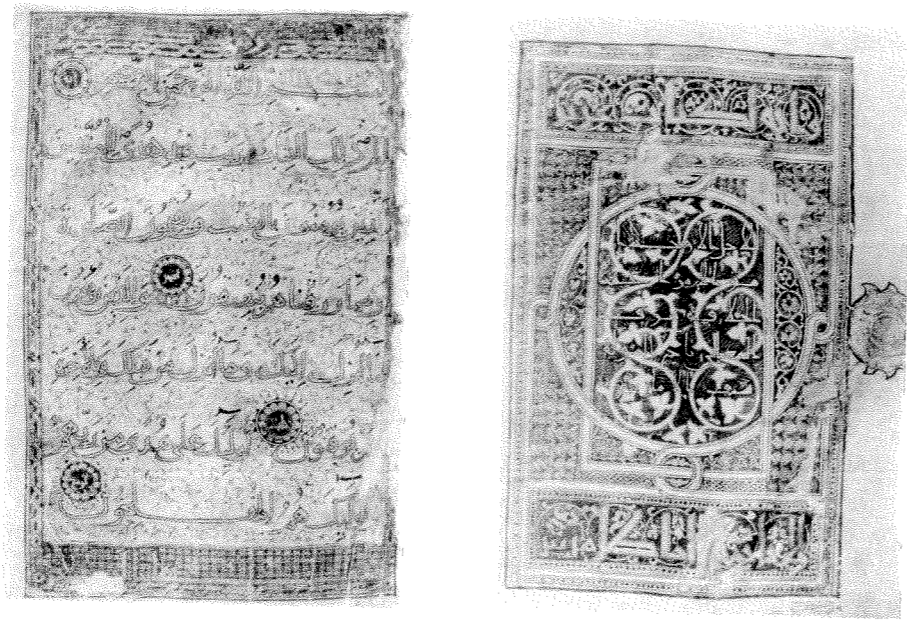
Similar remarks apply to the subsequent growth of cursive. In the lifetime of Ibn al-Bawwāb, Baghdad lived under the rule of a Shi'ite dynasty, the Buwayhids. The ideological orientation of the polity was a subject of deep dissension between the Buwayhid emirs, whose power was based upon Shi'ite allegiances but who also sought to rally the Sunnites, and the Abbasid caliph al-Qādir (r. 991-1031). Al-Qādir appears to have followed the political line of the Buwayhids until the year 1000, when his intention to re-establish Sunni orthodoxy began to surface. In 1006, following agitations in Baghdad, he convened a commission of Sunni scholars to condemn the recension of Ibn Mas'ūd, which was favoured among Shi'ites. His profession of faith, the *Risāla al-qādiriyya*, explicitly defined Sunni orthodoxy for the first time, establishing the Abbasid caliphs as its leaders against all other religious currents. This work written by the theologian al-Bāqillānī (d. 1013) was first read at the Buwayhid palace in 1018 and further elaborated in 1029.<sup>70</sup> The Qur'an of Ibn al-Bawwāb – and its script – predate all these developments. What is more, they represent the fruition of a process that was already under way decades earlier, in 959, and probably began in secular calligraphy.

According to his biographers, Ibn al-Bawwāb was buried near the tomb of Aḥmad ibn al-Ḥanbal, so he must have been a Sunnite.<sup>71</sup> But Yāqūt (1179-1229) also tells us that he worked for the Buwayhid emir Bahā' al-Dawla in Shiraz and became an intimate of the dynasty's vizir Fakhr al-Mulk when the latter assumed the governorship of Baghdad, in 1010.<sup>72</sup> Our meagre biographical information suggests that if, in his lifetime, Ibn al-Bawwāb ever leaned towards either side, it was probably that of the Buwayhids. In his surviving Qur'an manuscript, 'Alī ibn Abī Ṭālib is also called *amīr al-mu'minīn* ('commander of the

faithful') in the opening illumination, while the colophon invokes the 'Pure Family' of the Prophet, as if to confirm a Shi'ite inclination.<sup>73</sup>

