Avicenna’s Copyists at Work:  
Codicological Features of the Two Leiden Manuscripts of the *Kitāb al-Shifāʾ*

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Abstract
Two manuscripts of Ibn Sīnā’s *Kitāb al-Shifāʾ* kept in Leiden’s library have played a role of some importance in the transmission and edition of that text. In the present article these two manuscripts are, for the first time, subjected to a detailed codicological analysis. From the results of this analysis the history of the making of either manuscript and the state of repairs in one of them could be reconstructed. The authenticity of Ibn Sīnā’s text as contained in the manuscripts could be given more nuance than ever before. The article is an illustrated advice to let codicological observation and analysis precede textual criticism.

Keywords
Ibn Sīnā, Leiden University Library, Islamic philosophy, codicology, Islamic manuscripts

Introductory Remarks
In the bibliographical literature (notably Anawati and Mahdavi)\(^1\) the two Leiden manuscripts of Ibn Sīnā’s *al-Shifāʾ* are known as MSS Leiden 1444 and Leiden 1445. Neither manuscript contains the full text, nor can we be sure that the text that they present is uncontaminated. The references Leiden 1444 and Leiden 1445 are the serial numbers given in the *CCO*, the old catalogue of the

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Leiden library, published in 1865. That description is the most recently published description by autopsy of the two manuscripts. These CCO numbers are not, however, shelf marks or class-marks in the Leiden library, and these numbers are not found in the Leiden manuscripts themselves. Yet these CCO numbers very prominently exist in the bibliographical literature on Ibn Sinā as they have been chosen as reference by Carl Brockelmann in his *Geschichte der arabischen Litteratur*, and that in turn has proved to be decisive for practically all later references to these manuscripts. Brockelmann’s choice of the serial numbers of CCO (and later its successor, CCA) is the cause, now for more than a century, of bibliographical confusion for the Arabic manuscripts in the Leiden library. The class-marks of the two Ibn Sinā manuscripts, Or. 4 (= CCO 1444) and Or. 84 (= CCO 1445), are the numbers by which the two manuscripts have always, since they were acquired early in the seventeenth century, been retrievable in the Leiden library.

Neither of the Leiden manuscripts has information about the exemplar(ia) from which they are copied. The two Leiden manuscripts are certainly not the oldest surviving manuscripts of the *Kitāb al-Shifāʾ*, on the contrary, they seem relatively late. They have, however, entered the corpus of textual witnesses of Ibn Sinā’s work and they were used for the Cairo edition, albeit in a rather limited way. The editors of several of the volumes of the Cairo edition of *al-Shifāʾ* did indeed use parts of the two Leiden manuscripts, supposedly from microfilms. At the time of the great project of the publication of the multi-volume edition of *al-Shifāʾ* hardly any codicological information was available to the editors. That is why it seems useful to describe the physical features of the two Leiden manuscripts more extensively than has been done before. It is hoped that the results gained from this process will encourage others to undertake the same task with the other manuscripts of *al-Shifāʾ*, much to the benefit, no doubt, to future editions.

Georges Anawati has, in his introduction to the edition of *De anima*, made an effort to work out a stemma of the different manuscripts, including the two Lei-
den ones, or at least to point out connections within the corpus of manuscripts.\textsuperscript{7} Zakarīyā Yūsuf has used MS Leiden Or. 84 for his edition of the book on music and gives as his overall impression of the quality of the text that it is full of mistakes.\textsuperscript{8} Ahmad Fu‘ād al-Ahwānī used a Leiden manuscript for his edition of the \textit{Topica}, but he does not indicate which one.\textsuperscript{9}

**MS Leiden Or. 4**

*Introductory Note*

This huge codex of luxurious manufacture and aspect, a true \textit{makhṭūṭa khazā’i-niyya}, contains three out of the four \textit{Jumal} of the \textit{Kitāb al-Shifā’}. It must have been made for an important patron. Age and origin of the manuscript cannot be determined with certainty, but it is surely considerably older than the 10/16th-century owner’s mark on the title-page. At some stage of its existence is was heavily damaged, with considerable loss of text. This has been substituted from unknown sources. The 4th \textit{Jumla} may have been lost at that time as well, without having been replaced. The substitution of lost text dates from before 1629, the year in which the manuscript was incorporated into the Leiden collection, and it may have been provided by a bookseller who wished to add value to an otherwise doubtful manuscript which was once a splendid book. It shows many traces of use. Numerous readers have, in the course of time, written collation notes in the margins.

*Details of Physical Appearance*

The manuscript is made of indigenous, Middle Eastern, paper of one single type (except for ff. 42 and 293, which are later inserts, though still made of indigenous paper), of a brownish colour with numerous vegetal elements visible in the structure of the paper. The structure of the paper shows traces of a mould with chain-lines and laid-lines. The chain-lines (vertical) are sometimes in groupings of two, but there are also single chain-lines. The chain-lines (vertical) are sometimes in groupings of two, but there are also single chain-lines. These groupings are not uniform.


