

# Building Trees: Genealogical Relations Between the Manuscripts of Wīdēwdād

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The Zoroastrian ceremonies have been transmitted in manuscripts of different types (liturgical and exegetical) produced in very different places from Eastern Iran to the Indian Gujarat in a wide period of time. We have evidence of the production of such manuscripts since the end of the 10<sup>th</sup> century till the present day. An analysis of the nature of the manuscripts, their usage, the manner in which they were produced and in which context is indispensable for tracing back the history of the extant manuscripts of a concrete ceremony.

## 1. Typology of the Wīdēwdād manuscripts<sup>1</sup>

### 1.1. Textual typology

Avestan manuscripts are, according to their contents, of three different types:

1. The liturgical Sāde manuscripts are complete descriptions of ceremonies including the recitative in Avestan language and the ritual directions in different languages (mostly Pahlavi, Gujarati or Persian).
2. Exegetical manuscripts include two different versions: the Avestan text of the liturgy and its translation and commentary in Pahlavi. Sometimes the Pahlavi translation is complemented or substituted by a translation in other languages such as Sanskrit, Gujarati or Persian.
3. Combined Sāde-Pahlavi manuscripts which include the Avestan text, the ritual directions and a Pahlavi translation of the Avestan text. We find this type only for the Yasna ceremony. The best exponent of this type is Pt 4.

1 On the typology of Avestan manuscripts see now CANTERA 2011. The sigla of the manuscripts are the same used by GELDNER for the manuscript he describes. For the rest I make use of the sigla of the catalogues or other sigla I find in the literature or I have invented ad hoc, when the manuscript has not a standard siglum. In order to avoid this confusing system I have created a new set of systematic sigla in numbers that are transparent, so that the siglum allows to know the text it contains, the type of manuscript and its relative chronology. These numbers are often quoted in brackets. A complete list of these numbers is to be found in <http://ada.usal.es/pages/numbers>.

The Sāde manuscripts reproduce the Avestan text recited in the Zoroastrian ceremonies. Accordingly, there are as many types of manuscripts as ceremonies. We distinguish mainly two different collections:

1. The inner ceremonies or ceremonies of the long liturgy that are celebrated in the temple by a priest who has undergone the *barsnūm*;
2. The minor or domestic ceremonies that can be celebrated outside the temple and by a less qualified priest.

The manuscripts of the second type do not always include the texts for exactly the same number of ceremonies and include a variable number of texts the liturgical use of which is not obvious. They are hence quite heterogeneous. More homogeneous are the manuscripts of the first type, viz. those of the long liturgy. They always include a complete ceremony and usually only *one*<sup>2</sup> complete ceremony. Although the long liturgy is always basically the same, it might appear in two different basic variants:

1. The daily morning ceremony usually called Yasna;
2. A more solemn ceremony, the Wīspērad or Yašt ī Wīspērad, that for its part appears in different variants.

On the purely ritual level one of the most significant differences between both types of ceremonies of the long liturgy is the number of wires that form the *barsom* (a set of metallic wires, originally branches of a tree that is spread and bound several times during the ritual). In the standard ceremony the *barsom* consists of 21 wires, in the more complex form of the ceremony it consists of 33 wires. Some variants of the Wīspērad, like the Wīspērad ī artokartin (a ceremony for the festivity of the end of year) can reach the number of 551 wires. Furthermore, there is a minor variant of the Yasna celebrated at noon in the summer time, the Yasna ī Rapihwin, in which the *barsom* consists of 15 wires (N 72.11). The number of wires determines the solemnity of the ceremony and is most frequently indicated in the manuscripts immediately after the indication of the ceremony included in the manuscript.

The basic form of the more solemn ceremony is known as Wīspērad. This ceremony serves as a basis for the development of further ceremonies that can be created by intercalating Young Avestan texts between the Old Avestan texts that are recited exactly in the middle of the long liturgy. I call them “intercalation ceremonies”. We have information about the existence of many intercalation ceremonies, but only two have left evidence in the manuscript tradition: the Wīdēwdād and Wīštāsp Yašt ceremony.<sup>3</sup> Thus we find in the manuscripts five different types of ceremonies of the long liturgy: 1. Yasna; 2. Yasna Rapihwin; 3. Wīspērad; 4. Wīdēwdād; 5. Wīštāsp Yašt.

2 There are, nevertheless, exceptions. Thus the manuscript G 18 (2010, 5000) has a Wīštāsp Yašt and a Wīspērad ceremony and Ave 1066 (300, 2020) includes a Frawardīn Yašt, a Yasna Rapihwin and a Wīspērad ceremony.

3 About other intercalation ceremonies like the Bayān Yasn, cf. KREYENBROEK 2004, CANTERA 2009.

None of these ceremonies is ever performed or recited identically. Changes are introduced according to different factors like the date of the performance, the god addressed, the purpose of the ceremony, etc. There are different parts of the text of the ceremony that might change depending on these factors. Although there are others, the main mobile part of the text of a ceremony is the dedicatory, known in Pahlavi as *(x)šnūman*. Such a formula is repeated several times during the ceremony and allows us to recognise easily which kind of ceremony is being performed.<sup>4</sup> The dedicatories are, however, not the only changing parts in the ceremonies.

The Sāde manuscripts deal differently with these variations. Some of them produce a standard version of one ceremony. Others do not reproduce the text of the standard ceremony, but one concrete performance of the ceremony for one special use or festival (e.g. the performance of a specific ceremony during the Gāhānbār). A third group of manuscripts does not reproduce either the standard or a specific ceremony, but offers different alternatives for the performance of different ceremonies. A good example of the third type is the manuscript G 18b (2010), a Wīspērad manuscript that apart from the standard text includes directions for the performance of the ceremony during the Gāhānbār or in Frawardīgan, among others. This procedure is most frequent in the Wīspērad manuscripts but is to be found in other ceremonies as well. We find, e.g., different alternative dedicatories in most of the oldest Iranian Wīspērad Sāde manuscripts. In the Yasna manuscripts we do not as a rule find alternative dedicatories.

The Wīdēwdād ceremony is based on the Wīspērad ceremony but intercalates the Wīdēwdād Nask of the exegetical Avesta described in the 8<sup>th</sup> book of the Dēnkard or at least a similar text.<sup>5</sup> We do not have a definitive indication of the date of this special intercalation ceremony. It is not mentioned in the Nērangestān. But probably the ceremony is as old as the text in its present form, since the general structure of the intercalated text represents the history of the world and was conceived most likely to be intercalated between the Old Avestan texts, as is evident for the correspondences of the last Wīdēwdād fragments with Y 53 and Y 54 (SKJÆRVØ 2007) and others like V 1 and the Ahuna Vairiia or V 9–11 and the Yasna Haptañhāiti (CANTERA 2012 [in press]).

The Pahlavi translation of the Wīdēwdād mentions already the celebration of a Wīdēwdād ceremony in several passages (PV 9.32, 46, 10.2, 11.2, 19.13). Most interestingly, PV 19.32 mentions specifically the celebration of a Wīdēwdād ceremony with the dedicatory to Srōš in the context of the celebration of a *baršnūm* or purificatory ceremony:

*wandīdād pad ēd kār pad šnūman ī srōš be yazēd*

“He celebrated for this action a Wandīdād ceremony with the dedicatory to Srōš.”

4 On the dedicatories the most complete approach is still HARTMAN 1956.

5 On the relationship between the Wīdēwdād text of the manuscripts and the Wīdēwdād Nask cf. CANTERA 2010a.

The Persian Rivāyats very often mention not only the Wīdēwdād ceremony but also a Wīdēwdād ceremony for Srōš. In fact, most of the manuscripts reproduce this ceremony dedicated to Sraoša. Other manuscripts, however, show other dedicatories and there is even mention of other special celebrations like Wīdēwdād with a dedicatory to the Frauuašiš, which indicate other changes than just a different dedicatory.<sup>6</sup> It is worth mentioning that not infrequently the dedicatories change within a manuscript.

The Sāde manuscripts include not only the Avestan text, but also some ritual indications. These directions are not always in the same language, and even when they are, they are not necessarily identical, although they show clear similarities that reveal a common tradition. But even manuscripts belonging to the same family of priests and reproducing similar originals show divergences in the ritual directions. These similarities and differences must also be taken into account when analysing the dependencies between the manuscripts. Hence, the description of a manuscript of the long liturgy must include at least the class (Sāde or Pahlavi), the ceremony (Yasna Rapihwīn, Wīšperad, Wīdēwdād or Wīštāsp Yašt), the occasion for its celebration (when known) and the dedicatories. The description must also include references to the ritual directions, their language and characteristics.

Beside the Sāde manuscripts that include only the Avestan ritual text and some ritual directions, there are other manuscripts known as Pahlavi manuscripts that intercalate a translation of the Avestan sentences. The typology of the exegetic manuscripts of the long liturgy is varied. The Pahlavi manuscripts of the Yasna display with few differences the same Avestan text as the Sāde manuscripts. In contrast, the Pahlavi manuscripts of Wīdēwdād do not include the complete text of the Wīdēwdād ceremony, but only the Young Avestan interpolations between the corresponding sections of the Wīšperad during the recitation of the Old Avestan texts. The interpolations correspond almost exactly with the text of the Wīdēwdād Nask as described in the eighth book of the Dēnkard. There are, however, some differences (CANTERA 2010a, p. 197). The most significant is clearly the absence of the 12<sup>th</sup> *fragard* in the old Pahlavi Wīdēwdād manuscripts. There is a similar case with the Wīštāsp Yašt manuscripts, although this time the correspondence between the description of the Wīštāsp Yašt in the Dēnkard and the actual text is not such an exact one.

Typologically different is the case of the Wīšperad (cf. the more detailed analysis in this volume, p. 452ff.). The Wīšperad ceremony is essentially the same as the Yasna, with some texts of the Yasna being substituted by alternative versions and new texts interpolated in certain places of the Yasna ceremony. While the Sāde manuscripts of the Wīšperad include the complete text of the ceremony,

6 The most important one is the inclusion of Y23.1–3 and of Y26, omitted in the ceremonies that do not end their dedicatories with the Frauuašiš. These changes will be discussed with more detail elsewhere.

the Pahlavi manuscripts contain only the Avestan texts and their translations of the alternative and interpolated texts. Not every alternative or interpolated text, though, appears in the Pahlavi manuscripts. Only the interpolations up to Y 54 (and not all of them) are included. The criterion for the inclusion in the Pahlavi manuscripts is the necessity or not of giving a Pahlavi translation of the text, depending on whether the same text appears in the Pahlavi Yasna or earlier in the Wīšperad-Pahlavi manuscripts. Texts that have been already translated in the Yasna manuscripts or earlier in the Wīšperad manuscripts are not included.

Summing up, we can state that very different types of manuscripts contain the text of the Wīdēwdād considered in the narrow sense, that is, a text similar to the Wīdēwdād Nask described in the Dēnkard that appears intercalated between the Old Avestan texts in the Wīdēwdād ceremony. The main types of manuscripts including such a text are the following:

1. Wīdēwdād Sāde with the dedicatory to Ahura Mazdā including sometimes the dedicatory to the Frauuašiš
2. Wīdēwdād Sāde of Srōš
3. Pahlavi Wīdēwdād.

Furthermore, the rest of the ceremony appears also in the other Sāde manuscripts of the long liturgy:

- Yasna ī Rapihwin
- Yasna
- Wīšperad
- Wīštāsp Yašt

## 1.2. Geographical typology

The Wīdēwdād manuscripts, like the rest of the Avestan manuscripts, were copied partly in India and partly in Iran. The manuscripts written in each of these countries share certain characteristics that allow us to group them. The differences between both groups are especially clear in the case of the Sāde manuscripts. Here the language of the ritual directions is usually a good clue to the geographical origin of the manuscripts. In the Iranian manuscripts these are mostly written in Pahlavi, while in the Indian manuscripts they are mostly in Gujarati and when they use late Pahlavi or Persian, they are in Pāzand, that is, in Avestan script. There are some manuscripts written in India with *nērang* in Pahlavi, but in these cases they are all, as far as I can see, direct copies from Iranian manuscripts and very often written by Iranian priests. This is the case of the earlier Indian manuscript, K7, written in Anklesar by the famous Iranian priest Rostam Mihrābān Marzbān. I consider these manuscripts Iranian, although they were written in India. In fact, the oldest manuscripts written in India by Indian priests and without any mention of Iranian originals have their ritual directions in Gujarati and partly in Pāzand (e.g.

B3 [230], L17 [100], B2 [4210], R278 [4220], etc). We can also find ritual directions written in Gujarati, but in Avestan script (e.g. K8 [2100], Bh5 [231]).

There are many other characteristics that differentiate Indian from Iranian manuscripts. These distinctive features do not appear from the beginning, but were developed in the course of history. Usually the Iranian manuscripts are more conservative than the Indian ones, even when some of the Indian ones are older than the Iranian counterparts.

There are some orthographical features specific of the Indian manuscripts that are clearly innovations in these. The Iranian manuscripts show still some letters that do not longer appear in Indian manuscripts like *ń* for *n* before *i* or *ii* (forms like *ńiuuaēdaiiemi* or *asńiiaēibiio*). In most Indian manuscripts only *ś* appears for both *x<sup>v</sup>* and *ś*, whereas this distinction is still preserved in the Iranian ones. The Indian manuscripts show almost exclusively *ao* instead of the Iranian *aō*. Furthermore, the confusion between *š* and *ś* is much more generalized in the Indian manuscripts. Thus we find in them almost always *aśa-* instead of *aša-*, but the Iranian manuscripts usually have the correct form. Other confusions frequent in the Indian manuscripts, but rare in the Iranian ones, are the use of *st* for *št* like *vahistāi* for *vahištāi* and the use of *z* for *j*, like *berāziūai* for *berājiūai*.

The Indian manuscripts show furthermore new palaeographic features. For example, it is a well-known fact in the Indian manuscripts that for the initial *y* they usually have the letter 𐬨 instead of the letter 𐬨 used in Iranian manuscripts. The oldest extant manuscript copied in India by an Iranian priest (K7) has, as expected, the Iranian *y*, but strikingly in Mihrābān's manuscripts the Indian *y* is generalised.<sup>7</sup> In the manuscripts of the 16<sup>th</sup> century (like B3 [230] and L17 [100]) the Indian *y* already appears, however even in much later manuscripts we find still both kinds of *y*. Similar is the case of the use of two different letters for *q*. While in the Iranian and the old Indian manuscripts *q̇* is used only under very specific conditions (HOFFMANN 1989, p. 74), in the late Indian manuscripts (from the 18<sup>th</sup> century on) this is the universal letter for *q*. This time Mihrābān follows the "Iranian" way.