There is equally little to suggest that the Abbasids' main rivals, the Fatimids, sought to distinguish themselves from the mainstream in calligraphy. This is, first of all, evident from texts.<sup>74</sup> According to the early Fatimid historian al-Musabbiḥī (d. 1029), a collection of calligraphy in the 'proportioned script' belonged to the Dār al-'Ilm, the dynasty's major library in Cairo, which was opened by the caliph al-Ḥākim in 1005.<sup>75</sup> Rashīd ibn al-Zubayr (d. 1168) also records that among the objects plundered from the treasury of the Fatimid caliph al-Mustanṣir between 1067 and 1069 were volumes 'written in gold [script] outlined with lapis-lazuli' by Ibn Muqla and Ibn al-Bawwāb, together with pens sharpened by their hands.<sup>76</sup> In his account of the same events, al-Maqrīzī (1367-1441) mentions, alongside these pens, 2,400 bound volumes of the Qur'an 'in proportioned script of the greatest beauty, embellished with gold, silver and other colours.'<sup>77</sup> Citing Ibn al-Ṭuwayr (1130-1220), he goes on to say that numerous Qur'ans 'written by Ibn Muqla and his peers, such as Ibn al-Bawwāb and others' belonged to the dynasty's book treasury (*khizānat al-kutub*).<sup>78</sup> These sources suggest that the Fatimids had no aversion for the 'proportioned script' and that they held the work of Ibn Muqla and Ibn al-Bawwāb in high esteem, for they collected not only manuscripts attributed to them, but also their pens.

In the material record, documentary remains of the Fatimid period are extremely rare, yet some pieces of evidence do survive. Three extant manuscripts are known to have belonged to Fatimid treasuries between the late eleventh and mid-twelfth centuries: they all display high standards of calligraphy in the New Style and proportioned cursive.<sup>79</sup> Closer in date to our period of interest is the so-called 'Ṣulayḥid Qur'an', written in lavish gold cursive in 1026 (Figure 80).<sup>80</sup> Its opening pages mention the caliph al-Mustanṣir and dedicate the manuscript to the 'support of the caliphate' 'Alī ibn Muḥammad al-Ṣulayḥī (d. 1066 or 1080). The latter was the founder of an Ismā'īlī dynasty which acknowledged the Fatimids and ruled much of the Yemen between about 1047 and 1138.<sup>81</sup> A copy of the letter in which al-Mustanṣir grants him this title is preserved: it is dated 1064, so the illuminations must have been added to the manuscript between that year and 'Alī's death.<sup>82</sup> Stylistically, the geometrical treatment of their



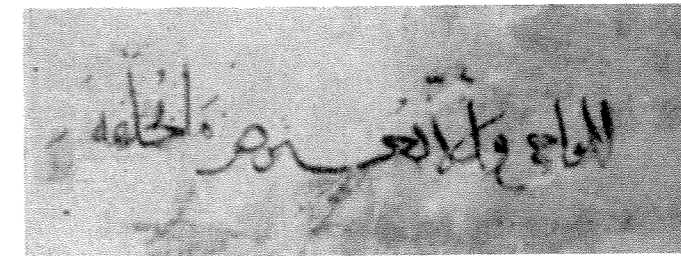
ground, scrolls with palmettes and gold titles on blue all recall the Qur'an of Ibn al-Bawwāb.<sup>83</sup>

It is unlikely that a close ally of the Fatimids, himself a convinced Ismā'īlī, would have endorsed this Qur'an and associated it to their authority, had there existed an ideological bias against cursive scripts. This idea is confirmed by extant Fatimid caliphal decrees, which are all in high-quality cursive, including the earliest preserved one, written in 1024 in the name of al-Zāhir (Figure 81).<sup>84</sup>

The Palermo Qur'an, a fine example of the New Style, was completed in 983, at a time when Sicily belonged to the periphery of the Fatimid empire (Figure 71). By then, however, the island seems to have been moving away from Fatimid orthodoxy: Ibn Ḥawqal, a supporter of the dynasty who visited Palermo in 362/973, had already found it corrupt as to religion.<sup>85</sup> One of the manuscript's marginal medallions contains the phrase: 'the Qur'an is the word of God and it was not created.'<sup>86</sup> This apparently anodine statement harks back to one of the most virulent theological debates of the ninth century, the createdness of the Qur'an, which continued to divide Muslim communities in the tenth century.<sup>87</sup>