I noticed in the same leaf (f. 88, a random choice) a grouping with an internal distance of 10 mm and another one with 16 mm of internal distance between the chain-lines. In between the two groupings is a single chain-line. The laid-lines (horizontal) are clearly visible and have a frequency of c. 27 lines per 50 mm (f. 298, chosen because of visibility by lack of written text). The paper is sturdy and rather thick: 100 ff. together measure c. 14 mm. There are numerous skilfully executed repairs in the paper (including considerable replacement of text), especially in the latter part of the volume.

There are no precise leads as to from where the paper originates. As one type of paper is used for the entire volume, the different copyists must have worked in some sort of co-ordinated way, and in the same place and at approximately the same time. Further investigation and comparison with safely and positively dated and located samples of paper is necessary, but for the moment there does not exist a corpus of paper samples on the basis of which even an attempt to determine date and origin could be made. Helen Loveday has proposed protocols for paper determinations and she has noted for several periods a number of characteristics of Persian paper on the one hand and Syro-Egyptian paper on the other. However, so little is known about ‘Oriental paper,’ that no important results in the nearby future should be expected from further research in this direction.

The volume contains 339 ff., measuring 39 × 30 cm with a text area of c. 29.7 × 21.3 cm. The script can best be described as ‘old naskh’ with taʿliq features, and is written by at least four distinctly different copyists. The entire text is set within a double frame in red ink, and each page contains 39 lines (apart from a few exceptions) of text, which are written on blind ruling that is not made with a mistara. The text is written in brown-black ink with use of rubrication. Headings

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10) I do not follow Helen Loveday, *Islamic Paper: A Study of the Ancient Craft* (London: [no publisher indicated], 2001), 56, in her use of a micrometer, as I find this impractical during my field work. My data are, therefore, approximate and certainly less accurate than hers. When I wish to have an idea of the average thickness of paper of a certain manuscript, I measure the thickness of one hundred leaves in millimeters, and then divide the outcome by one hundred.

11) Loveday, *Islamic Paper*. Especially innovative in this respect is Loveday’s ‘Table of Results’ (pp. 80–87), though it lists almost as many identical features between the two types, which Loveday distinguishes, as differences. Another problem is the question of how securely the specimens of Loveday’s corpus are dated and located. Creating a corpus of safely dated and located specimens should, I think, preferably be done in a large public collection where constant recourse to the original material is possible. The documentation available in a private conservator’s workshop does not seem to be the most appropriate place for this, how valuable the notes and other information in such a private practice may be.

are often in red and written in a thuluth-like script, by several different copyists. No names are given for the copyists, except that copyist 2 mentions himself: Muhammad b. al-Hasan b. Muhammad al-Kātib (f. 298a), but he does not give a date. The frame in which the text is set automatically solves the problem of the left-hand justification, but occasionally a word is too long and then the copyist writes the final part of the word further on in the margin (e.g. muqā | bala, f. 159a). This is one of the well-known devices of justification which are used by Muslim copyists.

There is extensive illumination work of good quality on the title-page (f. 1a), and on the illuminated double opening page (ff. 1b–2a). On f. 299b there is an ornamental heading in an archaic Kufi script. The upper cartouche on the title-page (f. 1a) contains the title of the book, the cartouche at the bottom of the page gives the name of the author. In the Shamsa in the central part of the title-page an ex-libris was never recorded. The manuscript must have been made for a wealthy patron or an affluent institution, but all details are lacking.

The volume is bound in full-leather standard binding of the Leiden library, which is possibly not older than the 19th century.

In the margins are numerous collations in a great number of different hands. Numerous skillfully executed repairs in the paper (including replacement of text), especially at the latter part of the volume.

Content


On f. 1b is the preface by Ibn Sīnā’s pupil, Abū ‘Ubayd ‘Abd al-Wāḥid b. Muḥammad al-Jūzjānī (GAL S I, 828), in which details on the composition history of al-Shifāʾ are given. Most of this preface has been edited in CCO vol. 3, pp. 316–319. See for the text of this preface also Mahdavi (1954), pp. 127–129.

In the upper margin of f. 2a, outside the frame, is Ibn Sīnā’s own introduction, with a table of contents. It was apparently skipped by the copyist and added by one of the collators.
Provenance

Since 1629 the manuscript has been in the Leiden library as part of the Golius collection. It was acquired for the Leiden library by Jacobus Golius (1596–1667) between 1625–1629 either in Aleppo or Istanbul.

Earlier owners are mentioned on the title-page (f. 1r):

– Muḥammad b. Mawlānā ʿAbd al-Karīm, without date.
– Hasan Chelebī, and his heirs, dated 957 (1550–1551)
– ʿAbd al-Razzāq b. ʿAbd al-Raḥmān b. ʿAlī b. ..., Friday 1 Rabīʿ II 9.8 in Qustānṭīniyya. The only years ending with 8 in the 10th century AH in which 1 Rabīʿ II falls on a Friday are 928 (1522) and 968 (1560).
– Ismaʿīl b. Yaḥyā b. Ismaʿīl, without date.

None of these previous owners is found in 郯kœprǔzāda’s Shaqāʾiq. On the title-page (f. 1r) there are at least two more owner’s notes, but these were mostly lost because of early restauration work.