On the other hand, the Iranian manuscripts also developed some characteristic features in the course of time that differentiate them from the Indian manuscripts, e.g. the usage of a single letter for *ī* and *ū*. As a consequence of the influence of the dialect spoken by Zoroastrians around Yazd and Kermān<sup>8</sup>, *ū* and *ī* are confused and

7 It is, indeed, very strange that an Iranian priest Mihrābān Kayxōsrō uses the Indian *y*. Was he imitating the Indian orthography? It seems very unlikely, since 300 years later the Indian manuscripts still use both letters. Or was the use of the "Indian" *y* a particularity of Mihrābān's family that became universal in India through the influence of Mihrābān? The main difficulty is that we do not know further Iranian manuscripts that use the Indian *y*. Actually, many Iranian manuscripts are showing up and we can not exclude that such manuscripts with the "Indian" *y* appear. We know, indeed, very few Avestan manuscripts copied within the family of Mihrābān. However, his related Rōstām Mihrābān used the Iranian *y* three generations before Mihrābān.

8 On this dialect see IVANOV 1934.

frequently we find in the Iranian manuscripts only the letter *ū* for *ī* and *ū*, although it was read as *ī*. However, the oldest Iranian manuscripts keep perfectly the distinction and it is in the 17<sup>th</sup> century when we find the first traces of this confusion.

There are further features differentiating Indian and Iranian manuscripts concerning the textual contents and their arrangement. Whereas in Iran, the Wīšperad ceremony appears in the manuscripts written at length and never together in a manuscript with a Yasna ceremony, in India it appears mostly<sup>9</sup> together with the Yasna and the two Sīrozag (for instance in the manuscripts K 11 [110], J21<sup>10</sup>, H1<sup>11</sup>). Concerning the Wīdēwdād, the most significant difference between the presentation of the text is that whereas all the Iranian manuscripts include a very short description of the preliminaries of the ceremony and begin the Avestan text with Y0.0, the Indian ones begin usually directly with the section *yašt bun* of the Iranian ones, that is, in Y0.4<sup>12</sup> (for instance, following manuscripts available in ADA: T 46 [4240], O 2 [4250], B 4 [4410], FIRES 1, etc.).

The Wīdēwdād ceremony is frequently attested in Iranian as well as in Indian manuscripts. The exegetical manuscripts we know were all copied in India, but at least the oldest can in fact be considered as Iranian manuscripts. L 4 and K 1 were copied in India, but by an Iranian priest (Mihrābān Kayxōsrō) from an Iranian original (written by Mihrābān Marzbān) and show none of the features peculiar to the Indian manuscripts with the exception of the very frequent use of the Indian initial *y* (whereas K 7 has the Iranian one) and occasionally *ao* for *aō*.

## 2. The relationship between the different text types of Wīdēwdād

### 2.1. The prehistory of the Sāde and Pahlavi text types

The text of the Wīdēwdād (like the text of the ceremonies of the long liturgy) is transmitted thus in different kinds of manuscripts, including different texts (exegetical and liturgical either Indian or Iranian). Each class of these manuscripts can be considered a text type of Wīdēwdād. Hence countless questions arise that we can summarize in two main questions:

1. What is the relationship between the exegetical (Pahlavi) and the liturgical (Sāde) manuscripts? This question has special implications in the case of the Wīdēwdād, since the proper or intercalated Wīdēwdād is the only text of the liturgical manuscripts that was at the same time one Nask of the Great Avesta.

9 The exceptions known to me are P 12 (Suppl. Pers. 30) and K 8 that bears the notice that it is written “in the Iranian way”.

10 See the description of HINTZE in this volume, p. 263.

11 See the description of HINTZE in this volume, p. 267.

12 An exception is M 2 [4230]

2. Is it possible that liturgical manuscripts containing different ceremonies of the long liturgy as the Yasna, the Wīspērād or the Wīdēwdād go back to a common written source? Or are they totally independent text types?

Traditionally, the question about the relationship between the different text types has been posed only with reference to the liturgical and exegetical manuscripts. Since the differences between the various ceremonies were thought to be limited to the texts included in the Pahlavi manuscripts, it has always been implicitly assumed that the manuscripts of the different variants of the long liturgy can go back to a common source. Furthermore, analyses of the written transmission of the Avesta took for granted that the different types of manuscripts derived from a common text. The dominant idea was that all our manuscripts are the random rests of the Great Avesta rearranged for ritual purposes. Because of the misfortunes of the Zoroastrian community after the Islamic conquest, so the argument ran, most manuscripts were lost and only one copy of each text remained. As we know from the descriptions in Pahlavi literature, the Great Avesta included not only the Avestan text but also the Pahlavi translation. Since our manuscripts go back ultimately to the Great Avesta, it was assumed that the Pahlavi manuscripts are older and that the Sāde manuscripts were created extracting from them the Avestan text. This seemed to be confirmed by the fact that the extant exegetical manuscripts for the Yasna and the Wīdēwdād are older than the liturgical.

This view has changed in the last years. According to KELLENS (1998) there were around the end of the Sasanian age two different compilations of Avestan texts: the ritual Avesta and the Great Avesta. Some rituals were still celebrated in Avestan (as they are also today), and at a time which cannot be determined exactly but was in the 10<sup>th</sup> century at the latest, some of them were written down. The main part of the extant Avestan manuscripts belongs to this group that we call “ritual Avesta” (although we do not have any evidence that this group was ever considered to be a unity by the Zoroastrian tradition).

The Nērangestān provides, indeed, direct evidence of the Sasanian antiquity of the tradition of the ritual Avesta. As I have shown in a communication presented in Cracow in the 7<sup>th</sup> European Conference of Iranian Studies (September 2011), the Nērangestān continues the same tradition that brought about the Sāde manuscripts and is based on descriptions of the ceremonies similar to the descriptions we find in the Sāde manuscripts (cf. some examples in this volume, p. 449f.). Often the formulation in the Nērangestān supposes the existence of the ritual directions we know from the Sāde manuscripts. It is thus very likely that at the time of the composition of Nērangestān (probably late Sasanian times), descriptions of the ceremonies similar to the descriptions written down in the Sāde manuscripts were available either just in oral or in oral and written form. So the Sāde manuscripts continue a tradition that goes back at least to late Sasanian times and is probably much older.<sup>13</sup>

The liturgical manuscripts of the long liturgy are continuants of the descriptions of the ceremonies including the text and ritual directions that were usual in the priestly schools at least since Sasanian times, but probably also earlier. We do not know, however, at what time these descriptions started to be written down; whether only one copy was made in a concrete school and then was sent to other schools or different copies of the usual descriptions in the different schools were produced independently or even at different times; whether the manuscripts of the different ceremonies were created all on the basis of the ritual practice or whether a basis ceremony was copied and later on the manuscripts of the different ceremonies were created (once or several times) on the basis of this one basic ceremony. The extant manuscripts (most of them at least 700 years later than the earliest copies) show a great homogeneity (despite some local and temporal differences) in the ritual text, but a great variety of readings of each single word. This textual homogeneity together with single common aberrant readings have been an argument for the manuscripts going back to a common source, but this uniformity can, however, reproduce the ritual uniformity.

Besides, there was the Great Avesta described in the eighth and ninth books of the Dēnkard. Most texts of the Great Avesta have been lost with only few exceptions like the Hērbadestān and Nērangestān. The traditional idea is that the exegetical manuscripts go back to the Great Avesta and that they are the basis for the liturgical manuscripts. We have just explained that the second part of the statement is false, but we still have to clarify the relationship between the exegetical manuscripts of the ceremonies and the liturgical ones. In the case of the Yasna and Wīšperad it is obvious that the Pahlavi manuscripts are secondary to the liturgical manuscripts. In fact, the Pahlavi manuscripts of the Yasna still contain, although in different degrees, the ritual directions contained in the ritual descriptions. The case of the Pahlavi manuscripts of Wīšperad is even clearer. The exegetical manuscripts include the alternative or additional texts of the Wīšperad ceremony when compared with the daily morning ceremony, but only from Y 1 to Y 54 (probably following the model of the exegetical manuscripts of the intercalation ceremonies) and only the texts that need a translation because they do not appear either in the Yasna exegetical manuscripts or in the Wīšperad in an earlier passage.

The process of creation of the Pahlavi Yasna manuscripts is described in the colophon of the group of manuscripts of Pt 4 and Mf 4. According to their introduction, Māhyār, son of Farroxzād, combined before the year 1020 in one manuscript

- 13 We find indeed evidence of the existence of ritual directions even in the Avestan language in the Nērangestān, of course, but elsewhere as well. This is clearly the case in the dialogic recitation of the Ahuna Vairiia which always appears in the long liturgy when the Ahuna Vairiia has to be recited only once. The texts *zaota frā mē mrūtē* and *frā ašauna vīduuā maotū* are clearly ritual directions in Avestan that became part of the liturgical recitation by mistake. SHERVIN FARRIDNEJAD informs me that he has witnessed a Gāhambār ceremony in Tehran, six years ago, in which instead of reciting three times the Ašom Vohū, just *ašom vohū se bār* was recited (with ritual instruction in Pahlavi “three times”).

the Avestan text of the Yasna taken from one manuscript and the Pahlavi translation taken from another (CANTERA/DE VAAN 2005). However, whereas it seems to be clear that one of the sources was a Sāde manuscript (including the ritual directions) as we know them from later times,<sup>14</sup> we are not sure about the shape of the manuscript including the Pahlavi translation (an exegetical manuscript as we know them or a manuscript containing just the Pahlavi translation?).

The Pahlavi manuscripts of Wīdēwdād include just the Avestan text and translation of the proper Wīdēwdād that appears intercalated in the Wīdēwdād ceremony. This text is the only ritual text that was at the same time a Nask of the Great Avesta<sup>15</sup> and this puts the exegetical manuscripts of the Wīdēwdād in a special middle position. Therefore, the question arises if the exegetical manuscripts of the Wīdēwdād might continue the tradition of the Wīdēwdād Nask and if this tradition has also influenced the proper Wīdēwdād text of the liturgical manuscripts.

The language of the Pahlavi translation of the Wīdēwdād shows certain linguistic features that are closer to Inscriptional and Manichaean Middle Persian than to Classical Pahlavi (CANTERA 1999; 2004, p. 231ff.). Furthermore, the Pahlavi translation of the Wīdēwdād with its long digressions and above all with the quotation of Avestan texts as argument of authority (see CANTERA 2004, p. 253ff.) is closer to the translations that continue the Great Avesta like Nērāngestān and Hērbadestān than to the translations of the other ritual texts. Thus, the Pahlavi translation contained in the exegetical manuscripts of Wīdēwdād seems to continue in a certain way the exegetical tradition that led to the creation of the Great Avesta with its Pahlavi translation.

Furthermore, the Wīdēwdād Sāde manuscripts show in the Wīdēwdād intercalations scribal characteristics that are missing in the rest of the ceremony. For instance, many manuscripts have important geometrical or vegetal (or sometimes even animal) decorations at the beginning of some Wīdēwdād fragards that do not appear at the beginning of other sections of the ceremony. The most impressive we know were produced by Mihrābān Anōsagruwān Wahromšāh<sup>16</sup> in the second half of the 17<sup>th</sup> century in Iran, but we find some even in several Indian manuscripts of the 19<sup>th</sup> like FIRES 1 (4515).<sup>17</sup> Such decorative elements missing in other liturgical manuscripts (with some exceptions where we find cypresses and pomegranates before Y28) and in the same manuscripts in the rest of the ceremony could be originally typical decorative elements of the Great

14 In fact, this manuscript was probably not very different from Mf1 and this led GELDERNER to the wrong idea that Mf1 was extracted from the common source of Pt4 and Mf4, as I have recently shown in a communication in the Conference “700 años de Estudios Orientales en Salamanca”, September 2011.

15 With minor deviations, the description of the Dēnkard agrees with the text of the proper Wīdēwdād as it appears in both text types, the Sāde and the Pahlavi. For an analysis of the deviations of the description in the Dēnkard from the Wīdēwdād of the manuscripts cf. CANTERA 2010a.

16 He is the copyist of Ave 1009 (4050) and RSPA 230 (4060).

17 Available in ADA.

Avesta manuscripts. Their usage just in the intercalated parts of the Wīdēwdād could then be explained through the use of the Wīdēwdād Nask for copying the Wīdēwdād sections of the Wīdēwdād ceremony.

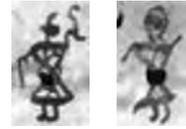


Fig. 1 Fig. 2

Two manuscripts of the Marzbān family (Ave976 [4000] and Ave977 [4010], the oldest known Iranian Wīdēwdād Sāde mss.) show, indeed, a further particular scribal feature in the Wīdēwdād sections (and only here). Some special words are systematically marked with specific pictures, either geometrical or human or animal figures. For instance, Ave976 [4000] show in V3 and V8 a bird head up after each *ašāum* and upside down after each *mazdā* (see folio 78v in ADA). In V5 it is a horizontal goat for *ašāum* and a vertical one for *mazdā* (see folio 100r in ADA). In V7 two different human figures appear for *ašāum* (Fig. 1) and for *mazdā* (Fig. 2)<sup>18</sup> and further figures appear in other *fragards*.

Similarly in Ave977 [4010] key words (like *ašāum*, *mazdā*, *nasuš* ...) are systematically accompanied by different decorative motives only in the Wīdēwdād intercalations. It seems that the Wīdēwdād sections follow a different scribal tradition than the ritual sections of the Wīdēwdād ceremony. Such differences could perhaps reveal the amalgamated nature of the liturgical Wīdēwdād manuscripts.<sup>19</sup>

Furthermore, the division in 22 *fragards* could also point out a composite nature of the liturgical Wīdēwdād manuscripts. In the ceremony as it appears in the liturgical manuscripts, Wīdēwdād is divided into 10 sections, but the manuscripts show a division in 22 *fragards*. This division agrees with the 22 *fragard* of the Sūdgar and Bay Nask of the Great Avesta and with the 22 divisions of the Old Avestan texts in some celebrations of the long liturgy.

Phl. *fragard* is probably the designation for one intercalated section in a ceremony of intercalation. Thus appears still in the liturgical manuscripts of the Wīštāsp Yašt, where each *fragard* corresponds to a ritual intercalated section. The Sūdgar and Bay Nask might thus represent the intercalated Avestan texts of an old ritual or have been modelled according to this pattern. In the case of the Wīdēwdād ceremony there is, however, a discrepancy between number of the *fragards* and the ritual division of the text that might again point out the composite nature of the Wīdēwdād liturgical manuscripts.<sup>20</sup>

18 These pictures are taken from folio 129, but in other folios the two figures are not so different from each other.

19 A possible objection to this hypothesis is that the exegetical Wīdēwdād manuscripts do not show such features. However, we must keep in mind that all the extant exegetical Wīdēwdād manuscripts go back to two copies by the same scribe so that it is possible that this is just a personal feature of Mihrābān Kayxōsrō or originates from him. In any case, such decorative motives are rather to be expected in the exegetical manuscripts than in the practical liturgical manuscripts used in the priestly schools.

