# Describing the Complex: the Multiple Dimensions of a Relational Database\*

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The paper shows, on the example of manuscripts from Ethiopia containing the *Kitāb al-farā'id* which were surveyed by the *IslHornAfr* project, how a relational database can manage data on complex (composite and multiple-text) manuscripts.

One of the main aspects observed in manuscripts retrieved within the framework of the project *Islam in the Horn of Africa*<sup>1</sup>—and possibly the most challenging to deal with during the conception of the descriptive database of the project—is the codicological and textual complexity of this manuscript heritage. Most of the codices were non-homogeneous, and their complex textual and codicological stratigraphy had to be duly reflected in the relational database.

Needless to say, such complexity is a feature not limited to the manuscripts in Arabic script produced or circulated in the Horn of Africa, nor to the manuscripts in Arabic script in general. In fact, fruitful reflections on multiple-text manuscripts and composite manuscripts have developed in the last years, and important contributions on the subject have been published extending concepts and terminology previously used for western manuscripts also to different cultural contexts.<sup>2</sup>

As in other spheres, manuscripts in Arabic script from the Horn of Africa can be complex from the point of view of their material history (composite manuscripts) and from that of their content (multiple-text manuscripts). In his 2016 contribution,<sup>3</sup> Alessandro Gori showed that in the Islamic context of the Horn of Africa, composite manuscripts (with one codex made up of several codicological units which were formerly independent) are mostly represented by manuscripts assembled by Europeans travellers and scholars. Even if compiled locally, they were often bound or otherwise put together once they had to be stored in European collections. As for multiple-text manuscripts (single codicological/production units with two or more texts), we can distinguish between (a) closed, or canonized, collection of texts, such as, for example, 'liturgical' collections of devotional poems and litanies, always copied together, and (b) instable, or open, collections that group various texts usually

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- 1 See also the project note by Alessandro Gori in this issue.
- 2 See e.g. the contribution by Nathan Carlig in this issue.
- 3 Gori 2016.

on the same or related topic (sometimes also on different topics), most typically collections of texts related to the various fields of the traditional Islamic knowledge for teaching and learning.

In this paper, I would like to illustrate how these complexities of the material and textual structure of this manuscript heritage have been dealt with in the *IslHornAfr* database. A preliminary remark has to be done regarding the aim of the project, which has mainly a literary perspective. This is reflected in the description of the book heritage and in the structure of the database: in fact, the priority has been given to text entities which have been selected as the central reference element to be described.

#### The identification of texts in the Kitāb al-farā'id

As a case study, I have chosen one of the most representative works of the Islamic literary tradition of the Horn of Africa, the *Kitāb al-farā'id*, an extensive work in Old Harari, written in Arabic characters. Its title can be translated as 'The Book of the Obligations', or rather 'The Book of Obligatory Portions', if we want to maintain a closer correspondence to the meaning of these words in the Arabic tradition, which specifically refers to the law of inheritance. The numerical portions are indeed a constant motive in the explanations of moral and religious duties introduced in the work. For example:

God said 'With three things you should persuade me, for three things you should fear me, for three things you should worship me.'

God said 'With three things you should persuade me': God said: 'You should persuade me with your prayer, your fasting and your alms'.<sup>4</sup>

The case of the *Kitāb al-farā 'id* was particularly challenging when trying to describe it in a database that has to account for textual and material evidence, as the work as we know it is actually a combination of different (three, in fact) textual entities not easily identifiable in manuscripts, as we shall see below.

The first to describe the *Kitāb al-farā'id*, using just one witness available at the time (now Vatican City, Biblioteca Apostolica Vaticana, Cer. et. 325<sup>5</sup>) was Enrico Cerulli.<sup>6</sup> He offered an Arabic vocalized transcription, a transliteration, and an Italian translation.<sup>7</sup> According to this edition, the text is divided into two sections which are reflected in a shift of content. The first section falls into the genre of wisdom literature and contains sayings and maxims with moral and religious subject or pertaining to ritual obligations. The second section falls into the genre of religious teaching, containing a cate-

- 5 Raineri 2004, 232–233.
- 6 Cerulli 1936, 282–343.
- 7 Cerulli also used the text as a basis for his grammar and glossary of Old Harari, ibid. 344–437.

<sup>4</sup> Banti 2009-2010.

chism-like text, structured in a question and answer alternation, in which the articles of faith are first given in Arabic and then explained in Harari. In his introduction to the edition, Cerulli noticed that the colophon 'oddly' appears mid-text on f. 7 (the text covering ff. 1v-17v) and mentions a certain Tayyib al-Wanāğī al-Ṣadrī, to whom he ascribed the entire work.<sup>8</sup>

After more manuscripts containing the *Kitāb al-farā id* came to light, it became obvious that the label is conventionally applied to several distinct works, written by different authors, which are usually copied together.