Some Leaves Now in Disorder

At two instances the leaves of MS Leiden Or. 4 are presently in some disorder:

– f. 20 is bound between ff. 9 and 11, whereas it is numbered 10.
– f. 29 is bound between ff. 19 and 21.
– Order in which the leaves should be read as a continuous text: ff. 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 10, 21, 22.
– f. 42 is a single leaf of different paper, pasted onto f. 41b, with script in a different hand. It contains text of al-Shifāʾ.
– In ff. 248–260 the correct order of the leaves seems to be: ff. 248, 259, 250, 251, 252, 253, 254, 255, 256, 257, 258, 249, 260. A reader has indicated the correct order by using catchwords.

These irregularities may be the result of the binding or rebinding of the volume, probably after its arrival in Leiden. It may have arrived in Leiden without binding or with an original binding that was too damaged to be preserved. The present full-leather standard Library binding makes a 19th-century impression. Nothing specific is known about the earlier conservation history of the volume.
Copyists

At least four copyists seem to have written the main text in the volume:

- Copyist 1. ff. 1–119 (line 35), ff. 179a (line 26)–259b (line 39), 39 lines per page. *Nasta’liq* script (so in *CCO*) or rather *Naskh* with numerous *Ta’liq* features. His text is densely written, with 32 words on the line (f. 46a, last line), 37 words (f. 47a, last line), or 33 words on the line (f. 65a, last line).

- Copyist 2. ff. 119b (line 36)–f. 169a (line 39), ff. 260a (line 1)–298a (end). 39 lines per page, with densely written text: 34, 32, 37, 39 words on line 36–39 of f. 119b. *Naskh* script. F. 119b, line 35 *ashkala* = copyist 1; *lā shakl*, line 36 = copyist 2. This is the copyist who signs with his name on f. 298a: Muhammad b. al-Hasan b. Muhammad al-Kātib.


- Copyist 4. ff. 299b–339a (= end of the volume). This hand has 21, 25, 21, 26 words per line (f. 299b, lines 4–7 respectively), though, nearing the end of the volume, his writing becomes more dense, as if he foresaw that he would not have sufficient space to get his text finished on f. 339a, on which the last line runs vertically along the inside of the frame.

It is difficult to distinguish between copyist 1 and 2, or rather: to locate the exact place where copyist 2 takes over from copyist 1. Copyist 3 can easily be distinguished as he writes much less words per line than copyist 1 and 2. Both copyists No. 3 and No. 4 write less densely, but the hands are clearly distinct.

Quires and Quire Marks

Quire marks are used in order to maintain the correct order of the quires. In MS Leiden Or. 4 they are written in the upper left corner of the first recto page of the quires, though not all of these are visible anymore. In the first quire there is
no quire mark, which is normal as the title-page has, among other things, that function itself. These quire marks consist of ordinal numbers written in letters in large script, which is possibly not contemporary to the copyist: f. 10a: 3; f. 11a: 2; f. 51a: 6; f. 71a: 8; f. 89a: 10; f. 99a: 11; f. 109a: 12; f. 119a: 13; f. 129a: 14; f. 139a: 15; f. 149a: 16; f. 159a: 17; f. 169a: 18; f. 179a: 19; f. 189a: 20; f. 199a: 21; f. 209a: 22(?); f. 219a: 23; f. 229a: 24 (?); f. 239a: 25; f. 249a: 27; f. 259a: 26; f. 299a: 1 of Ilāhiyyāt; f. 309a: 2 of Ilāhiyyāt; f. 319a: 3 of Ilāhiyyāt (?); f. 329a: 4 of Ilāhiyyāt. These quire marks were possibly not written by one and the same person.

From the occurrence of these quire marks, it becomes clear that the usual quire in MS Leiden Or. 4 consists of five sheets (= ten leaves = twenty pages). This is normal for manuscripts coming from the heartlands of the Middle East. Beit-Arié observes that the usual composition of the quires in Persia and Central-Asia is four sheets, not five. However, Beit-Arié’s observations, valuable though they are, cannot always be used as strict criteria.

Catchwords

Catchwords are used to keep the leaves in order, but in a more precise way than the quire marks do. Quire marks guarantee the order of the quires in relation to one another. Catchwords, which seem to come later than quire marks in Arabic manuscripts, are used both to keep the leaves within the quire in order, and to guarantee the correct order among the quires. The two systems, catchwords and quire marks, usually do not coincide in one manuscript. As a rule, MS Leiden Or. 4 has no catchwords, but here and there in the manuscript, especially in the latter part, catchwords can be observed at their usual position: at the lower bottom of the verso page. In the case of MS Leiden Or. 4, these catchwords are later additions, and they have not been written by any of the copyists. It seems possible that they were written by the collators. They are in more than one hand, and these hands are different from the copyist’s using different inks, usually black, whereas the inks used by all copyists are of a brownish colour. It is evident that the catchwords have not been written when the manuscript was produced. They were still wet when the page was turned and often leave an offset image on the opposite recto page. It is probable that they are later additions. This is not uncommon a feature in manuscripts, and this occurs under different circumstances. They may have been added by someone (reader, collator.