20 In my opinion, the use of *pərəsaṭ zaraṣuštrō ahurām mazdqm* could have been an old indicator of the beginning of a *fragard* and the textual indication of the step from the “ritual” text to the *frašna*-revelation that took place in the middle of the ceremony, a

Thus the exegetical manuscripts are probably not totally independent from the Great Avesta. The liturgical manuscripts are possibly influenced by the manuscripts of the Wīdēwdād Nask as well. Unfortunately, the prehistory of the Sāde and Pahlavi text types cannot be clarified with the actual data. We do not even know whether the Wīdēwdād text in the Wīdēwdād ceremony and the Wīdēwdād Nask have always been exactly the same. In their actual form most of the divergences can be attributed to errors in the written transmission of the Pahlavi Wīdēwdād manuscripts, with the exception of the omission of the 12<sup>th</sup> *fragard* in the Pahlavi Wīdēwdād manuscripts that has yet to be explained satisfactorily (CANTERA 2010a, p. 199ff.). Even the differences stated between the extant text and the Dēnkard synopsis of the Wīdēwdād Nask are far from conclusive and could be a consequence of the character of the synopsis itself.

Nevertheless, one thing we know for sure. At a certain point the exegetical and the ritual proper Wīdēwdād text have been exactly the same or both have been collated to produce a unified version. A clever analysis of V 15.49 and 15.50 by HUMBACH 1973 (see p. 291ff.) has made evident that at some point of the written transmission (before the 13<sup>th</sup> century) there was a common version of the Avestan text of Wīdēwdād for both text types, the exegetical (at least in the only version of it we know, the transmission line of Homāst Wahišt) and the liturgical. Traditionally it has been assumed that it means that there is genealogical dependence between both text types. This problem is, however, related to the second question raised by the motley typology of the manuscripts of the long liturgy: do manuscripts containing different versions of the long liturgy and even exegetical manuscripts and liturgical manuscripts go back to one and the same source? Or are there other possible explanations for the textual homogeneity of most of the manuscripts?

## 2.2. The alleged “Stammhandschriften” or hyparchetypes.

All the manuscripts of Wīdēwdād (exegetical or liturgical) share such a pregnant error like the repetition of V 15.49. Furthermore, all liturgical manuscripts of the long liturgy share other errors that must have arisen within the written transmission, like *ziīāienīm* in Y 12.3 (see p. 291). According to the Lachmannian principles, if two manuscripts share a significant error, they must be ge-

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signal of the change from the monologue of the sacrificer to the dialogue between sacrificer (Zarathuštra) and Ahura Mazdā. In fact, in Wīdēwdād this expression marks usually the beginning of a *fragard* (2, 7, 9, 10, 11, 14, 17,20). It signals also the beginning of a Yašt in Yt1 and 14. Actually, it does appear in the middle of a *fragard* only in the *fragard* around the most “*frašnaic*” moment of the ceremony, the second Yasna Haptañhāiti and Y 53, that is in V 18 and 19 (V 18.8, 14, 61, 67, V 19.11, 17, 20, 26). The use we find in the actual version of the Wīdēwdād might keep some traces of this supposed value, but it reveals a certain degree of confusion. The position of the *pərəsaē* does not correspond exactly either with the ritual with 22 sections or with that of the 10.

nealogically related. Therefore, it seems that all liturgical manuscripts of the long liturgy go back to one single original in which such a mistake had already occurred. Following this principle, HOFFMANN developed around the 1970s the hypothesis of the hyparchetypes or “Stammhandschriften”.<sup>21</sup> According to HOFFMANN, at the end of the 9<sup>th</sup> or 10<sup>th</sup> century there was only one manuscript of each Avestan text: one for the Yasna, one for the Wīšperad and one for the Wīdēwdād (HOFFMANN 1989, p. 17). HUMBACH (1973) postulated with the same methodology a further common hyparchetype for the liturgical and exegetical manuscripts of the Wīdēwdād. Accordingly two hyparchetypes take part in the constitution of the liturgical Wīdēwdād manuscripts, an idea that fits well in the supposed composite nature of the liturgical manuscripts of Wīdēwdād.

The main argument for a hyparchetype of the long liturgy (Yasna, Wīšperad and Wīdēwdād) was brought forward by HOFFMANN himself (1969). In Yasna 12.3 the manuscripts of the different classes show different variants that allow us to reconstruct a common reading *ziiāiienīm* for all of them. According to HOFFMANN this is likely to be a corruption for *ziienīm*: the copyist mistakenly wrote *ziiā*, noticed his error, marked *iiā* with deletion dots and continued writing the rest of the word (*iienīm*). Later copyists have overlooked the deletion dots and hence written *ziiāiienīm*. Although such a procedure of deleting just three letters is not usual, this is the most likely explanation for the original word and its corruption. Since this corrupted form appears in the Yasna as well as in the other versions of the long liturgy and in Sāde as well as in Pahlavi manuscripts, this seems to imply that all the manuscripts of the long liturgy go back to a single copy. It implies the existence of only *one* “Stammhandschrift” for all different types of manuscripts of the long liturgy.

For the Pahlavi and Sāde manuscripts of Wīdēwdād a common hyparchetype has been also supposed. HUMBACH (1973) analysed different mistakes in the written transmission of Wīdēwdād and came to the conclusion that there must have been two successive “Stammhandschriften” for the Wīdēwdād:

1. a Sāde manuscript (“Stammhandschrift 1”);
2. a Pahlavi Wīdēwdād manuscript deriving from the old Sāde and being the source of all extant Avestan manuscripts, Sāde and Pahlavi alike (“Stammhandschrift 2”).

This hypothesis faces the same difficulties as the one of the long liturgy’s “Stammhandschrift”. It is not difficult to produce a Pahlavi Wīdēwdād manuscript from a Wīdēwdād Sāde, as long as the Pahlavi translation is available from another source (oral or written). It is much more difficult, however, to create a Wīdēwdād Sāde manuscript from a Pahlavi Wīdēwdād. An additional Wīšperad Sāde or at least Yasna Sāde (a copy of the “Stammhandschrift” of the long liturgy) would be necessary. The creation of a Wīdēwdād Sāde would then have

21 For a history of the development of this theory cf. KELLENS 1998.

been the result of a collation process between the “Stammhandschrift 2” of the Pahlavi Wīdēwdād and one copy of the Stammhandschrift of the long liturgy.

HUMBACH’s main argument for the existence of the “Stammhandschrift A” is that some mistakes in the written transmission of the Avestan text have left traces in the Pahlavi translation. Hence he deduces that the Pahlavi translation has been added after these errors happened. The most significant error is the repetition of the paragraph V 15.49 which is identical to V 15.50 but for the omission of the verb *jaiṅti* and the final sentence *kā hē asti ciṣa* in the first one. Obviously V 15.49 is faulty. HUMBACH explains this peculiar repetition by assuming that a copyist had copied V 15.49 almost completely, when he noticed that he had left out *jaiṅti*. Accordingly he deleted the wrong paragraph with deletion dots and copied the text again. A later copyist overlooked the deletion dots and copied the text twice. In the Pahlavi Wīdēwdād manuscripts both paragraphs have a Pahlavi translation. Hence HUMBACH makes two deductions:

1. There was a Stammhandschrift A from which all extant manuscripts derive, and it was a Wīdēwdād Sāde manuscript; and
2. The Pahlavi translation was created after this error happened. Thus a new type of manuscript was created by extracting the text of the proper Wīdēwdād from a Wīdēwdād Sāde and its Pahlavi translation was added.

Actually, the repetition of V 15.49–50 is a wonderful example of a significant error that according to the Lachmannian principles must imply the existence of a common source for all the different types of Wīdēwdād manuscripts. Nevertheless, HUMBACH has gone too far in his conclusions. First, the fact that the repeated Avestan text is translated too does not prove that this repetition happened before the creation of the Pahlavi translation. It could at the most indicate that the Pahlavi translation was “joined” to the Avestan text of the proper Wīdēwdād after this error happened. But the Pahlavi translation indeed takes only rudimentary heed of this repetition. Thus, we may observe that *jaiṅti* in V 15.50 is not translated (CANTERA 2010a, p. 196) and it is rather likely that the Pahlavi translation of V 15.49 is just repeated.

Furthermore, the adaptation of the Pahlavi translation to the Avestan text was, indeed, not a one-off, but a process that extended over time. We have, indeed, evidence of further adaptations of the Pahlavi translation to transmission errors within the transmission of the Pahlavi translation. In V 19.45 L 4 and K 1 omit the Avestan words *uruṣanta adāuṅta daēuua druuantō* available in the Sādes. The Pahlavi translation of these words is also missing. In K 1 the text runs as follows (L 4 is similar):

*adumaranta adāuta daēuua druuantō duždāyḥō aṣam daoθrīm dāuṅta daēuua druuantō* \* dw’lyt HWE-d AP-š’n dwst ŠDYA gwšn PWN MNDWM OLE-š’n SLYT-l YHWWN-t’ y ŠDYA-’n dlwnd’n’ dwšd’n’k’n \*

This omission is very peculiar for several reasons. When a few Avestan words in a sentence are omitted in the transmission of the Pahlavi Wīdēwdād manuscripts,

their Pahlavi translation usually remains.<sup>22</sup> When a whole Avestan sentence is skipped, then either its Pahlavi translation is omitted (if it is a *saut du même au même* because of the initial word of the sentence like in V 3.41 and 11.9) or the Pahlavi translation of the previous Avestan sentence is omitted together with the Avestan text (like in V 18.5).

In V 19.45 some words are omitted in the middle of the sentence and so is their Pahlavi translation. The missing Pahlavi translation cannot be a transmission error, since the Avestan text and Pahlavi translation are not transmitted in direct connection. It is obvious then that the Pahlavi translation was adapted to the Avestan text after this error happened within the written transmission of the Pahlavi Wīdēwdād manuscripts. Such adaptations are frequent and therefore, an adaptation of the Pahlavi translation to the “new” repetition of an Avestan passage could have been possible any time.

HUMBACH furthermore assumes a Stammhandschrift 2 (with the Pahlavi translation already included) from which all the Sādes and Pahlavi Wīdēwdād manuscripts derive. The argument is based on some minor omissions in the Avestan text the Pahlavi translation of which is, however, available, and other common transmission errors like the form *frāšnuuāt* instead of the correct *frāšūšūiiāt* in V 1.1, where the Pahlavi translation seems to reflect the original form. There are, however, only a few common errors to support this assumption.

A further argument for the existence of this Stammhandschrift 2 was delivered by KELLENS (1998, p. 447 n. 49) and earlier advanced by GELDNER (1886, I, p. xix). KELLENS establishes a relationship between Stammhandschrift 2 and the fact that some Avestan quotations which belong to the Pahlavi commentaries sometimes also appear in the Wīdēwdād Sāde manuscripts as part of the Avestan text of the recitation. According to him they were copied wrongly when a new Sāde was made from a copy of the Stammhandschrift 2. Actually, the Avestan quotations were not included in the supposed hyparchetype of all Avestan Sādes deriving from the “Stammhandschrift 2”, since the Iranian Sādes do not include most of them and even in the Indian Sādes the inclusion of the quotations was a gradual process that did not affect equally all manuscripts. The introduction of the Avestan quotations is the result of several processes of collation between Sāde and Pahlavi manuscripts (as FERRER shows in his contribution to this volume, p. 395ff.) and is not proof of the Sāde manuscripts going back to a manuscript of the Pahlavi Wīdēwdād type.

Thus, the only argument for establishing a hyparchetype for all liturgical manuscripts and another of the proper Wīdēwdād text remains the Lachmannian principle that a significant common error supposes the existence of a common source for all manuscripts sharing this error. Nevertheless, the theory of the hyparchetypes seems to find confirmation in the view of the transmission delivered by the colophons of some Avestan manuscripts.

22 Examples in CANTERA 2007.

In fact, the available colophons allow us to reconstruct for several text types of the *Wīdēwdād* a common ancestor for all or most of the extant available sources. It is well known that all the Pahlavi *Wīdēwdād* manuscripts go back to a manuscript by Homāst Wahišt, later copied by Ardašir Wahman Rōzweh. A similar situation can be postulated for the *Wīdēwdād Sāde*. Most of the manuscripts belong to the family of Marzbān Frēdōn (Ave 976 [4000], Jp 1, Ave 977 [4010]) and two further manuscripts were copied by Mihrābān Anōšīrwān (Ave 1009 [4050], RSPA 230 [4060]) from an original belonging to the family of Marzbān. At least one manuscript of the Marzbān family, Ave 992 [4030], went back to a manuscript of Šahryār Erdešīr Ērīz, so that we could assume the same origin for the rest of the manuscripts of the same family. Ave 1001 [4040] is also a copy of a manuscript by the same copyist and gives us the information in the middle colophon that Šahryār's copy goes back to a copyist of the Dēnkard, Wizan Šahryār. Only Mf 2 [4020] does not mention a dependence of the Šahryār Erdešīr copy, but it shares with the rest of the Iranian *Wīdēwdād Sāde* the addition of the same texts after the end of the text of the ceremony. This could point out to a common source (but does not have to).

All Iranian *Wīdēwdād Sāde* manuscripts (but not the Indian ones) show a colophon immediately before V 9. Although this is a significant place after the *Wīšperad* section following the first Yasna Haptaṅhāiti, there are no clear reasons why colophons must appear exactly at this point. Furthermore, V 9 begins in the Iranian manuscripts always at the beginning of a new folio, a particularity of this *fragard*. This scribal tradition can go back to a first liturgical *Wīdēwdād* manuscript in two volumes (like some of the preserved *Wīdēwdād Sāde* manuscripts, for instance Ave 977 [4010]) with a colophon at the end of the first volume and a second at the end of the second one.

The *Wīšperad* manuscripts G 18b (2010) and AQ 2973 (2020) are also closely related to each other. The first is a copy of a manuscript written by Wahrom Marzbān; the latter, although written almost hundred years later (1069 YE), has been joined to a manuscript of Wahrom containing Yt 13 and the Yasna ī Rapihwin.