Thus, Ewald Wagner<sup>9</sup> could show that the two sections of Cerulli's edition correspond to two different works, which explains the difference in content. The first work is a *Kitāb al-farā'id* ascribed to  $\bar{a}w$  'Abd al-Raḥmān al-'Arāšī (hereafter KF<sub>1</sub>), and the second is a *Kitāb al-farā'id* ascribed to *faqīh* Tayyib al-Wanāğī al-Ṣadrī (hereafter KF<sub>2</sub>). Wagner also noted that 'the IES owns a third *Kitāb al-farā'id* written by a certain 'Abd Allāh 'Umar b. Ğibrīl al-Aswām al-Sāḥitī' (hereafter KF<sub>3</sub>).<sup>10</sup> A closer analysis, drawing also on the manuscripts which clearly show all the text boundaries and ascriptions, has revealed, however, that Cerulli's edition actually contained all the three texts (with the 'oddly' placed colophon appearing at the end of KF<sub>2</sub>).

Wagner explained Cerulli's failure to identify the two sections as  $KF_1$ and  $KF_2$  with 'a lacuna [...] at the passage of the first to the second work'. But in fact there is no textual lacuna, and the passage from  $KF_1$  to  $KF_2$  is evident in the edition<sup>11</sup> thanks to the presence of a typical *explicit* formula (*Tammat Kitāb al-farā'id bi-kalām al-Ḥabaš aḥrağahu faqīh Țayyib al-Wanāğī al-Ṣadrī, nafa ʿanā Allāh bihum amīn*,<sup>12</sup> with a verb, *aḥrağa*, normally used in Arabic for the compilations of collections of *ḥadīts* on special themes). The *explicit* is then followed by a *basmala*. Yet, while the passage from  $KF_1$  to  $KF_2$  is quite evident in the edition, the shift from  $KF_2$  to  $KF_3$  is in fact oblique: there is no *explicit* or colophon, nor any other kind of textual boundary.

#### Textual boundaries in the manuscript witnesses

As Giorgio Banti noted, 'in most mss. one or even the two junctures between the three different texts have been skipped over, and only one or two of the three ascriptions remains'.<sup>13</sup>

- 8 Ibid. 282–283.
- 9 Wagner 1989.
- 10 Wagner 2005, 492. In addition to the description of MS Staatsbibliothek zu Berlin, Hs. Or. 10455 in Wagner 1997, 6–8, 118–119, see also MSS Addis Ababa, Institute of Ethiopian Studies (IES) 257 and 268 described in Gori et al. 2014, 1, 5. Cf. ALA<sup>3a</sup>, 23, 33–34.
- 11 Cerulli 1936, 290–291.
- 12 'It is concluded the Book of Obligations in the language of the Abyssinians which Țayyib al-Wanāğī al-Ṣadrī extracted...', ibid. 290.
- 13 Banti 2009-2010, 168.

The quite old (early nineteenth century?) manuscript Addis Ababa, IES 256,<sup>14</sup> is an excellent witness as it clearly shows all the boundaries and is one of the more concluding for the textual identification. The first section (KF<sub>1</sub>, ff. 1v-4r) has an *explicit* with attribution to al-'Arāšī; the second section (KF<sub>2</sub>, ff. 4r-7r) begins with an attribution to al-Wanāğī al-Ṣadrī, and has only *tammat* as the *explicit*; in the third section (KF<sub>3</sub>, ff. 7r-10v), an *incipit* with attribution to al-Sāḥitī was added and partially written on the margin; the *explicit* confirms the attribution to al-Sāḥitī with the common formula (see fig. 1a, 1b).

مَرْلَهُ وَإِنَّ الْمَا حَزْ عَ الْمَرْ وَالْدَقَا ب جرار فرود الله المراقة عدامو المراقة عدامو المعرام بحث يوس م وصْوَاتْ هَدِيَتْ هَرْعَة ٱللَّهُ، دِيْجَ بِعَادَ لَهُ لَيْ أَصْبِرْ بِنَوْت الماج ديت عاد واحد قد سطة مدام معذ د س النَّ فَدِيَتْ هَرْعَة أَسَارَ في في المَسْحَة فَ أَصْحَات إِنَّ سُنَّ وَبِهُا أُنْتَى يُوُقُتُ اللَّهُ يَصَلِّعَلَى أَثْرَادَ جُوبَ وَ سَلْ الله ٥ ورسُّ بي المَنْ عَتَى المُنْ فَي سَسُر الله حَمَاد أَنْفِ جَنْرٍ، حَشَنُو مِنْ مَنْ مَنْ ٢ هِذَاكَ مَعَالَهُ المَعْرَ المَعْنِ تَلَكُمُ مَعَالَمُ مُعَامًا الله الرجن الم، حثم 6 الم حد سمارمه أقل بساشلة مع زائر دفا فريص أخ مؤسين

Fig. 1. Ms IES 256, text boundaries  $KF_1$ - $KF_2$  (a: f. 4r, detail) and  $KF_2$ - $KF_3$  (b: f. 7r, detail).