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or bookseller), other than the copyist, in order to guarantee the correct order of
the leaves. Another possibility is that they were added by a bookseller who wished
to fraudulently sell an incomplete or disorderly manuscript as a complete or
well-arranged one. This should be further investigated in the case of MS Leiden
Or. 4 by more precisely collating its text with other manuscripts or a printed
edition.

**Foliation**

Foliation and pagination are relatively modern ways to keep the leaves of a manu-
script in order, or to enable easy reference. In the manuscript era they do not serve
a purpose as the distribution of the text over the pages is almost always different
in each manuscript. Sometimes leaves are counted, without being actually num-
bered (though this is sometimes done as well, mostly in legal texts), in order to
establish the value or to fix a price for the manuscript. On f. 1a of MS Leiden Or.
4 the number of leaves is indicated, though I do not know how to interpret this
note. It may, therefore, be an owner or bookseller who has written: | عدد أوراق | = 'the number of leaves is ... (?). In MS Leiden Or. 4, there are two foli-
ations, one in black ink, by an Oriental reader or librarian, the other in pencil
apparently by a European librarian, though not a recent one, it would seem. The
two numbering systems do not always coincide, which among other things has
to do with inserts, which were not counted as leaves by the Oriental librarian,
and with the disorder of some leaves (see above).

**Collation Work**

Here and there we see balāgh marks in the margin (e.g. ff. 134a, 198a, 246a, 265),
sometimes barely visible because of the trimming of the paper by the binder. A
considerable number of scholars have worked on MS Leiden Or. 4 or on parts
thereof and traces of their work abound in the margins. It goes beyond the scope
of the present description to even try to inventorise their work. On almost every
page their collation notes can be seen, with different marks, mostly sahha, but
also naskha, and occasionally other marks or no marks at all. Several hands of the
collation work occur frequently, others only incidentally. Most are in a variety
of nastaʿlīq script, some in naskh. There are a few marginal notes, not collations it
seems, in a sort of siyāqa script (f. 299b). It is tempting to try to identify the hands
of the owners on the title-page with the hands of the collators. Only in the case
of owner Ismaʿil this seems to be possible if one compares his note on f. 1a with
the collation on f. 194a, but this remains questionable.

MS Leiden Or. 4 most recently originates from Istanbul or else from Aleppo,
but it was probably copied further East. There are till today a considerable num-
ber of manuscripts of the Shifāʾ in libraries in Istanbul,\textsuperscript{14} and the collation notes may originate from comparison with those manuscripts, and possibly from others as well. The collation notes have no doubt a certain textual value, but it is difficult to weigh their importance due to lack of precise knowledge about their origin. An evaluation of the glosses is a future necessity for any editor of the text.

**Damage and Repairs**

The manuscript shows traces of several restorations and several types of repairs. At the bottom of the text block considerable moist damage is visible, but this has not significantly weakened the paper, nor has it caused loss of text. All outer margins of the leaves of the first quire (ff. 1–10) must at some stage have been considerably damaged. Without a binding the first quire was the most vulnerable part of the text block (when placed horizontally on the shelf, as is usually the case). The damaged leaves were repaired by pasting strips of paper, which brings the leaves back to their original size and at the format of the leaves of the other quires. This is old restorative work, since the paper with which this is done is indigenous, Oriental, paper as well.

On ff. 264–287 there is considerable damage on the vertical edges of the paper, with loss of much original text. The paper has been repaired and lost text has been substituted by a recent hand. The source of the substituted text is nowhere indicated. The amount of damage to the paper, and loss of text, gradually decreases when one nears the end of the volume. The last leaf on which text on the edge had to be substituted is f. 287, but from f. 288 till the end of the volume (f. 339) there are several larger and smaller holes in the middle part of the paper, sometimes more than one per leaf, also with loss of text. All these holes have been carefully repaired and the missing text has been substituted, equally without indication of its source. The outer margins of ff. 336–339 are cropped, and were then complemented with newer paper. The lower edges from ff. 288–336 are extensively cropped and substituted, but all well below the frame within which the text is contained. The substitutions point to contamination of the text, as it is unlikely that the substituted passages were copied from the same exemplar as the original text.

**Illustrations**

The *Jumla* of the Kitāb al-Shifāʾ which has most illustrations, the book on mathematics, is absent in MS Leiden Or. 4. However, there are a few simple drawings

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\textsuperscript{14} See the lists in Anawati, *Essai*, and Mahdavi, *Bibliographie*. 
in the part of the Ṭabīʿyāt: on ff. 184a (ruler and compass used, different ink), 191b, 245b, 250a (out of hand). None of these seems to be drawn by the copyist, but he did leave space open for them and all are located inside the text area. Due to the evident difference of ink between text and illustration there is some difference of time between writing the text and adding the illustration.

Paste-on Inserts

All paste-ins date from before the arrival of the manuscript in Leiden. On ff. 33a and 272b are a few small modern paste-ins. A full paste-in leaf is f. 42. It is made of indigenous, Middle Eastern, paper, different from the paper used in the rest of the book, but similar to that of the insert of f. 293. The insert has text of the Kitāb al-Shifāʾ by another copyist, who is also different from the copyists of the other insert, f. 293. The other paste-in leaf is f. 293. It is made of indigenous paper different from that used for f. 42. The text of Kitāb al-Shifāʾ on this insert is written by another copyist. F. 293 measures 28.6 × 22.8 cm. The inner structure shows chain-lines with five groupings of three chain-lines, vertical, together c. 29 mm wide, with distance of 34–36 mm between the groups, and with laid lines (horizontal).