The vast majority of North African and Sicilian Sunnis were, in that period, followers of Saḥnūn (d. 855), who had been tried in Kairouan for his belief in the uncreated nature of the Qur'an.<sup>88</sup>

80. The Sulayhid Qur'an. The text was written in 417/1026 and the opening illuminations added between 1064 and 1080.



The Fatimids, on the other hand, did not uphold the dogma of the uncreated Qur'an, like most Shi'ites. The Palermo manuscript may thus represent the production of a Sicilian community, probably of Māliki obedience, seeking to assert Sunni orthodoxy.<sup>89</sup> But in the light of what has gone before, I would be reluctant to claim that its *script* carried any ideological connotation.

Another famous manuscript, the 'Blue Qur'an', could have been brought into this discussion, having been ascribed to the early Fatimid period by Jonathan Bloom,<sup>90</sup> but it may in fact be considerably earlier than has recently been assumed (this complex question, being mainly related to Kufic script and decoration, will be developed in a separate publication).

### *Economy, orthography and legibility*

While the relationship between political motives and the scribal evolutions of the tenth century remains elusive, several other trends were clearly at play in the manuscript record. One of them is the improvement of orthography.<sup>91</sup> A first testimony of this development is the *Gharīb al-ḥadīth* of 866, with its modern vocalization signs and nearly complete diacritics (Figure 68). In the same period, some Qur'ans in styles D.I and D.III were also moving towards full notation of the diacritics and vocalization by means of the typical dashes and red dots of Kufic. This trend became general in D.V and was pursued after the advent of the New Style.<sup>92</sup>

In mature Kufic, different combinations of green, blue and yellow dots were sometimes added to record further orthographic signs, as well as variants between Qur'anic readings. The underlying conventions differed between manuscripts.<sup>93</sup> This type of notation was, again, taken over and developed in NS, where it became more common than in Kufic. In the Palermo Qur'an, for example, red dots indicate the

81. Detail of a decree by the Fatimid caliph al-Zāhir granting privileges to Coptic monks (Egypt, 415/1024, width 32 cm).

vocalization alongside yellow dots for *hamza*, blue dots for *alif* of liaison, the modern notation of *shadda* and a variety of signs in thin red ink for additional orthographic purposes.<sup>94</sup> Interestingly, the scheme used in this Sicilian manuscript closely resonates with the description made by al-Dānī (982-1053), our main source on this subject, of a Qur'an written and vocalized in 227/842 by Ḥakam ibn 'Imrān, whom he calls 'the vocalizer of the people of al-Andalus.'<sup>95</sup> Similar observations about regional practices abound in the same treatise: their confrontation with actual manuscripts may have the potential to yield insights into the question of geographical origins.

The combination of old and modern orthographic signs exemplified by the Palermo Qur'an was another widespread trait of the New Style, where the modern notation of *shadda*, *hamza* and *sukūn* is commonly found alongside more traditional vocalization signs; this, again, finds parallels in Kufic style D.V.<sup>96</sup> An altogether different innovation contributed to the same logic of completeness: the addition, at the beginning of manuscripts, of tables giving detailed verse counts. While they may have initially emerged in Kufic, they only become clearly attested with the New Style.<sup>97</sup>

Just as the orthography grew more comprehensive, a second tendency was also gaining momentum: economy. Paper, being based on vegetal components, was much less expensive to produce than parchment, which required large amounts of animal skin of a standard format. In the New Style, some lavish manuscripts, such as the Isfahan Qur'an (Figure 72), still had an impressive format with only a few lines per page. But it also became increasingly common to produce small vertical codices (15 x 10 cm or under) with at least ten lines of text. This trend is epitomized by one miniature Qur'an in the Khalili collection which fits some thirty lines of script into pages of only 7.3 by 6 cm (Figure 82).<sup>98</sup> This evolution had already started with the D styles of Kufic.<sup>99</sup> It became systematic in cursive Qur'ans of the eleventh century, which almost all have a small format and over fifteen lines of text.<sup>100</sup> Because of its more flexible scribal rules, proportioned cursive could also be written to the highest standard by a trained scribe at considerably greater speed than Kufic or even NS. These changes all imply a reduced consumption of time, labour and writing material.