In other cases the textual distinctions and attribution are more complex. In fact, often we do not have anything testifying the textual boundaries. Where boundaries and attributions are evident, the *explicit*/colophon between KF<sub>1</sub>– KF<sub>2</sub> and KF<sub>2</sub>–KF<sub>3</sub> has sometimes been wrongly referred to the following text as opening formula or *vice versa* (as in the case of Cerulli's edition). But quite regularly the *explicit* of the last text correctly ascribes the work to al-Sāḥitī.

In a manuscript from 'Abd Allāh Šarīf collection in Harar (MS Harar, 'Abd Allāh Šarīf, 191), the text boundary between  $KF_1$  (which is acephalous) and  $KF_2$  is marked by the word *tamma* and a circle with a dot inside (fig. 2), which was traditionally used as a collation mark and *igāza* (that is approval

14 Gori et al. 2014, 1.

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Fig. 2. Ms ASH 191, text boundary KF<sub>1</sub>-KF<sub>2</sub> (f. 7v, detail).

for transmission) but also as a separation of individual textual units (expecially between  $had\bar{t}$ ). There is instead no text boundary between KF<sub>2</sub> and KF<sub>3</sub>, while the latter is correctly attributed in the colophon to al-Sāhitī.

In manuscript Addis Ababa, IES 306,<sup>15</sup> KF<sub>1</sub> is copied on ff. 1r–6r and is acephalous; there is no text boundary within the scribal frame, but on the margin there is a note stating that 'in a copy, after the eulogy on the Prophet, there is a *basmala*' which is in fact a very common mark of textual boundary and a testimony to the manuscript having been collated with another witness of the text (fig. 3). In IES 306, the boundary between KF<sub>2</sub> and KF<sub>3</sub> is not marked at all, but, meaningfully, after the *explicit* of the last textual section the work is attributed to all three mentioned authors.<sup>16</sup>



Fig. 3. Ms IES 306, text boundary KF<sub>1</sub>–KF<sub>2</sub> (f. 6r, detail; marginal note: *wa-fī nushatin ba 'da qawlihi wa- 'alā ahl Muhammad, bi- 'sm Allāh al-Rahmān al-Rahīm*).

While the codicological evidence of textual boundaries is confusing (with the lack of textual boundaries being more common between  $KF_2$  and  $KF_3$ ), the threefold textual identification can be confirmed by the clear thematic division between  $KF_2$  and  $KF_3$ . At a first glance, both fit into the general class of catechism-like texts, but the  $KF_2$ , ascribed to al-Wanāğī al-Ṣadrī, deals primarily with '*aqīda* (creed) and general Islamic dogmas and beliefs (for example the 15 Ibid. 16.

16 One could infer that the attribution to the three authors is based on the witness used for the collation, rather than coming from the antigraph.

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eschatological ones), and the  $KF_3$ , ascribed to al-Sāḥitī, focuses on *fiqh* (law) issues, following the order and subjects of the Šāfi'īte manuals.

### Data organization

In the *IslHornAfr* database, the *Kitāb al-farā id* is encoded as a set of entities. There is a general record for the entire work as it is traditionally transmitted and known, with its three sections (fig. 4).



Fig. 4. Database record for the Kitāb al-farā'id, detail (August 2018).

At the same time, each section is encoded as a textual entity in its own right, as they are attributed (sometimes also explicitly in the manuscripts) to

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different authors.<sup>17</sup> Such encoding is also necessary as the single sections may have circulated separately. This is illustrated by MS Addis Ababa, IES 265, where  $KF_1$  is copied on its own in an independent monomerous (homogeneous, containing a single codicological unit and text unit) manuscript (fig. 5).



Fig. 5. Database record for MS Addis Ababa, IES 265, detail (August 2018).

This method of structuring data gives project researchers the opportunity to account both for the codicological and textual complexity of this manuscript heritage. The codicological homogeneity can be a connecting element among the different textual entities, as well as the textual homogeneity and continuity can link different codicological units.

There are many other cases of textual constellations similar to the *Kitāb* al-farā'id. One of them, also related to the city of Harar, is the work known as the *Mawlid šaraf al*-'ālamīn, a constellation of texts including the 'Unwān al-šarīf, the Taḥmīs al-Fayyūmī 'alā al-Burda, and a connective group of du'ā' and doxologies.<sup>18</sup> Other cases include various collections of du'ā', for

17 Cp. also the contributions by Massimo Villa and Tito Orlandi in this issue.

18 Gori 2010.

example the rather unstable one compiled by Kabīr Hamza b. Kabīr Mahmūd b. Kabīr 'Alī al-Harallī al-Awsī al-Hanafī (1211–1279H/1796–1862AD) and commonly known under the title *Fawātiq al-falāh wa-bawāriq al-salāh fī dikr mawlid al-nāțiq bi-l-nağāh*—which will hopefully be object of further enquiries within the framework of the project *Islam in the Horn of Africa*.

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