MS Leiden Or. 84

Introductory Note

MS Leiden Or. 84 is ‘a nearly complete copy of the Kitāb al-Shifāʾ by Ibn Sinā (d. 428/1037).’

Different Order of Content

What immediately strikes the reader is that the distribution of the text in MS Leiden Or. 84 is different from other manuscripts. The usual order of the subject-matter within Ibn Sinā’s al-Shifāʾ has Jumla 1 as logic and speech, Jumla 2 as the

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natural sciences, *Jumla* 3 as mathematics and *Jumla* 4 as metaphysics. However, MS Leiden Or. 84 has its content distributed differently:

- ff. 1\textsuperscript{b}–68\textsuperscript{b}: Metaphysics;
- ff. 69\textsuperscript{a}–312\textsuperscript{a}: Logic, speech;
- ff. 313\textsuperscript{b}–545\textsuperscript{a}: Natural sciences;
- ff. 545\textsuperscript{b}–664\textsuperscript{b}: Mathematics.

The manuscript has maintained the original count of the *Funūn* but the order of the content within the volume was changed. The four *Jumal* in the volume are, codicologically speaking, four different physical entities. The final leaves of each *Jumla*, ff. 68\textsuperscript{b}, 312\textsuperscript{b}, 545\textsuperscript{b} and 664\textsuperscript{b}, are also the final pages of a quire. The different order of the four *Jumal* in MS Leiden Or. 84 may have been made by a binder, or at the request of an owner who would prefer that the volume with Ibn Sīnā’s *Kitāb al-Shifāʾ* begin with the book on metaphysics, rather than end with it. The authors of *CCO* 1445 also remarked the different order of the four *Jumal*, and they too attributed this to the *bibliopega*, the binder, but they give the dating in the two slightly later colophons as an argument for this. They have apparently not seen that these two colophons (on ff. 68\textsuperscript{b}, 545\textsuperscript{a}) were not written by the copyist of the volume, so that these cannot be used as a chronological argument. It is possible that at an earlier stage the four *Jumal* were four separate volumes, that were brought together in the binding that now holds together the entire text.

**Details of Physical Appearance**

MS Leiden Or. 84 is made of burnished indigenous, Middle Eastern, paper of one type, of a light, creamy colour, with numerous vegetal elements visible in the structure of the paper. The paper is rather thin and 100ff. together measure c. 11 mm. In the structure of the paper vertical laid-lines are clearly visible, with some 36 lines per 5 cm. There seem to be no chain-lines, although this is not entirely clear (see f. 498 for what seem to be chain-lines). The volume contains 664ff., which are preceded by two flyleaves of European paper in which a watermark (bend, in crowned coat of arms, with underneath BB or BP and halfway at the right IC, more or less like Heawood, Nos. 135, 138–140) and a countermark AN can be seen. The paper measures 25.8 × 17.8 cm (text area: 18.5 × 10.5 cm).

The text is written in a minute and expert ta’līq-like script by one copyist, Faḍl Allāh b. ‘Abd al-ʿAzīz Hāfīz, throughout. It is unvocalised and only partially punctuated, as is often the case in scientific manuscripts. The left hand justification is achieved by placing further in the margin the second half of a word, which
could not be abbreviated (e.g. *wal-iṭiba* | *rāt*, f. 23a). These marginal extensions of the main text should not be confused with collation notes. The text counts 31 lines per page, and these are written following the ruling made by a *mistara*. It is written in black ink with the use of rubrication, with at least two shades of red. The rubrication was done in a later stage and the rubricator, who is probably identical to the copyist, was helped in his work by a system of representants in the margins, which was left by the copyist. These were often, but certainly not always, trimmed by the binder. A later rubrication of a blotty and watery aspect can be found occasionally (e.g. ff. 17b, 280a), but this is apparently a later addition to the manuscript and was not done by the copyist.

The order of the leaves is secured by a system of catchwords which were written by the copyist, and this system also guarantees the correct order of the quires. On f. 467b the catchword was extended by the rubricator/copyist by an extra word in red, possibly because he thought the existing catchword (*wa-amma*) was not sufficiently distinctive. The rubricator did his work after the completion of the text in black, and this is proven by the fact that the red part of this combination of catchwords has caused an offset print on the opposite page, f. 468a.

The quires are composed as follows: 8 IV (64), II (68), 8 IV (132), II (136), 66 IV (664). The quire of two sheets (ff. 65–68) is the end of the first *Jumla* in this volume. The composition of the quires is, with a few exceptions, four sheets per quire, which, according to Beit-Arié, could point to an Oriental origin, Iran or further East. The catchwords are written by the copyist at the bottom of each verso page. He even follows the colour of the ink (e.g. red ink on ff. 13b, 14a) according to with what sort of ink he is writing at that moment.