The Pahlavi Yasna manuscripts could also go back to one common original, but this time we can not use the evidence of the colophons. Since the manuscripts include some of the performative ritual directions that characterize the combined *Sāde*-Pahlavi Yasna manuscripts (the manuscripts belonging to the group of Pt 4 and Mf 4) it seems rather likely that these manuscripts do go back to the same composite manuscript (*Sāde*+Pahlavi) put together by Māhyār Farroxxād.

The lack of genealogical information in most of the Indian manuscripts makes an assessment of the homogeneity of the Indian witnesses difficult, but my impression is that there are clear homogeneous groups. Thus, most of the Indian Yasna *Sāde* manuscripts belong to one of two groups: 1. the oldest witness of the first group is B 3 and L 17 is late copy of it; 2. the oldest manuscript

of the second group is K 11 [110], followed by Lb 2 [120]. We lack, however, any evidence that brings both groups together.

Thus the colophons and a superficial analysis of the transmission reveal often a possible common ancestor for each different text type, but we cannot exclude the existence of witnesses with a different origin. Although the information available in the colophons also points out the direction of rather coherent groups of manuscripts for each text type, the hypothesis of one Stammhandschrift for the long liturgy or for each single ceremony is based only on the Lachmannian principle of a common agreement as proof of a genealogical relationship between two witnesses.

This philological argument poses several historical problems. Which kind of manuscript was the hypoarchetype of the liturgical manuscripts of the long liturgy? Which liturgy did it contain? How were the manuscripts of the rest of the ceremonies of the long liturgy created? If we accept the hypothesis of the creation of the manuscripts of the different ceremonies of the long liturgy on the basis of *one hyparchetype* reproducing one ceremony, we must assume that the manuscripts of the other liturgies were created on the basis of the ritual knowledge of the copyist and that he was able to put in written form the texts he knew by heart from the ritual praxis. If this was possible, why must we assume that he did so for the specific parts of each ceremony, but not for the common parts? He could have copied the whole ceremony out of his ritual knowledge as well without using any written source.

In fact, we find among the historical manuscripts at least one sample of a manuscript of one ceremony that could be created on the basis of a manuscript of a different ceremony. The Wīspērad manuscripts G 18b (2010), AQ 3973 (2020) and the well known Wīštāsp Yašt K 4 (5020) and G 18a (5000) seem to be in a clear genealogical relation. Mānušcihr Ardašīr Wahrom Sfandyād has copied in one manuscript (G 18) a Wīštāsp Yašt and a Wīspērad. The first goes back according to the colophon to an original of Xōsrōšāh Anōšagruwān Rustām Xōsrōšāh, the author of the original of K 4. The similarities of G 18b (2010) with K 4 (5020) might indicate that he used the original Wīštāsp Sāde manuscript for creating a complex Wīspērad manuscript offering several alternatives on the basis of this manuscript and his own ritual knowledge. AQ 3973 might have been copied from Wahrom's original of G 18b, although there is no direct evidence for it. However, such cases of manuscripts belonging to different ceremonies that show a close influence are not frequent and in most of the cases the influence can be explained because of the activity of the priestly schools, as we are going to see later. This can be the case, for instance, of the connections between the Yasna Sāde Lb 2 (120) and some Indian Wīdēwdād Sāde manuscripts like T 46 (4240).

In the case of the Wīdēwdād ceremony, the combination of the hypothesis of the hyparchetype of the long liturgy and of the hyparchetype of all the copies of the proper Wīdēwdād text in exegetical as well as in liturgical manuscripts also has inevitably historical consequences. In HUMBACH's view, the exegetical

manuscripts were created by extracting the proper Avestan text from a liturgical *Wīdēwdād*. He does not explain, however, the relation of this new created exegetical manuscript to the *Wīdēwdād Nask* as described in the *Dēnkard*. The similitudes between both make it unlikely that they are totally independent from each other. If the exegetical manuscripts were created on the basis of the liturgical ones, then the liturgical manuscripts must be older than the Great Avesta. Since all liturgical manuscripts go back to a single archetype as well, this archetype is older than the exegetical manuscripts of *Wīdēwdād* and hence older than the Great Avesta. This combined hypothesis does not fit properly into the traditional view of the liturgies as re-arrangements of the remnants of the Great Avesta. Actually, the data provided by HUMBACH are maybe not enough for the reconstruction of the hyparchetypes 1 and 2 and the connected historical consequences.

Summing up, by the end of the Sasanian era there were two different types of Avestan texts:

1. the Great Avesta containing all known Avestan texts conceived and arranged as an extension of the Ahuna Vairiia;
2. the recitatives of several liturgies and rituals, some (but not all) of which were also included in the Great Avesta, albeit not in the same disposition.

The extant manuscripts of the Avesta go back (with few exceptions like the *Nērangestān* and the *Hērbadestān*) to the ritual texts. This is obvious for the different manuscripts containing the long liturgy, including the *Wīdēwdād Sāde* manuscripts. The *Wīdēwdād* ceremony in its two variants is attested already at the end of the Sasanian age, as is witnessed by the commentary of PV 9.32.

In contrast, the Pahlavi manuscripts are linked to the exegetical tradition of the Great Avesta, most directly in the case of the Pahlavi *Wīdēwdād*. In the case of the proper *Wīdēwdād* only minor adaptations were necessary when creating the Pahlavi manuscripts of *Wīdēwdād*, whereas for the translation of the standard texts of the long liturgy (the *Yasna* and the *Wīšperad*) a more intense exegetical activity was required.

Furthermore, the exegetical manuscripts of *Wīdēwdād* and the exegetical tradition of the Great Avesta seem to have influenced the creation of the liturgical manuscripts of *Wīdēwdād* that have hence a composite character. And viceversa, the liturgical manuscripts have influenced probably the exegetical ones, as far as we can follow back the transmission of *Wīdēwdād*.

According to the information in the colophons, many of the extant manuscripts of the different text types seem to share a common past, but it is rather impossible to generalize this statement to all extant manuscripts of each text type. All different variations of the long liturgy (in their *Sāde* as well as Pahlavi versions) share some common transmission errors and show a high degree of homogeneity in the common parts of the liturgy. The same is true for all the different versions of the *Wīdēwdād* (the two *Sāde* versions and the Pahlavi one). This

fact has been traditionally explained as the result of the existence of “Stammhandschriften” for the long liturgy and for the Wīdēwdād text. On the basis of the analysis of common errors it has been postulated that there was a single copy of the Wīdēwdād ceremony, from which a Pahlavi Wīdēwdād manuscript was created which for its part is the source of all known Wīdēwdād manuscripts (Sāde and Pahlavi).

An alternative explanation is that the homogeneity in the manuscript tradition is a reflex of a great ritual homogeneity, that is, that the long liturgy was celebrated exactly in the same way in widespread areas so that manuscripts produced independently could share common mistakes and that there were several priests probably at different times and in different places that were able to reproduce in written form accurately the ritual performance. Furthermore, since some of these generalized mistakes have taken place within the written transmission, we would have to accept that the written transmission influenced the ritual praxis so that transmission errors could develop to canonical forms.

The hypothesis of the “Stammhandschriften” is based entirely on the Lachmannian principle that the sharing of a significant error in the written transmission is a definitive proof of the common origin of two manuscripts. Such an axiomatic principle must, however, be reconsidered. Are just a couple of common significant errors really enough evidence to establish a genetic relationship between manuscripts? Or are there other possible sources for the spreading of a variant to several manuscripts without their being related genetically? Only an analysis of the way the different types of manuscripts were copied can help us in making a decision.

### 3. The scriptural-exegetical and the ritual-oral tradition

The exegetical and the liturgical manuscripts had completely different functions. We might therefore suppose that they were transmitted differently too. The Sāde manuscripts are closely connected with the ritual activity and above all with the instruction and training of priests. They were typically not intended to be used directly in the ritual (with the exception of the Wīdēwdād part of the Wīdēwdād Sāde manuscripts), but only in the training of priests for it. This is obvious in the case, already mentioned, of manuscripts like G 18b (2010) that do not reproduce the text of one specific ceremony, but include several alternatives to be recited on different occasions. Of course, the ritual directions written in Pahlavi or Gujarati, sometimes quite long, were not meant to be read by the priest during the ceremony, but in advance during his training. Thus, although the manuscripts were not usually used in the ceremony, the connection between liturgical manuscripts, which played an important role in the instruction of priests for the ritual performance, and the ritual practice is extremely close.

On the other hand, the Pahlavi manuscripts continue the exegetical tradition and have no direct connection to ritual practice. This tradition was probably, at least from the 14<sup>th</sup> century on, almost purely scriptural. It was restricted to manuscripts, and the manuscripts were prestige objects and accessible to a cultivated elite of the priestly class. This explains, on the one hand, the scarcity of Pahlavi manuscripts before the 18<sup>th</sup> century and, on the other hand, the fact that most of the oldest manuscripts are, indeed, the Pahlavi manuscripts and not liturgical ones. Being prestige objects, they were better preserved than the liturgical manuscripts intended for daily use in the priest schools. The oldest Sāde manuscripts we know (with the exception of K7) belong to the 16<sup>th</sup> century and it is only in the 17<sup>th</sup> century that the extant copies begin to be numerous. In contrast, the most important Pahlavi manuscripts date from the 14<sup>th</sup> century and further copies are seldom till the 18<sup>th</sup> century. The liturgical manuscripts are much more frequent than the exegetical ones, although written in a poorer quality. From the 200 or so Wīdēwdād manuscripts known to us, about 60 are Pahlavi manuscripts and 140 Sāde.

We have indications that there existed a kind of mass production of liturgical manuscripts in certain priestly families. From Marzbān and his sons Frēdōn and Wahrom we have notice of at least five Wīdēwdād Sāde manuscripts and the colophons point out that this family had established a sort of company for the production of manuscripts. The colophon of the manuscript Ave977/978 (4010) was written by one person who left a blank for the first name of the copyist (while the rest of the genealogy was fixed, since it could also appear in colophons of the brother) and also for the day and month of the date, while the year is written. The blanks were completed in red ink by a different hand. It seems also that someone worked for the sons of Marzbān and could produce several manuscripts a year.

Also the users of exegetical and liturgical manuscripts seem to be different. While in the Pahlavi manuscripts Pahlavi is, of course, being used, the Sāde manuscripts copied in India do not make any use of Pahlavi. The earliest Sāde manuscripts in India that were not copied by Iranian priests mainly use Gujarati for their ritual directions. When Pahlavi (or a late variant of it) appears, it is mostly in the Avestan script. It seems that the ordinary priests for whom the manuscripts were intended did not read the Pahlavi script with ease. The Pahlavi manuscripts, in contrast, were directed to a more cultivated priestly class. There are thus two different traditions of copying manuscripts:

1. the exegetical-scriptural tradition responsible for the Pahlavi manuscripts;
2. the ritual-oral one responsible for the Sāde manuscripts.

Since the tradition of the exegetical manuscripts of the Pahlavi Wīdēwdād was established, it became independent, although contacts between both traditions took place at certain times, as will be shown later. One of the most marked characteristics of the exegetical manuscripts of the Pahlavi Wīdēwdād is that they were more resistant to change than the Sādes, on two accounts:

1. Already in the 13<sup>th</sup> century it was an almost purely scriptural tradition, independent of the ritual practice and hence free from its influence.
2. The Pahlavi translation helped to fix the Avestan text, since the introduction of changes in the Avestan text also imply the adaptation of the Pahlavi translation.

These manuscripts were more or less careful copies of their precursors and tried to reproduce their originals with accuracy. This has, on the one hand, contributed to a certain extent to the preservation of Avestan texts less influenced by the text recited in the ritual. But on the other hand, they were more exposed to accidents in the transmission. Since there was no control text (the recitation in the ritual practice), each loss of a word, sentence, page or line, etc. was reproduced in later copies. Already the earliest extant Pahlavi Wīdēwdād manuscripts, L 4 (4600) and K 1 (4610), show frequent errors of this kind: omissions of sentences, lines or pages and important misplacements of complete folios (CANTERA 2010a).

Besides the oldest Pahlavi Wīdēwdād manuscripts L 4 (4600) and K 1 (4610), only three Wīdēwdād manuscripts survive that testify perfectly to this tendency: B 1 (4711), M 3 (4715) and P 10 (4716) (the rest are late manuscripts that show a clear influence of the liturgical manuscripts in the 18<sup>th</sup>–19<sup>th</sup> century). All three of them are copies from K 1 and unfortunately none of them is dated. They show very high indices of agreement with their ancestor; reproduce its misplacements of folios; fail to complete the missing texts, even when a whole folio is lost, etc. However, even in these very conservative manuscripts minor changes were consciously introduced. Some missing texts are completed, some incorrect forms in K 1 are corrected etc., but the changes are always minor.

The process is totally different in the case of Wīdēwdād-Sāde manuscripts. Written text and oral text, manuscript and text recited in ritual practice were very close to each other. The liturgical manuscripts were intended to be used in the training of priests. The priests who copied them were often the same as those who used them. They taught and learnt to celebrate the ceremonies according to the manuscripts. There is thus a clear connection with the ritual practice, even if the texts were not used directly in the ritual. In the case of the Wīdēwdād ceremony the liturgical manuscripts were also used during the celebration of the ceremony for reading.<sup>23</sup> Consequently, many Wīdēwdād Sādes are or have been kept in fire temples.

The ceremonies and ritual directions were also the subject of priestly discussion and different opinions were available about the different ritual practices, as is frequently to be observed in the Nērangestān. It is difficult to imagine then, that when a manuscript was copied within the circle of a priestly school, this intense educative and ritual activity would not be reflected in the copies produced

23 This is the reason why in some manuscripts like FIRES 1 (4515) the text of the proper Wīdēwdād is written bigger than the rest.

there. The text taught in the school and recited in daily practice ought to have left traces when it was copied into a manuscript that was going to serve as basis for the future teaching activity. Manuscripts and priests were the bearers of knowledge of the ritual practice and accordingly manuscripts were embedded in the ritual life, conditioned and reflected it.

There are many signals that point out to a direct influence of the ritual practice in the creation of manuscripts. The most clear one is the existence of numerous variants through the influence of the oral transmission. Besides the transmission errors with a clear origin in the written transmission, most variant readings reflect phonetic variants in the recitation. Just to mention one example, there are numerous instances of *y-* for *ə* in initial, parallel to the confusion of *ā* and *i* in the middle of the word. Clear instances of this change are the variants *yāāṅhā* (L 1 [4200], G 106 [4400]) or *yā.āṅhā* (L 2 [4320], E 4 [4360]) instead of the original form *āāṅhā* in Y 28.11, or the forms *yaṃā* (L 1) and *yāṃāi* (L 5 [4370]) in Y 29.11 instead of *āhmā*.<sup>24</sup>

The close link between manuscripts and ritual practice also explains the different index of agreement between the manuscripts in the *Wīdēwdād* sections and in other parts of the ceremony. In fact, if we compare the index of agreement of the (probably) oldest *Wīdēwdād* *Sāde*, B 2, with other *Sādes* we find higher indices of agreement in the *Wīdēwdād* sections than in Y 28–34 (see Figs. 3 and 4).