The tenth century was finally marked by a drive to enhance legibility. Proportioned cursive and the New Style had the advantage of being



closely related to contemporary everyday scripts, which must have contributed to their general accessibility.<sup>101</sup> A further contributing factor, in cursive, was the differentiation of spaces between and within words, whereas in Kufic and NS they had been equal. The diacritical signs used in cursive (thick dots) also have a better contrast than in Kufic and NS (thin dashes). These shortcomings were partly compensated, in Kufic and NS, by the tendency to write in larger scripts: one major achievement of Qur'anic cursive was thus to allow clear calligraphy to be written at a fast pace, on a small scale.

The underlying evolution was a broad, incremental process spread over a long period of time, which mirrored the transformation of society. By the tenth century, Muslims had come to make up the majority of the population in many regions, increasing the demand for both public and personal copies of the Qur'an.<sup>102</sup> The enormous expense incurred to produce a thirty-volume Kufic Qur'an on parchment must, at some point, have become incompatible with the needs of local communities. The adoption of Islam by growing numbers of non-native Arabic speakers probably added a further impetus to the improvement of orthography. The underlying change was reflected, in manuscript production, by the move away from a distinct corporation of Qur'anic scribes towards society at large.<sup>103</sup> It is only in such conditions that, by the tenth century, fairly detailed

82. Miniature parchment manuscript in the New Style, shown to real size (Khalili QUR430 7.3 x 6 cm).

instructions on the basic proportional rules of the script could be made public by the Ikhwān al-Ṣafā'. The new approach eventually obliterated the geometrical unity of the Qur'anic page. From being one whole bound together by successive proportional relations, it became divided into two parts: script and layout, each arranged according to its own geometrical principles. This shift of paradigm is reflected by the Ikhwān who, while asserting that calligraphy was a musical art, could not explain the concrete relevance of musical ratios to its practice.

The transformation of Arabic script in the tenth century thus marked, in many ways, the end of an era. In technique, it resulted from a new codification of the letters which was closely adhered to in the New Style, then gradually rendered more supple in cursive. But in this process, continuity with the Kufic past was stronger than appearances would suggest, notably as the founding principles of the old system – geometry, proportion and the thickness of the pen – were carried into the new. The major force behind this development lay in the transformation of Muslim society and the need of wider, less specialized audiences to consult the Qur'an, as well as a growing range of other texts. At the same time, the ethos inherited from Late Antiquity, which had stood at the root of all these developments, was receding into the background, eventually to be completely forgotten until our day.

## Appendix

### *Guidelines to Déroche's script classification*

This classification serves to identify the style of any given early Qur'anic manuscript, and thereby link it to a larger scriptural group. It can be compared, in its workings, to the typeface of modern fonts. In its present state, it remains a work in progress, which will continue to be refined as more manuscripts come under study.\* There are seven scriptural groups (A to F, NS), each distinguished by a set of basic features. Groups B, C, D and NS are divided into several subgroups (e.g. B.II, D.Vb). For purposes of clarity, the most salient characteristics of each major style are singled out in the following pages.\*\* Readers are referred to Déroche's publications for more comprehensive definitions.

Sources: Déroche 1983a: 35-47 (French), Déroche 1992 (English), Déroche 2004b: 231-5 (Marcel 13).

\* Modifications have been made below to the original definitions of *hā'* and final *nūn* in C.Ia, a style for which the documentation initially available to Déroche was limited.

\*\* In order to simplify notation, those letters sharing the same grapheme have been designated by a single name, e.g. *jīm* for *jīm/ḥā'/khā'*, *ʿayn* for *ʿayn/ghayn*, and so on.