There are numerous illustrations, expertly drawn by ruler and compass, in the part on mathematics. Some corrections by erasure can be observed in the illustrations (f. 626a). Most illustrations are within the text lay-out. Not all illustrations have in fact been added and reserved space sometimes remains unused (e.g. ff. 350b, 458b, 517a). On ff. 645a–b are hand drawn images to illustrate arithmetical operations with pebbles.

**Dating**

MS Leiden Or. 84 is dated Tuesday 8 Rabī’ II 881 (1476) and was copied by Fadl Allāh b. ‘Abd al-ʿAzīz Ḥāfīz (colophon on f. 312b). An early owner or reader, Muḥammad b. ‘Abd al-Razzāq al-Jurjānī, has written his name and other details in two more colophons, on f. 68b with date 882 (1477–1478), and on f. 545a, with date 4 Shaʿbān 882 (1477). It is evident from the difference in handwriting and ink that this person is not the copyist of the text, but that the colophons on ff. 68b and 545a are his only contributions to the volume. The colophon on f. 545a does contain a few words of the text of *al-Shifāʾ*, however. He seems to create the
impression of being the copyist of the volume, as his two colophons are rather
unrecognizably added to the text, and only at a more careful look can one see the
difference in hand. For either of his colophons this owner/reader, Muḥammad b.
ʿAbd al-Razzāq al-Jurjānī, uses space that otherwise would have remained empty.
The closeness of the dates of work of the volume’s copyist and writer of the two
additional colophons suggests a link between the two persons, though it is not
clear of what nature.

Collation

There are collation notes in the margins, usually provided with either ṣahā,
sometimes written in a curious ligature, or with kh (for nuskha or nuskha ukhrā?).
It seems evident that MS Leiden Or. 84 was collated with several manuscripts.
The collation notes are written several different hands, one of which is the copy-
ist’s. Reference marks are usually used in the text and in the margins for the link
between text and variant reading (e.g. ff. 11a, 24a). The copyist uses a reference
mark which resembles the letter ʾāʾ. Mistakes found during collation could be
corrected in different ways, by crossing out (with red ink, e.g. f. 89a, line 15) or,
more seldom, by erasure (f. 406b, line 21: kānat). The rubricator, who is also the
copyist, seems to have given his black text a final touch while adding the rubrica-
tion.

Binding

The text is bound in an originally full-leather Islamic binding with flap, with both
gilded and blind ornaments (borders, corner pieces, centre piece, all of 16th or
17th century Ottoman manufacture, by estimate and guess on the basis of the
ornamentation). The two boards and the flap are still extant, but the original
back is now lacking. An (18th-century?) European librarian has written a title
in Arabic on the spine. Inside the boards is a full-leather doublure with blind
tooled ornamentation. The fly-leaf in front is a double one. The binder of the
volume may have had a hand in the unusual distribution of the content in Leiden
Or. 84.16 On the lower edge the title Shifāʾ is written.

16) This was the state of affairs in September 2010, when I made my first description by autopsy.
However, MS Leiden Or. 84 was, early in 2011, treated for maintenance by Ms. Karin Scheper,
the library’s conservator. This treatment is documented in her report No. 2011-3. Ms. Scheper has
renewed the back of the volume and she removed the partial fly-leaf at the end. One of the flyleaves
(the one with countermark AN), which preceded the text, has been removed as well. Ms. Scheper
kindly provided me with images of the earlier state of the binding and the text of her report.
Short Survey of the Contents of MS Leiden Or. 84

F. 1\textsuperscript{a} is blank, except for the Leiden library stamp. There is no title-page text. The upper left corner of f. 1\textsuperscript{a} has been cut off. Here Golius may at first have written his price of purchase, but nothing is there anymore. The phenomenon, a price or a cut-off corner, can be observed in many of Golius’ manuscripts and these occurrences have been indicated in my inventory of the Golius collection.\textsuperscript{17}

1. ff. 1\textsuperscript{b}–68\textsuperscript{b}. The Ilāhiyyāt Section, Metaphysics

f. 68\textsuperscript{b}. End of the Ilāhiyyāt:

... ومن احتملت له معها الحيقة النظرية وقد سعد ومن فار مع ذلك بالخصاص البلويه كاذ

يصير ريا انسانيا فكان ان يجل ان يجل (!) عباده بعد الله وهو سلطان العالم الأرضي

وخلفه الله فيه والحمد لله والمنه

On f. 68\textsuperscript{b} there follows the later colophon, written in a hand different from the copyist’s, in nasta’\textsuperscript{’}līq script:

وقت الفراق عن تخير هذا القسم | الشريف اللاهتي من كتاب | الشفاء على يد صاحبه

العبد الضعيف | الجاني محمد بن | عبد الرزاق | الجرجاني | سنة 882

2. ff. 69\textsuperscript{a}–312\textsuperscript{a}. Logic and Speech, with Abrupt Beginning

At the bottom of f. 69\textsuperscript{b} is the indication of the end of Maqāla 2, which marks the end of Fann 3 of Jumla 1 in al-Mantīq.