While the text of the *Yasna* was known by heart, already the Persian *Rivāyats* inform us that a similar knowledge was not necessary for the *Wīdēwdād*. Thus the ritual knowledge of the *Wīdēwdād* was not as good as that of one of other parts of the long liturgy. This fact is reflected in the written transmission: the influence of the oral-ritual tradition is stronger in the *Yasna* parts of the long liturgy than in the *Wīdēwdād* parts.

Furthermore, in the liturgical manuscripts we never find long omissions resulting from the loss of one or several pages, as we find them in the exegetical manuscripts (CANTERA 2010a). There is also not a single case of long misplacements. In the liturgical manuscripts there was a control text, the text recited in ritual. Consequently, when mistakes of this kind and of minor extension occur (like the omission of a line), they are mostly emended in the next steps of the transmission.

Written transmission and ritual practice are two elements present in the process of copying most of the liturgical manuscripts of the long liturgy. But their presence is not identical in each manuscript. There are manuscripts that are trustworthy copies of their originals and there are others that are more influenced by the the ritual practice or that derive directly from it. The manuscripts

24 Knowing this kind of change allows us to recognise that in the Indian ritual practice the correct lecture *āāscā* (Y 30.3) was preserved instead of *āscā* in the IrVS as witnessed by the IndVS: *yāscā* (L 1 [4200], B 2 [4210], P 1 [4260], L 2 [4320], E 4 [4360], L 5 [4370]) and *yāscā* (T 46 [4240]).

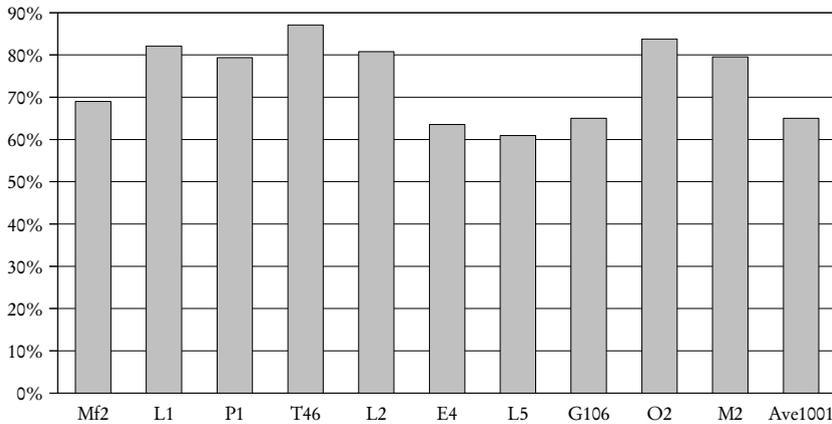


Fig. 3: V9, index of agreement

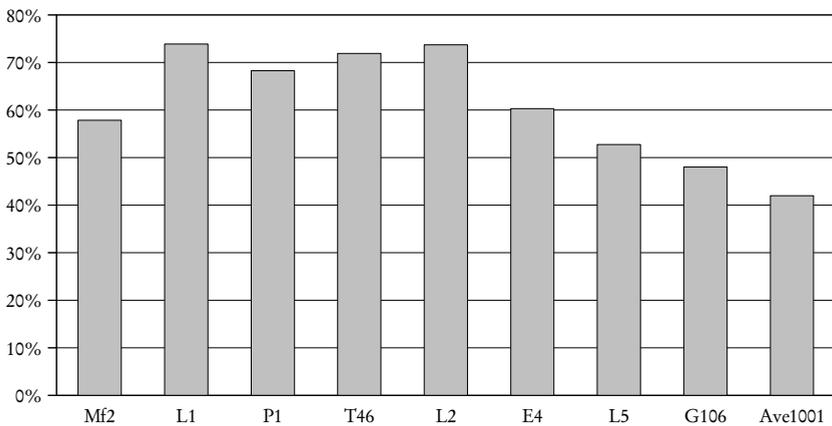


Fig. 4: Y28–34, index of agreement

that do not show evident influences of the ritual practice at all (or rather rarely) are characterized as good or reliable manuscripts. On the contrary, there are other manuscripts that seem to be copied not from a written source, but from an oral dictation or as a transcription of the ritual practice. A clear example is the oldest known *Yasna Sāde*, B3 (230).<sup>25</sup> Let us compare, for instance, Y1.3 in three different liturgical manuscripts:

25 B3 has no date since the final pages containing the colophon are missing, but it is the indirect ancestor of L17 (see p. 443ff.). L17 bears the date 1556, but its colophon is likely the copy of the lost colophon of B3.

B3 (230)

*asnīaēibiiō. aṣabe. ratubiiō. hānuanēaṣaoni. aṣabe. raθβe. niuuāēdaīēme. ☉  
šānuuayhē. viṣiiāeca. aṣaoni. aṣabe. raθβe. niuuāēdaīēme. ☉ miθrahe. vōuru.  
gaōiiaoitōiš. hazayhra.gaoṣabe. baēnuarācasmanō. aōxtō.nām[anō. γ]azatahe.  
rāmanō. x<sup>v</sup>āštr[abe.]*

K 11 (110)

*niuuāēdaīēmi. haṅkāraiēmi. asniīaēibiiō. aṣabe. ratubiiō. hānuanē. aṣaoni.  
aṣabe. raθβe. niuuāe. sānuuayhē. viṣiiāica. aṣaone. aṣabe. raθβe. niuuāe. miθrahe.  
vouru.gāōiiaōitōiš. hazayhara.gaoṣabe. baeuuarā.caśmanō. aoxtō.nāmanō. yaz-  
atabe. rāmanō. xāstrabe.*

Ave977<sup>26</sup> (4010)

*niuuāēdaīēmi. haṅkāraiēmi. asniīaēibiiō. aṣabe. ratubiiō. [...] hānuanē. aṣaone.  
aṣabe. raθβe. niuuāēdaīēmi. haṅkāraiēmi. sānuuayhē. viṣiiāica. aṣaone. aṣabe.  
raθβe. niuuāēdaīēmi. haṅkāraiēmi. miθrahe. vouru.gāōiiaōitōiš. hazayhrō.  
gaōṣabe. baēnuarā.caśmanō. aōxtō.nāmanō. yazatahe. rāmanō. x<sup>v</sup>āstrabe.*

The differences are obvious. The most correct variants are offered clearly by Ave977, the second oldest Iranian Sāde. Among the Indian Sādes the variants of K 11 (written 1647) are more correct than these of B3. However, B3 still keeps the distinction between *x<sup>v</sup>* and *ś* that might be an indicator of the date of the confusion in India between both letters (in the second half of the 16<sup>th</sup> century or the first of the 17<sup>th</sup>). Many features of B3 reveal a clear influence of the recitation like the systematic use of *ī* for *ii*; *-āeca* for *-āica* in *viṣiiāica*; the total confusion between *s*, *ś* and *ṣ* (*šānuuayhē* for *sānuuayhē*, *viṣiiāeca* for *viṣiiāica*, *°casmanō* for *°caśmanō* etc.), whereas K 11 limits the confusion to the usual Indian writing *aṣabe* for *aṣabe*; *hānuanēaṣaoni* for *hānuanē. aṣaoni*. Accordingly, B3 (230) is characterised by GELDNER as “carelessly written and worthless” (GELDNER 1896, I, p. ii), although B3 (230) together with its copy L 17 (100) are the only Indian Sāde manuscripts that in many points are free from Indian innovations. Actually, B3 (230) is not a “carelessly written and worthless” manuscript, but a trustworthy record of the recitation of the Yasna ceremony in the 16<sup>th</sup> century in Gujarat. One might even question whether a written source was used at all for the production of B3 (230).

Such manuscripts with a clear influence of the ritual practice or derived directly from it enter the written transmission and are then copied like an authoritative copy exactly in the same manner as all the rest of the manuscripts. Thus, the manuscript L 17 (100) is a careful copy of a manuscript copied from B3, although Geldner (1896: 1. ix) characterizes it as “a careless copy from K5” (!). Let us compare Y 1.3 in L 17 (100) with the text of B3 (230):

*niuuē. asnīaēibiiō. aṣabe. ratubiiō. hānuanēaṣaoni. aṣabe. raθβe. niuuāē.daīēmi.  
☉ šānuuayhē. viṣiiāe.ca. aṣaoni. aṣabe. raθβe. niuuāēdaīēme. ☉ miθrahe.*

26 In the Wīdēwād Sāde manuscripts this passage does not appear as such, but I have taken the first sentence from VS1.2 and the second from VS1.3.

*vōuruḡagaouiōuitōiš. hazayhra.gaošahe. baiuuaracasmanō. aōxtō.nāmanō. yaza-  
tāhe. rāmanō. x<sup>v</sup>āštrahe.*

The text is almost identical to that of B 3 (230) and therefore “carefully written”, but its source is a written reproduction of the text recited in the liturgy. This process can give us an idea of the process in older times.

The creation of a liturgical manuscript is thus quite different from the process of copying an exegetical manuscript. While copying an exegetical manuscript is the usual procedure in the written transmission of the classical traditions, where a manuscript is a copy of one manuscript or the result of a process of collation of several manuscripts, liturgical manuscripts have special features. As we have pointed out already, there is a great variety of Sāde manuscripts of the long liturgy that has its origin in the ritual variety. There are several types of ceremonies (Yasna, Wīspērad, Wīdēwdād and Wīštāsp Yašt) and different variations for each type. All of them share a great amount of text, but also show significant differences.

When copying Sāde manuscripts the copyist faces three different possibilities:

1. copying from a manuscript which contains exactly the text of the ceremony he wants to reproduce (as in the case of L 17, which is certainly a copy of a copy of B 3);
2. copying from a manuscript containing a different type of ceremony of the long liturgy or even the same type, but in a different version. In this case the necessary additions and substitutions are made according to the ritual knowledge of the copyist. This is the only possibility compatible with HOFFMANN’s hypothesis of the “Stammhandschrift” of the long liturgy;
3. copying the text from the ritual, that is, from the ritual practice, either based on his own knowledge or through the dictation of another priest.

In the cases 2 and 3, the ritual knowledge must have played an important role in the production of new Sāde manuscripts, at least at the beginning of this tradition. Since only case 2 is compatible with the hypothesis of a common “Stammhandschrift”, accepting this hypothesis supposes that the task of producing a new manuscript of the long liturgy is not restricted to the simple and more or less unconscious process of copying an original, as is the case of the exegetical manuscripts (where omissions of complete folios go often unnoticed by the copyists).

This is also obvious when we analyse the ritual directions. Their analysis is one of the neglected tasks of Avestan philology in many regards. Ritual directions are more flexible than the Avestan recitatives and we state a greater liberty of the copyists for changing them or just their wording. Nevertheless, as in the Avestan text, there is a great homogeneity between the ritual directions of the manuscripts of the long liturgy. This is the result of a long tradition going back at least to Sasanian times. Notwithstanding we find very often variations even within closely related manuscripts. Let us compare the ritual directions of Y 0.6 in different manuscripts. Frēdōn Marzbān writes (Ave 976 [4000]):

*staomī* blswm LALA YNSBWNšn' *ašəm ašəm. vohū. III gwptn'*

Instead his brother Wahrom writes (Ave 977 [4010]):

zwt YDE QDM blswm HNHTWNtn' *staōmī. ašəm. BRA gwbšn' APš blswm MN m'hlwk' LAWHL YNSBWNšn' ašəm. vohū. III B<R>A gwbšn'*

A similar wording appears in the related manuscript of Mihrābān Anōsagruwān RSPA 230 (4060). A combination of both appears in K 4 (5020):

*staomī* YDE QDM blswm HNHTWNtn' blswm LALA YNSBWNšn' *ašəm ašəm. vohū. III gwptn'*

Although G 18a (5000) copies, according to its colophon, from the same original as K 4 (5020), it has again a different wording:

*staōmī. ašəm. BRA gwbšn' blswm MN blswmd'n' LALA d'lšn' APš ašəm. vohū. III BRA gwbšn'*

In fact, the combination of different ritual directions and different ways of abbreviating the Avestan text can have the result that two Sāde manuscripts with a common origin can be quite different in their final shape. The manuscript G 18 was copied in 1647 in Kermān by Mānušcihr Ardašīr. The first part contains a Wīštāsp Yašt Sāde which according to the colophon is a copy of a manuscript written by Xōsrōšāh Anōsagruwān Rustām Xōsrōšāh in the year 1344. This is the same copyist as of the last original of the manuscript K 4. Both Wīštāsp Yašt Sādes seem then to go back to the same original (or to two different copies written by the same priest), but in their actual shape they are quite different. The manuscript G 18a is much shorter (38 folios) than K 4 (114 folios), because the first abbreviates far more than K 4. Despite some coincidences, the ritual directions differ between both manuscripts, as we have seen just now. The copyists of Sāde manuscripts enjoyed a certain freedom when making up new manuscripts. The changes introduced and decisions taken depended entirely on their knowledge of the ritual practice.

Just as ritual practice influenced the written transmission, the latter also influenced the former. Since the Sāde manuscripts were used for ritual instruction, some transmission errors conditioned and changed the ritual practice, and ritual practice in turn produced changes in the manuscripts. When a “wrong” variant entered the ritual in a prestigious school, it could develop into a canonical form in this school and even in others. Thus errors or changes in the transmission can spread over many manuscripts without them being related genealogically to each other. Two or more manuscripts copied within the same priestly circle could share the same transmission error without being copies of the same manuscript and in spite of being independent from each other. Producing a liturgical manuscript means finding a compromise between the written witnesses available and the text of the ritual practice. Different manuscripts take different positions in these axes, but none lies outside the coordination system.

Sāde manuscripts and ritual practice are involved in a vicious circle of reciprocal influence. Therefore, when analysing a Sāde manuscript, at least two factors have to be taken into account: the written source and the priestly school in which the manuscript was copied.

In ritual practice as well as in copying manuscripts the aim is always to produce the best possible text. Therefore, there is no limitation to change the original manuscript or to introduce changes in the ritual, if the responsible person is authoritative enough. Our manuscripts are the complex result of unconscious oral and written transmission errors and conscious changes that try to correct alleged errors or to willingly introduce some innovations. The changes might arise in the oral or in the written transmission, but both transmission lines were permeable and the changes in one influenced the other too.

A clear case is V 3.41 (CANTERA 2010a, p. 192f.), where we can see how in the constitution of a new variant different factors are implied. This time the origin is not a distorted form in the ritual pronunciation, but clearly an error in the written transmission. But the final variant is the result of an analysis that tries to make sense of the wrongly transmitted text. In V 3.41 the Sādes appear divided in three groups:

A (B2, T 46, L 1, P 1)	B (O2, L 5, G 106)	C (L 2, E 4, B 4, M1630, FIRES 1, G 112 <sup>27</sup> )
<i>spaiieti draoṣəm</i> <i>spaiieiti yātuṇnīm</i> <i>spaiieiti aṣāuuaynīm</i>	<i>spaiieti draoṣəm</i> <i>auuaynīm</i> <i>spaiieiti yātuṇnīm</i> <i>spaiieiti aṣāuuaynīm</i>	<i>spaiieti draoṣəm</i> <i>spaiieiti auuaynīm</i> <i>spaiieiti yātuṇnīm</i> <i>spaiieiti aṣāuuaynīm</i>

The origin of variant B is obviously an error in the written transmission. In an unknown Sāde with the division of lines as shown here, one line was skipped:

*daēna māzdaiiasniš narš āstauua*  
*nabe baṇdəm spaiieite draoṣəm*  
*spaiieite yātuṇnīm spaiieiti aṣ*  
*auuaynīm spaiieite nasuspaēm*

The copyist wrote the beginning of the new line (*auuaynīm*), then noticed his error, marked *auuaynīm* with deletion dots and continued writing the correct text:

*daēna māzdaiiasniš narš āstauua*  
*nabe baṇdəm spaiieite draoṣəm*  
*auuaynīm spaiieite yātuṇnīm spaiieiti*  
*aṣāuuaynīm spaiieite nasuspaēm*

27 Formerly (CANTERA 2010a) known as G 42.

A later copyist did not notice the presence of the deletion dots and thus produced the text B that appears first in O2 and much later also in L5 and G106.<sup>28</sup> Then the pseudo-philological reflection of a school introduced *spaiieiti* before *auuaynīm* in order to make this incorrect text understandable. That happened in the 17<sup>th</sup> or 18<sup>th</sup> century and from then on this variant became almost universal. In the reformist school of Navsari this variant spread even into the Pahlavi Wīdēwdād manuscripts of the family of L4 like F10 (4670). In this fortunate case, the textual evidence allows us to distinguish between the variant of the “written” transmission that spread into other manuscripts only by way of copying, and the variant created consciously by a school that contributed to its generalisation through manuscripts and through priestly teaching and reciting. All these late manuscripts sharing the reading C do not have necessarily a common ancestor (they have indeed low indices of agreement). It is more likely that the reading C became canonical in India in the late 18<sup>th</sup> century.

Many of the conscious and unconscious changes took place, indeed, in India and we can see how the newly created readings (through unconscious error or intentional change) spread to several manuscripts of different classes or became almost universal in India. Since it is unlikely that an archetype should be postulated for each group of manuscripts sharing an alternative reading, it seems that variants created in India were introduced in the ritual performance (as it is to be expected at least in the case of the conscious changes) and that the ritual uniformity was kept in India in some way that we cannot determine exactly. Authoritative priests visited different communities and priestly schools and sanctioned the practice of the community and the manuscripts available there, as we know from the colophons. Furthermore, manuscripts were sent from one school to another in which instruction was needed. The result is a great uniformity in India. Similar processes can be assumed for Iran in earlier times.

Let us see some of these very numerous examples of alternative readings in the Indian ritual practice that affect manuscripts of different types and become almost universal. In Y 30.1 the change of *mazdāšā* into *mazdā.šā* in all liturgical Wīdēwdād but B2 (4210) is obviously the result of an analysis of the transmitted form as *mazdā* and the personal pronoun *šā*. This is not a simple transmission error but a conscious decision resulting from a priestly analysis of the text. This new variant became almost universal in India. It appears in all the Indian Sādes and even in the late Pahlavi manuscripts F2 (570) and T6 (420). In M1 (530) the writer first wrote the form he knew from the ritual, *mazdā.šā*, and then corrected it himself into the form that appeared in his original, *mazdāšā*. Among the liturgical manuscripts only B2 (4210), the oldest Wīdēwdād Sāde (1626), retained the original *mazdāšā*. Nonetheless, this does not mean that all manuscripts except B2 (4210) are genealogically related. The variant just be-

28 Strikingly, these later manuscripts show a very low index of agreement with O2 so that it is unlikely that O2 can be their ancestor.

came trendy after 1626, the date of B2 (4210). There are many other instances where B2 (4210) as the oldest Wīdēwdād manuscript agrees with the Iranian manuscripts, but not with all or most of the Indian manuscripts. This does not mean, of course, that there is an Indian “Stammhandschrift” for all the liturgical manuscripts of the long liturgy in India but that B2, rather than the rest of the manuscripts shows a variant that became usual in India from the 17<sup>th</sup> century on. A similar position has B3 (230) among the liturgical Yasna manuscripts.

In order to show how frequent these alternative readings are between the Indian and Iranian transmission let us compare Vr1.9 in both versions. The Iranian version runs as follows (with minor variants in the different manuscripts):

*niuuāēdaiemi. haṅkāraiemi. āhurōiš. frašnahe. āhurōiš. tkaēšabe. āhurōiš. dāxiiumabe. āhurōiš. zarađuštrō.təmahe. ašaōnō. ašabe. raḍβō. niuuāēdaiemi. haṅkāraiemi. hadišabe. vāstrauuatō. vāstrō.bəratabe. gauue. hudāḡhe. gaōidiieheca. narš. ašaōnō. ašabe. raθβō.*

The Indian version (again with further minor variants) could be edited as follows:

*niuuāēdaiemi. haṅkāraiemi. āhurōiš. frašnahe. āhurōiš. tkaēšabe. āhurōiš. dāxiiumabe. āhurōiš. zarađuštrō.təmahe. ašaōnō. ašabe. raḍβō. niuuāēdaiemi. haṅkāraiemi. hadišabe. vāstrauuatō. vāstrō.bərazabe. gauue. hudāḡhe. gaōidiieheca. narš. ašaōnō.*

Besides minor orthographical variations (like *niuuāē°* instead of *niuuāē*) there are three significant differences where a clear division can be traced between the Indian and the Iranian witnesses:

1. The Indian manuscripts show systematically (not only in this passage, but everywhere) *dāxiiuma-* for Iranian *daxiiuma-*. We cannot be sure about the original shape of the form, but the comparison with *zantuma-* could speak for the Iranian form.
2. The Indian liturgical manuscripts shows a variety of readings that seem to go back to *vāstrō.bərazabe* (*vāstrō-bərazabe* R278 [4220], P12 [2100]; *vāstriū-bərajahe* M2 [4230]; *vāstiūrō-bərazabe* T46 [4240]; *vāstriū-bərazabe* O2 [4250]). The same reading appears too in the exegetical manuscripts of the Wīšperad from K 7b (3000) on (G 19, T 40 [*°bərazabe*]).<sup>29</sup> G 15 shows an interesting reading, *vāstrō.bərezabe*, that seems to be a cross of the ritual tradition and its written original. This Indian reading is not just an error in the written transmission in one supposed hyparchetype of the Indian Wīšperad, since in the parallel passage Vr2.11 the Indian manuscripts show the reading *°bərazam* instead of the Iranian *°bəratəm*. The canonical form in India was *vāstrō.bəraza-* and not *vāstrō.bərata-*.
3. In the list of the *ratu-* of Y1 and Vr1, the sentences beginning with *niuuāēdaiemi haṅkāraiemi* ends always with (*ašaōnō*)<sup>30</sup> *ašabe raḍβō*. The

29 The PVr manuscript E 11 has instead the form *°bəratabe*.

30 *ašaōnō* is missing in the collective designation of the *ratu-* like *asniia-*, *māhii-* etc.

only exception is in the Indian manuscripts and in GELDNER the end of Vr 1.9. The reason is obvious, a priest has recognized the frequent sentence *narš ašaonō* in *gaōidiiebeca narš ašaonō ašabe raθβō* and removed *ašabe raθβō*. This omission appears already in K 7b (3000) and perhaps this old manuscript was the authority responsible for this ritual peculiarity of the Indian Wīšperad ceremony.

As usual, GELDNER produces a text that it is a mixture between the Indian and the Iranian ceremony. He chooses twice the Indian variant and once the Iranian one without a recognisable criterion and without other clear reasons to do so:

*niuuāēdaiemi. haṅkāraüemi. āhurōiš. frašnabe. āhurōiš. tkaēšabe. āhurōiš. dāxiiumabe. āhurōiš. zaraθuštrōtəmahe. ašaonō. ašabe. raθβō. niuuāēdaiemi. haṅkāraüemi. hadiṣabeca. vāstrauuatō. vāstrō.bəratəbeca. gauue. hudāṅhe. gaoidiiebeca. narš. ašaonō.*

Often the innovations of the Indian tradition are clear mistakes. In Y 19.12 we find in the Iranian manuscripts, in the old exegetical Yasna manuscripts (Pahlavi and Sanskrit)<sup>31</sup> and in the oldest liturgical Indian manuscripts (B 3 [230] and B 2[4210] ) the following text: *yaθa im vīspanəm mazištəm cinasti aθa abmāi dāmaṅ cinasti*. Already in the Yasna Sāde L 17, an indirect copy of B 3, *mazištəm* is mistakenly inserted a second time between *abmāi dāmaṅ* and the second *cinasti*. The same mistaken addition appears also in all liturgical Yasna manuscripts I can check but B 3 (230) (like Lb 2 [120], Bh 5[231], G 26 (234) etc.) as in all liturgical Wīdēwdād manuscripts but B 2 (L 1 (4200), R 278 [4220], T 46 [4240], O 2 [4250], etc.) and even in some late Pahlavi Yasna like F 2 (570) and like T 6 (420). We know, of course, that all these manuscripts are not genealogically related and it is unlikely that all of them have been materially collated with a common manuscript. This innovation entered the ritual practice probably through a manuscript with this transmission error and for some reason it became canonical. The catalyst of the spreading of this form was the ritual.

The same is true for another interesting example. The epithet of the full moon in Y 1.8 and Y 2.8 appear in the Iranian liturgical manuscripts as *vīšaptaθa-* (with some minor differences). The same reading is to be found in J 2 (500) written by Mihrābān Kayxōsrō. The Indian liturgical manuscripts show instead a reinterpretation of the original form as *vīspataθa-* in which the beginning was mistakenly understood as *vīspa-*. This reading appears in all consulted Indian Sāde (Yasna, Wīšperad and Wīdēwdād, including B 3 [230]). The Pahlavi Yasna K 5 (510) presents a lacuna here, but its copy M 1 (530) has already the Indian variant. The Sanskrit Yasna S 1 has the Indian reading, but it must be noticed that there are two clearly different hands in S 1 (677) and the beginning belongs to the younger hand. Very illustrative is the situation among the Pahlavi manu-

31 In J 2 (500) *aθa abmāi dāmaṅ cinasti* is omitted.

scripts of the group of Pt4 (400). Among them only Pt4 preserves the Iranian reading, whereas G9 (409), Mf4 (410), T6 (420) and E7 (450) have the Indian one. This is most interesting since these four manuscripts are unlikely to go back to a single source, for whereas G9 (409) and T6 (420) seem to be closely related, E7 (450) is more close to Pt4 (400).

A further similar, but longer, example is to be found in Y2.1. At the end of the paragraph, instead of the expected text that appears in the Iranian manuscripts, in the oldest Yasna Sāde B3 and in the exegetical Yasna manuscripts (Pahlavi and Sanskrit)

*imaṭ barəsmā haḍa.zaoḍrəm haḍa.aiβiiāṅhanəm ašaiia frastarətəm āiiese yešti*

L17 (a copy of B3) has surprisingly

*imaṭ barəsmā haḍa.zaoḍrəm haḍa.aiβiiāṅhanəm ašaiia frastarətəm ašauuanəm ašabe ratūm āiiese yešti*

with the addition of *ašauuanəm. ašabe. ratūm*, brought from the following

*abmūia zaoḍre barəsmānāēca ahurəm mazdqm ašauuanəm ašabe ratūm āiiese yešti*

This addition reappears not only in most of the Yasna Sāde<sup>32</sup> (Lb2 [120], G97 [235], J6 [238], L20 [241], etc.) but also in most Wīdēwdād Sāde manuscripts (L1 [4200], R278 [4220], M2 [4230], T46 [4240], O2 [4250], etc.) and even in at least one exegetical Yasna (F2 [570]). Again we have to look for the source in the ritual practice and not in some other manuscript.

Some variants are, however, just ritual changes without any origin in the written transmission, but in conscious ritual decisions. Some changes reached only a limited zone of influence. Such is the case of one change introduced in some dedicatorys in India already in the 16<sup>th</sup> century. Some Yasna manuscripts (B3 [230], L17 [100], P6 [132], H1, J6 [238]) show an alternative dedicatory to the fire only in Y22.26, 66.18 and 72.7 and not in the rest of the usual places for dedicatorys. This addition does not appear among the checked manuscripts in Lb2 (120), Bh5 (231), G97 (235), G26b (234). The usual text is extended through the addition of S1.9:

*āḍrō ahurabe mazdā puḍra tauua ātarš puḍra ahurabe mazdā  
[āḍrō ahurabe mazdā puḍra x<sup>v</sup>arənaṅhō sauuaṅhō mazdadātābe airiianəm  
x<sup>v</sup>arənō mazdadātānəm kāuuaiiebeca x<sup>v</sup>arənaṅhō mazdadātābe āḍrō ahurabe  
mazdā puḍra kauuoiš haosrauuṅhabe varoiš haosrauuṅhabe asnuuantābe  
garoiš mazdadātābe caēcastābe varoiš mazdadātābe kāuuaiiebeca x<sup>v</sup>arənaṅhō  
mazdadātābe āḍrō ahurabe mazdā puḍra raēuuantābe garoiš mazdadātābe  
kāuuaiiebeca x<sup>v</sup>arənaṅhō mazdadātābe āḍrō ahurabe mazdāpuḍra ]  
maṭ vīspaēibiū ātərəbiū garoiš ušidarənahe mazdadātābe ašax<sup>v</sup>āḍrahe*

32 This time the extension of the addition is not so universal. The manuscript G26b (234) is not affected by it.

Not all of the manuscripts which share this alternative dedicatory have to be genealogically related. The spreading of this change happened through instruction and ritual practice, but it did not become universal in India.