Colophon by the copyist on f. 312\textsuperscript{a}:

... تم الجز الرابع من كتاب المشفى وخرج بتبامه الجملة الأولى من الكتاب | وهي المشتملة على

تلخيص المبطط والحاجه حق حمد وهو حسبن وتعم الوكل كتب على يد الفقيه فضل

الله بن عبد العزيز حافظ في (في يام الثلاثة آمن شهر) شهر ربيع الآخر (881)

ff. 312\textsuperscript{b}–313\textsuperscript{a} are both blank (except for the Library stamp).

\textsuperscript{17} Jan Just Witkam, Inventory of the Oriental Manuscripts of the Library of the University of Leiden, vol. 1, Manuscripts Or. 1–Or. 1000 (Leiden, 2006), http://www.islamicmanuscripts.info/inventories/leiden/or01000.pdf.
3. ff. 313b–545a. The Section on *al-Ṭabīʿiyāt*, the Natural Sciences, Divided into 15 Books (*Maqāla*)

Later colophon in nastaʿlīq script (f. 545a):

فَهَيْنَا أُخْرِيَ الْمَقَالَةَ | وَهُوَ أَخْرَىَ الْكِتَابِ | وَاللهُ رَبُّ الْعَالَمِينَ | وَالصَّلَاةُ وَالسَّلَامُ | عَلَى رَسُولِهِ

مُحَمَّدٌ وَالَّذِينَ مَاتُوا مِنْ شُعْرَانِهِ | وَالَّذِينَ أَشْهَدُوا مِنْهُمْ | وَذَٰلِكَ رُزُقُهُمْ | بِأَنْ نَصْبُهُمْ | بِالْجَهَّالِ

الرُّوازِ | في رَأْعِ رَيْحَانَ | مَنْ شَهِرَ سَنَهُ | اثْنَىَ | وَمَنْ | وَلَمْ يُأْتِ الْجَهَّالِ | بِذَٰلِكَ | بِمَعَاهُ | مُحَمَّدٌ | بِنَعْمَةِ | الرَّحْمَانِ | لِيُقَلِّبُ الصُّواٰبِ

ff. 545b–664b. The Mathematical Sciences

First there is an epitome of the *Elements* of Euclid, then an epitome of Ptolemy’s *Almagest*. These are followed by a section on arithmetic, and the mathematical part of *al-Shifāʾ* is concluded by a *Fann* on music.

ff. 545b–578b. Mukhtaṣar *Kitāb al-Uṣūl al-Handasiyya li-Uqlīdis*. Epitome of the *Elements* by Euclid. Numerous (occasionally numbered) geometrical drawings in red ink, expertly made, both within the text and in the margins. The drawings have been added later, and a system of representants (in the inner margins) has been used in order to avoid confusion by the rubricator who drew the illustrations. The text is divided into fifteen *Maqālāt*.

ff. 579a–637b. Jawāmiʿ *Kitāb Baṭlamiyūs al-Kabīr al-Maʾmūl fī Miṣṭī wa-ʿIlm al-Hayʾa*. Epitome of the *Almagest* by Ptolemy. With numerous expertly made drawings in red ink set within the text, and occasionally in the margins. The text is divided into 12 *Maqālāt*. On f. 636b begins the added *Maqāla*, in which Ibn Sīnā treats subjects that are not addressed in his epitome of the *Almagest*.


ff. 648b–664b. *Fann* 18 of the *Kitāb al-Shifāʾ*, on Music. There is a rubricated head-title for the *Fann*, a feature which was missing in the previous texts. The text on music is divided into 6 *Maqālāt*, with occasional expertly made drawings, within the text and in the margins.
Provenance

The last provenance of MS Leiden Or. 84 is the same as that of MS Leiden Or. 4. It was acquired on behalf of the Leiden library by Jacobus Golius (1595–1667) during his journey to the Near East (1625–1629) and brought into the library in 1629.

Anawati states that parts of this manuscript (MS Leiden Or. 84) are preserved in the Bodleian Library in Oxford.\(^\text{18}\) In theory this could be possible because Golius’ private collection of manuscripts has for the greater part ended up in the Bodleian.\(^\text{19}\) However, Anawati’s statement is based on his mistranslation of a note in \textit{CCO} 1445,\(^\text{20}\) where the authors refer to the Bodleian catalogue for more manuscripts of the \textit{Shifā} or of sections thereof, but \textit{not} for parts of the \textit{Shifā}, originally coming from MS Leiden Or. 84, and which now would be kept in Oxford. Mahdavi does not repeat the remark.\(^\text{21}\)

Conclusions

This article shows the results of a purely codicological research conducted on the two manuscripts of Ibn Sinā’s \textit{Kitāb al-Shifāʾ} kept in the library of Leiden University. Codicological research, which is always done by autopsy, gives insights in the successive stages of the manufacture of the manuscript and shows traces of repair and readership. It provides a three-dimensional view of the manuscript which, at least for the time being, cannot be gained otherwise. So far, modern technology has not yet given a viable alternative for the codicological approach. This should always precede the actual use of a manuscript in the text-critical process, although one sees this be done only exceptionally. Too often the task of the editor of a text is seen as the simple accumulation of textual witnesses and the clever decipherment of a handwritten text. And too often the text-critical work is substituted by educated guesses in the editor’s selection of preferred variants. Detailed as the present description may be, the two Leiden manuscripts hint to many more features. It is evident that during its life in the Orient, MS Leiden Or. 4 was severely damaged, became incomplete, and subsequently was subject to extensive repairs. Elements of these repairs have been described here, but the ensuing contamination of the text is not studied here. The numerous marginal

\(^{18}\) Anawati, \textit{Essai}, 76.