The dedicatory to the Fire has been, indeed, submitted to various changes in India. G 26b (234)<sup>33</sup> shows a variant of this dedicatory different from the two mentioned in the corresponding passages:

*āθrō aburahe mazdā<sup>34</sup> puθra tauua ātarš puθra aburahe mazdā<sup>34</sup> xšāθrō  
nafəθrō nairiūō.səṅhe yazatahe maṭ vīspaēibiūō ātərabiiūō<sup>35</sup> garōiš ušidarənahe  
mazdadātahe ašāxāθrahe*

The addition *xšāθrō nafəθrō nairiūō.səṅhe yazatahe* appears also in the dedicatory to the Fire in Y 0.2 in B 3 (230) and L 17 (100) and seems to be a ritual innovation in India, but not a universal one.

The transmission of the Sāde manuscripts cannot therefore be compared with the transmission of Homer or other classical works in Europe through the centuries. The process of copying manuscripts is integrated into the ritual practice and ritual training within the priestly schools. This implies that variants are not just the result of transmission errors, but of the interaction of several factors, such as errors in the written transmission, attempts to restore the right variant in wrongly transmitted texts and even in correct forms mistakenly thought to be wrong ones, etc. On the other hand, the new variants spread into other manuscripts not only through the written transmission, but also through the ritual practice. Conscious changes were integrated into the manuscripts copied in the same school, but also into the ritual instruction and practice. Alternative readings are thus in many cases clearly “conventions of a school”. There are furthermore procedures for keeping ritual uniformity in the community so that some of the “conventions of school” became “canonical forms” in a widespread area. From the 17<sup>th</sup> century on we state a certain independence between the two big Zoroastrian areas, India and Iran.

The influence of certain schools was, indeed, not purely local, as is evident from the fact that some new variants spread to manuscripts of a different class and copied in a different place. It seems that certain centres exerted their influence sending priests and/or manuscripts to other places. Other schools remained more locally confined and their variants were successful only in the local manuscripts. Manuscripts arriving from other places were controlled against the local ritual practice and manuscripts; and accordingly corrections by a second hand were often introduced into them. The frequent corrections between the lines of many manuscripts attest to the reality of the process of checking manuscripts. In fact, we have never been able to identify the source of a correction by a second hand introduced into a manuscript. The reason is that these collations were often probably not the result of a collation against another manuscript, but against

33 No colophon, therefore place and date unknown.

34 It adds *maṭ vīspaēibiūō ātərabiiūō*, but it is deleted.

35 It adds *xšāθrō nafəθrō nairiūō.səṅhe yazatahe maṭ vīspaēibiūō ātərabiiūō* but it is deleted.

the ritual practice of the school. This does not rule out, however, collations of manuscripts, to which similar corrections in the Pahlavi manuscripts attest.

This is clearly the situation in India from the beginning of the witnesses to the Sāde tradition (around the 16<sup>th</sup> century). There is a lack of witnesses for earlier periods, but it is likely that similar processes took place in earlier times as well. Under these circumstances the Lachmannian principle that agreement in a significant error necessarily means a common ancestor does not apply for the Avestan manuscripts.<sup>36</sup> Accordingly, the presence in all Avestan manuscripts of the wrongly transmitted form *āziūāienim* in Y12.3 (the main argument for the Stammhandschrift of the long liturgy) is not a proof of the existence of a hyparchetype of the long liturgy. The same is true for the repetition of V14.49–50. Although both significant errors arose in the written transmission, we have seen other examples (like V3.41) in which errors in the written transmission enter the ritual praxis. The ritual praxis functions then as catalyst that generalises these changes of the “original” text.

The presence of the mistakes in the exegetical manuscripts and even the adaptation of the Pahlavi translation (in the case of V15.49–50) can be the result of a collation process between the liturgical and the exegetical transmission as we know them from later times. Although the scriptural-exegetical tradition of the

36 É. PIRART (2004, p. 27f.) believes to find in Y10.5 a proof of such generalizations of changes covering India and Iran even after the redaction of the Sanskrit translation of Nēryōsangh. The original text *mazā huruθma* appears according to him in Mf1 and Mf4. The rest of manuscripts, including the Sanskrit Yasna manuscripts S1 and J3, have *mazdā huruθma*. However, the Sanskrit translation *evam mahattarodayam* translates the original sentence (*mazā huruθma*), whereas the Pahlavi translation is a mixture of the original and the altered version: *ohrmazd meh ārōyišn*. Therefore, this almost universal change must have occurred only after Nēryōsangh’s translation. In PIRART’s words: “Il semble donc que des faits d’homogénéisation de la tradition manuscrite se sont produits postérieurement à la traduction que Nēryōsangh avait entreprise à partir d’une traduction pehlevi qui n’est pas celle que nous connaissons.” Unfortunately, the data do not confirm PIRART’s interpretation. First, the sentence *mazdā huruθma* appears transmitted in this manner in all manuscripts. In Mf4 and Mf1 (according to GELDNER) this sentence is *corrected secunda manu* to *mazā huruθma*. Secondly, the Pahlavi Translation is not *ohrmazd meh ārōyišn* as quoted by PIRART following JOSEPHSON’s edition (1997). The Pahlavi translation appears as *meh ārōyišn* “the great growth” in most and the oldest manuscripts (J2, K5, F2, M1, Pt4, Mf4 [v.l. myhyh]). Pt4 adds *secunda manu ohrmazd yazd* and Mf4 only *ohrmazd*. This addition tries to reproduce the altered Avestan text *mazdā huruθma*. Other manuscripts like T55b (belonging to the family of J2 and K5) include *ohrmazd* in the text *prima manu*: *ohrmazd mehīh ārōyišn*. Very interesting is the comparison of G14 and T6, both related G14 being older. They belong to the manuscripts of the family of Pt4 and Mf4. The older one shows a translation similar to T55b: *ohrmazd yazd meh ārōyišn*. But T6 has *ohrmazd yazd ārōyišn* (and *meh* is added by a second hand). The situation is quite clear. As a result of a false interpretation *mazdā* has substituted *mazā* and this reading is universal as well in the ritual as in the manuscripts of the different text types. This change is posterior to the fixation of the Pahlavi translation. When the translation was joined to the Pahlavi Yasna manuscripts, it was not adapted to the actual reading. The exegetical movements of the 18<sup>th</sup> century recognized the discrepancy and tried to solve it in different ways: correcting the Avestan text (Mf1, Mf4) or adapting the Pahlavi translation.

Pahlavi manuscripts is independent from the ritual-oral tradition of the Sāde manuscripts, there have been several contacts in the course of history. We have already mentioned that the origin of the Pahlavi manuscripts, especially for the Yasna and Wīspērad, seems to be the result of joining both traditions. But in the history of the transmission there have been further contacts between both traditions and some of them can even be dated with some certainty.

The strongest evidence for the influence of the scriptural transmission on the oral one and on the Sādes is the introduction of some Avestan quotations included in the Pahlavi commentaries of the Pahlavi Wīdēwdād manuscripts, already mentioned, into the liturgical manuscripts. Since FERRER has devoted his contribution to this subject in the present volume (p. 395ff.), I shall mention only a few essential points here. Only one or two such quotations appear in the Iranian Sādes, attesting to some minor connections between both traditions in Iran at the beginning of the 17<sup>th</sup> century or even earlier. In contrast, already in the oldest Indian Wīdēwdād Sādes (B2 [4210], L1 [4200]) a whole set of such quotations appears. Their number increases even more clearly in the second half of the 17<sup>th</sup> century. The oldest dated manuscript including the more extended set of quotations is O2 [4250] (1681), followed by P1 [4260] (1714). It is obvious that in the 17<sup>th</sup> century a revision of the Sādes with the help of the scriptural tradition was performed either in the Surāt or in the Navsari school and the results spread from there to the other school. Indeed, there seem to have been close contacts between both schools ever since the beginning of the century. Their manuscripts interchange a lot of variants, thus showing high indices of agreement, sometimes even higher than the conservative exegetical manuscripts B1 [4711], M3 [4715] and P10 [4716] have with their original (K1 [4610]), but this strong coherence is probably not the result of a common origin and of accurate copying, but of a process of assimilation through interchange between two schools. It is easy to imagine priests going from Surāt to Navsari and vice versa and bringing along one or more manuscripts. In any case, manuscripts from both schools attest to a clear process of collation with the Pahlavi Wīdēwdād manuscripts.

The glosses are not, however, the only witnesses to the influence of the scriptural tradition on the liturgical one. There are many examples of obvious changes in the Sāde transmission that have their origin in the Pahlavi manuscripts. One clear example is to be found in V 19.12 (Fig. 5).

While in the 17<sup>th</sup> century a reshaping of the Indian Wīdēwdād Sāde took place through collation with the scriptural-exegetical tradition, in the 18<sup>th</sup> century it was the turn of the Pahlavi Wīdēwdād manuscripts. The scriptural-exegetical tradition was kept apart and relatively independent of the ritual practice and oral transmission. As a consequence of this isolation, important omissions of whole lines and even pages became quite frequent in the Pahlavi Wīdēwdād manuscripts without later copyists being aware of them. During the second half of the 18<sup>th</sup> and throughout the 19<sup>th</sup> century a profound revision of the Pahlavi Wīdēwdād manuscripts took place in different schools. The Avestan text was

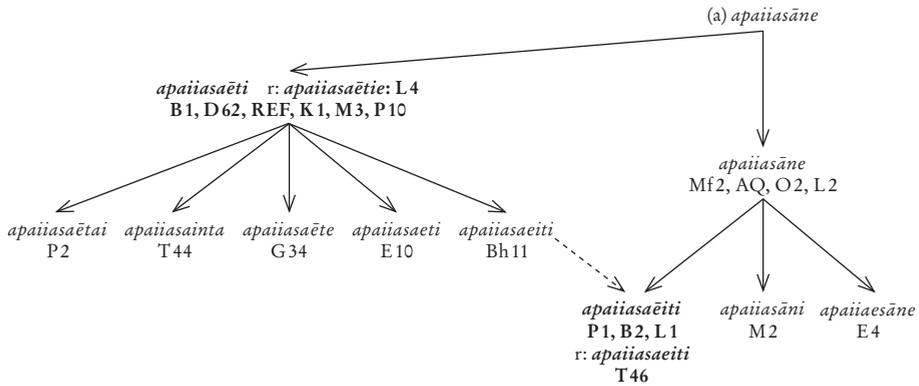


Fig. 5: V 19.12

collated with the text of the liturgical manuscripts, the missing Avestan text in the exegetical manuscripts was completed on the basis of the liturgical ones and some missing translations were created and added, as M. A. ANDRÉS-TOLEDO and I have analysed (CANTERA / ANDRÉS-TOLEDO 2008).

Although the lack of evidence prevents us from making any positive statements, it seems that even before the 17<sup>th</sup> century there were points of contact between the scriptural and the liturgical traditions. GELDNER already mentions the influence of the Yazdi Pahlavi Wīdēwdād tradition on the Iranian Sādes. Some of the agreements of Mf2 with the Pahlavi Wīdēwdād manuscripts in contrast with other Iranian Sāde manuscripts of the Marzbān family (such as Ave 976 [4000], Ave 977/978 [4010] or the manuscript from the Astān-e Qods Library [4030]) could be interpreted in this sense. Below are some examples (Figs. 6 and 7).

To sum up, in the Sāde manuscripts there is a complex interaction between the ritual-oral and the written transmissions in the priestly schools. Transmission errors of the written transmission and conscious “improvements” of the transmitted text go into the recitation. And vice versa, unconscious changes during the recitation and conscious alterations of the recitation as a result of exegetical and pseudo-philological reflections flow back into the manuscripts produced in the same centre and its sphere of influence. Thus it becomes possible that variants present in manuscripts of one specific ceremony also appear in manuscripts of another ceremony. The shared reading by one Sāde manuscript of Yasna and Wīdēwdād does not necessarily mean that a manuscript of the Yasna was used for creating a new Wīdēwdād Sāde manuscript (or vice versa). The common variant may as well be the result of the training activity in a specific priestly school. The authority of a new reading depended on the prestige of the school in which it arose and/or of the priest signing the manuscript that included it. In any case, it seems obvious that the process of copying one manuscript from another

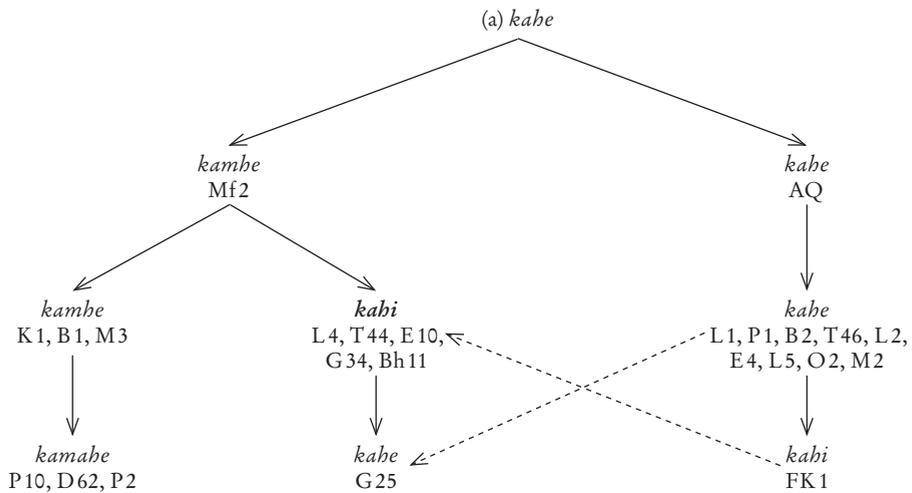


Fig. 6: V 19.8

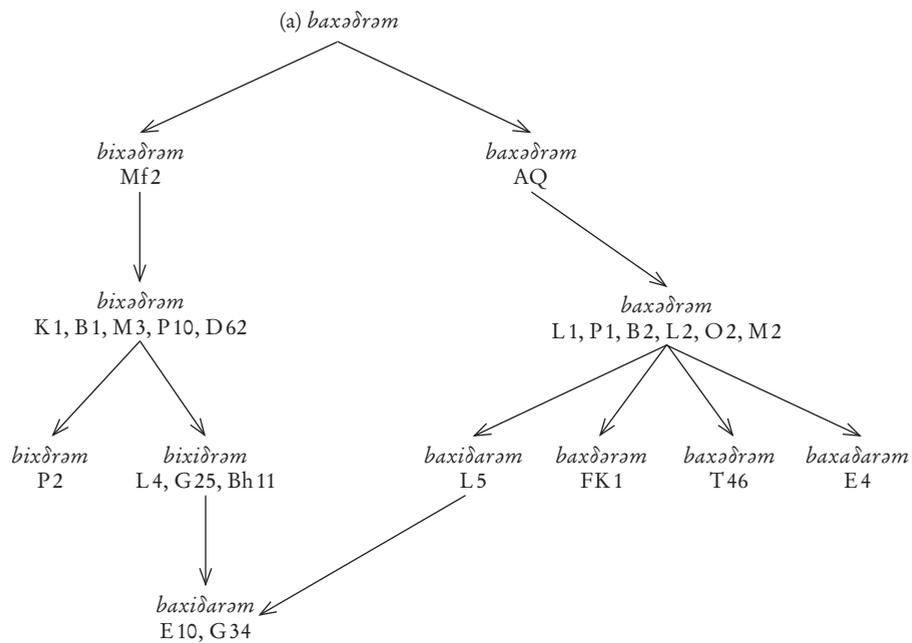


Fig. 7: V 19.21

is not the only source of common variants; and this has important methodological consequences for our analysis of the Avestan manuscripts.