\(^{19}\) See for more details on this transfer Jan Just Witkam, \textit{Jacobus Golius (1596–1667) en zijn handschriften} (Leiden: E.J. Brill, 1980).

\(^{20}\) \textit{CCO}, vol. 3, 319.

\(^{21}\) Mahdavi, \textit{Bibliographie}, 170.
notes in MS Leiden Or. 4 may contain important references to textual witnesses. This too needs further investigation, and from now on, it is hoped, these will be given due attention. The other manuscript, MS Leiden Or. 84, has two strange colophons, which have confused earlier students of the manuscript. Furthermore the text is given in an unusual order within the binding. Is this latter feature an accident or is there a purpose behind this? It is evident that it originated from a learned environment but at present we know next to nothing about its exemplar or exemplaria.

Bibliography


Tāshköprüzāda, Aḥmad b. Muṣṭafā. al-Shaqqāʾiṣ al-Nuʿmāniyya fi ’Ulamāʾ al-Dawla al-
Postscript (September 2012)

After the completion of this article it became known that the two Leiden manuscripts which are here described in detail (Or. 4 and Or. 84) have been digitized and put on-line. Brill’s of Leiden have in October 2011 launched their Project “Pioneer Orientalists,” with Dr. Arnoud Vrolijk, the Leiden library’s curator of Oriental Manuscripts and Rare Books, as their adviser. The project aims at making available online the manuscripts in the collections of Joseph Justus Scaliger (d. 1609), Jacobus Golius (d. 1667), and other early Orientalist scholars. The original manuscripts remain available for autopsy by qualified readers in Leiden library. Those who have campus rights can view the electronic copies free of charge through the library’s catalogue. All others can view the images by paying a (rather stiff) fee to Brill’s (see http://www.brill.com/publications/online-resources/middle-eastern-manuscripts-online-1-pioneer-orientalists).

Other, similar projects are in preparation at this Leiden publisher. The institutional subscribers to Brill’s project outside Leiden offer their campus access to the project as well. Brill’s website mentions a number of such institutions. The images in the project are professionally made and have excellent optical quality, though originals with poor contrast do not always come out well. They are offered in pdf format, and even with the compression that they have undergone the resolution of the images remains acceptable (though only just). The software that manages the images is far from perfect and the fact that most openings of manuscripts in this project are cut in two and only viewable in two separate images is slightly bizarre.

A read-only version of MS Leiden Or. 4 can also be viewed at: www.islamic-manuscripts.info/files/Leiden-Or00004.pdf

A read-only version of MS Leiden Or. 84 can also be viewed at: www.islamic-manuscripts.info/files/Leiden-Or00084.pdf
Ibn Sīna, *Kitāb al-Shifā*; MS Leiden Or. 4, f. 1ª. Illuminated title-page with notes of ownership.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, ff. 1b–2a. Illuminated double opening page. At the right is al-Jūzjānī’s introduction, at the left the beginning of the *Kitāb al-Shifāʾ*.

Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, f. 1b, detail. The illuminated *basmala* over the beginning of al-Jūzjānī’s introduction.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, f. 89a, detail. Quire mark ‘10th,’ two foliation numbers (88 and 89), and a collation note with siglum nūn.

Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, f. 119b, detail. The change of hands between copyist 1 and copyist 2 on line 4 from below.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, f. 120v, detail. The laid-lines in the structure of the paper.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 4, f. 184b, detail. Geometrical illustration in the section on natural sciences, made with ruler and compass. The perpendicular is written out of hand.

Ibn Sīna, *Kitāb al-Shifā*, MS Leiden Or. 4, f. 323b, detail. Considerable damage in the paper, much later carefully repaired and provided with substitute text.
Ibn Sīna, Kitāb al-Shifāʾ, MS Leiden Or. 84, f. 1b. Opening page of the text showing the beginning of Fann 13, Metaphysics.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 5⁴, detail. Collation note with two sigla.

Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 23⁴, detail. Extension of the text in the margin as a means to bring about a justification of the text.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 27⁴, detail. Collation note with ʿabsa written in a specific ligature.

Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 113b, detail. Correction on erasure, with addition of reading signs *fatḥa, sukūn, īḥmāl*.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 312v. The end of the *Jumla* on logic, followed by the colophon of the copyist Fadl Allāh b. ‘Abd al-‘Azīz Ḥāfīz, dated Tuesday 8 Rabī’ II 881 (1476).
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 579v, detail. Beginning of the epitome of Ptolemy’s *Almagest*. 
Ibn Sina, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 581a. A page from the epitome of Ptolemy's *Almagest*, with figures.
Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 651a, detail. Figures in the section on music.

Ibn Sīna, *Kitāb al-Shifāʾ*, MS Leiden Or. 84, f. 652b, detail. Representant in the upper margin as an instruction to the rubricator. Heading of the second *Maqāla* of the epitome of Euclid’s *Elements*.