Furthermore, the exegetical manuscripts were not affected as dramatically by the influence of the ritual-oral transmission. To a certain degree, the scriptural transmission remained free of this influence. However, we can state different processes of collation or contact between both traditions. The creation of the Pahlavi manuscripts as we know them today is probably the first reflection of a combination of them. The liturgical Wīdēwdād manuscripts can also have their origin in a collation of a liturgical manuscript and a manuscript of the Wīdēwdād Nask and in any case, it is likely that the exegetical manuscripts of Wīdēwdād have influenced the liturgical ones. In fact, sometimes Wīdēwdād Sāde manuscripts and Pahlavi Wīdēwdād manuscripts were copied by the same person, so that it comes as no surprise that both traditions influenced each other. We know that Marzbān Frēdōn Wahrom copied the Pahlavi Wīdēwdād manuscript IM as well as the Wīdēwdād Sāde manuscript original of Ave 976 (4000), Ave 977 (4010) and of Jp 1. The source for Marzbān's exegetical manuscript was a manuscript of Šahryār Ardašīr Ēriz who was also the copyist of the source for his liturgical manuscripts of Wīdēwdād. It is possible that this family was the origin of some of the contacts between the Sādes and Pahlavi manuscripts in Iran in the 16<sup>th</sup> and 17<sup>th</sup> centuries.

Another process of collation or contact took place around the 17<sup>th</sup> century in India and is responsible for the inclusion of the Avestan quotations of the long commentaries of the Pahlavi translation into the Avestan texts of the Indian Sāde manuscripts. Furthermore, it is obvious that the exegetical manuscripts were intensely checked against the Sāde manuscripts in India in the 18<sup>th</sup> and 19<sup>th</sup> centuries, a process that drastically changed the shape of the Pahlavi manuscripts. Such regular processes of collation can be responsible for the sharing of certain common transmission errors by both the ritual-oral and the scriptural-exegetical traditions that must not necessarily go back to a common written source.

Applying LACHMANN's methodology of agreement in error to the transmission of the Avestan long liturgy is simply impossible. If GELDNER gave up offering a stemma of the liturgical manuscripts, this was not just because he had only part of the material (which is true of all the transmission lines), but because his methodology absolutely failed to serve the purpose. In fact, GELDNER made *stemmata* analysing the history of a text type only where the colophons allowed building a first *stemma* to which then other manuscripts without colophon were added on the basis of his own observations, but the basis was the data of the colophons. Actually, if we want to analyse these manuscripts with a high degree of contamination, understanding the latter not as being the result of a simple process of copying from two sources, but of a complex process of interaction between scriptural and oral transmission in ritual practice as well as in priestly schools, then we must proceed with some theoretical reflections about the methodologies applied in the analysis of the relationship between manuscripts.

#### 4. Stemmatics 120 years after Geldner's Prolegomena

The only attempt to analyse the Avestan manuscripts and their reciprocal relationship is represented by the prolegomena in GELDNER's edition of the Avesta. Further analyses of the Avestan written transmission are based on GELDNER's materials and conclusions, but a critical revision of GELDNER's analysis and of his methodology has never been produced, despite the important debates and improvements in textual criticism during the 20<sup>th</sup> century. GELDNER is dependent on the method used by LACHMANN, considered to be the founder of modern textual criticism, in his editions of the Greek New Testament and other classical texts.<sup>37</sup> The main principle of LACHMANN's methodology is the agreement in error as an indicator of genealogical relationship. An indicative error (*error significativus*) is an error common to two or more manuscripts that reveals a genetic relationship between them. This relationship is represented by a stemma or tree. The approach found its canonical formulation long after GELDNER's edition in the famous book of P. MAAS, *Textkritik* (1927). In fact, the method described by MAAS shows significant differences with respect to GELDNER's set out in his edition, and a revision of GELDNER's method would be adequate even only on the basis of MAAS's postulates.

One of the earliest critics was PASQUALI (1934). He reacted against the supposition that every textual tradition must go back to an archetype and attacked the mechanism for the election of the right reading on the basis of the position of the witness in the *stemma*. But more fundamental was the reaction of BÉDIER (1928) who discovered that the method was tending to produce bipartite stemmata regardless of the history of the witnesses. Hence, although the Lachmannian method in an adapted variation continues to be widely used, traditional stemmatics have been seriously questioned several times during the 20<sup>th</sup> century and new approaches to the analysis of the relationship between different copies of one text have arisen.

One of the main difficulties with the traditional stemmatics is that it is based only on agreement in error and consequently its conclusions are based only on a small percentage of the words of a witness, usually less than 1%. Besides, common errors can have different origins: they can arise independently in two sources,<sup>38</sup> they can be the result of pseudo-philological reflection or of *contaminatio* of two or more sources (written or oral), etc., so that not every significant

37 For a history of LACHMANN's method cf. the recent work by TAMPANARO (2005).

38 SCHMID's findings in a recent article (2004) are very illustrative of the risks of the use of indicative errors as a genealogical criterion and of the possibility that indicative errors could originate independently and by chance. H.J. VOGELS found in the Codex Cassellaneus of Tatian's Diatessaron 44 "carefully selected as genealogically significant deviations" from the Codex Fuldensis, from which the Codex Cassellaneus supposedly derives. These readings seemed to derive from other codices and to postulate a new genealogical ascription of the codex. SCHMID has shown that 24 of these "significant readings" were not present in the original codex, but only in his 19<sup>th</sup>-century edition. They were mistakes by the editor and it can only be by chance that these errors happen to agree with the parallels adduced by VOGELS.

common error is of genealogical relevance. In the case of the Avestan transmission, in which common alternative readings can be the result of a ritual community and not only of a common written source, this problem becomes dramatic.

Therefore, we must look for alternative methodologies for the analysis of the relations between manuscripts. Other approaches try, for example, to classify manuscripts without establishing any genealogical dependencies. They benefit from the advantages of data management in the computing era, as does the quantitative method. One of its principal representatives is the Claremont Profile Method that has been developed for the organisation of the more than 1,500 manuscripts of the Gospel according to Luke. The quantitative analysis considers it methodologically unacceptable for a genetic relationship to be based on a minority of readings (the variants), and it pays more attention to the number of agreements than to the number of differences between manuscripts. It is performed on the basis of electronic transcriptions of sections of several manuscripts which are then compared mechanically with computer programmes. The results allow to group different manuscripts, but not to establish genealogical relations. A text section is selected as a sample base. A group of manuscripts is collated with this sample, and their variant readings are recorded. The results are represented in binary form: agreement (1)—disagreement (0), so that each manuscript shows a “profile” or “shape”. When several manuscripts share the same “profiles”, then it is possible to establish “group profiles”. What is now conclusive is the distribution of agreements and disagreements and not just the sharing of some selected alterations of the text.

At the end of the 1970s the idea came up of considering stemmatics to be a further branch of cladistics and phylogenetics besides biology and historical linguistics. The real application of the methods of biology to cladistic analysis in stemmatics started, however, only several years later, at the end of the 1990s.<sup>39</sup> In the past cladistics was based largely on morphological analysis, but today it is based on the analysis of DNA and RNA sequencing data that has been made possible through computational phylogenetics.

The DNA consists of two chains of nucleotides. There are four nucleotides: adenine (A), guanine (G), cytosine (C) and thymine (T). The sequence of these four nucleotides encodes the information of the DNA. It can be represented by a sequence of four letters combined in different shapes, such as AAGTCTGAC. Changes in this chain are called mutations and are the basis of evolution so that different chains can be compared and the genetic relationship between two or more chains can be analysed and expressed in the form of a phylogenetic tree. The parsimonious method looks for a tree of phylogenetic relations that can

39 The application of this method to the Canterbury tales (O’HARA/ROBINSON 1993; BARBROOK/HOWE et al. 1998) was a pioneering work. One of the very first attempts was the analysis of the manuscript tradition of the Old Norse narrative *Svipdagsmál* (ROBINSON/O’HARA 1996).

explain the different alterations in the sequence with the least possible number of changes. The operations leading to aligning and comparing the sequences and establishing the possible interrelations are performed by means of computational algorithms.

This picture of evolution where a mutation is the change of an element or of a coda in a sequence can be easily compared with the processes of copying manuscripts, where usually most elements of the sequence remain the same and only some change.<sup>40</sup> Other phenomena frequent in the written transmission correspond to genetic cladistics as well: contamination in cross-mutation, the restoration of the original form in back mutation, etc. Accordingly, information in manuscripts is encoded in a similar way to the DNA sequences and then the same algorithms of biology are applied. Some well-known transmissions have been submitted to this analysis and the results seem to match the ones of the traditional manual analysis.

Nevertheless this method is not without its difficulties. First, the relationship between different manuscripts is not represented by a single tree, but many trees are possible. Indeed, the potential number of trees increases exponentially with the number of sequences to be compared. When a high number of manuscripts is available, then the number of possible trees is extremely high. Secondly, the algorithm produces un-rooted or un-oriented trees. They can be rotated and what in a certain tree is the final result can be also the original source.

The most interesting reaction to the purely cladistic or phylogenetic analysis which does not however renounce the possibility of establishing genealogical dependencies is the Coherence-Based Genealogical Method (CBGM).<sup>41</sup> It was developed at the Institut für Neutestamentliche Textforschung at Münster University in the context of the *Editio Critica Maior* of the *Novum Testamentum Graecum*. Its most important feature is the distinction between two different levels of analysis: the pregenealogical level, based on the quantitative method, and the genealogical level which depends entirely on the application of the philological skills used in traditional stemmatics. According to the CBGM a genealogical stemma cannot be produced automatically, since the decision as to which is a prior or a posterior variant cannot be automated but must be the result of philological analysis. This analysis must be applied to each place or unit of variation, thus building local *substemmata*. The global stemma is only the result of the coherent combination of as many local *substemmata* as possible.

The challenge of CBGM is to establish a comprehensive hypothesis for the genealogical structure of the textual tradition of different texts by establishing local *substemmata* for each place of variation which are coherent with themselves

40 For a comparison of both processes and methodologies cf. HOWE/BARBROOK et al. 2004.

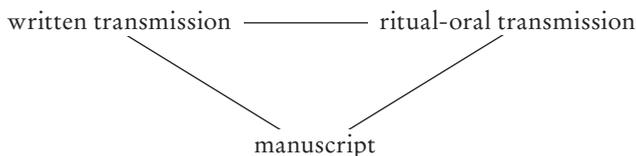
41 There is an abundant bibliography on this method (MINK 2000; MINK 2003; MINK 2004; WACHTEL 2008). Extensive online information is to be found at the page of the Institut für Neutestamentliche Textforschung of Westfälische Wilhelms-Universität Münster ([http://egora.uni-muenster.de/intf/projekte/gsm\\_en.shtml](http://egora.uni-muenster.de/intf/projekte/gsm_en.shtml)).

and with the others. The principal problems faced by neotestamental textual criticism when reconstructing the relationships between the different witnesses are the large number of witnesses and the high grade of contamination—i. e., the same problems we face when analysing the written transmission of the Avesta. In my opinion this methodology provides the best theoretical frame and fits best the needs of analysis of the Avestan transmission. Therefore, I have tried to apply it, with some modifications, to the Avestan manuscripts and have developed a software for it (Tools for Avestan Text Criticism, TATC) which is available on the website of the Avestan Digital Archive (<http://ada.usal.es/analizador/>). This method is still being developed and what follows, especially regarding the internal analysis, has to be considered an attempt to approach the analysis of the Avestan manuscripts differently rather than a completely developed methodology. The results are hence provisional and still based on very limited material.

## 5. Analysing the Wīdēwdād manuscripts

As we have seen, an Avestan manuscript is not simply the result of copying another manuscript, but of a complex process in which many factors are involved. On the one hand, we face the usual problems and difficulties of the written transmission, such as *contaminatio*, and the obvious problem that the surviving manuscripts are only a small fraction of all manuscripts once available, so that it is not very likely to have manuscripts which are direct copies from each other. On the other hand, the ritual-oral transmission in the priestly schools introduced conscious and unconscious changes into the manuscripts that spread in different ways. Furthermore, the ritual knowledge of the priests allowed them to introduce changes into the manuscripts according to the ritual needs, changing certain dedicatories and other texts and introducing new ritual directions. Besides, given the nature of the different ceremonies of the long liturgy that share a common structure and an important set of common texts, it is likely that priests were able to create manuscripts for a different ceremony on the basis of a manuscript of another ceremony. In addition, the influences between written and ritual-oral transmission were reciprocal: the written transmission introduced changes into the text recited in the ceremony, and the changes introduced into the ceremony modified the written transmission.

The process leading to the creation of a new manuscript can be schematized as follows:



In different manuscripts, the role played by the written and the ritual-oral transmission is different. The exegetical *Wīdēwdād* manuscripts are usually less influenced by the ritual-oral transmission than the ritual ones, although some of them show a clear influence of the ritual-oral tradition. Furthermore, not all the liturgical manuscripts are influenced by it to the same degree.

Under these circumstances it is obvious that our goal will not be to establish *stemmata* or genealogical trees like the ones established by GELDNER. It is impossible today to trace the history of the manuscripts copied between the 13<sup>th</sup> and 19<sup>th</sup> centuries. On one hand, as I have already mentioned, we have only a small accidental selection of the manuscripts. On the other hand, in the history of each manuscript the ritual-oral transmission plays an important role alongside the original written source(s). Since we do not have tape recordings of the rituals as they were performed at the time of the copying of the different manuscripts, the only witness for us of the ritual-oral transmission are other manuscripts copied within the same sphere of influence and with similar variants. It will surprise us no longer to find manuscripts that seem not to have a common origin, but share important variants. As a consequence, we face a highly contaminated tradition. Hence our goal cannot be to reconstruct the history of the manuscripts but to formulate instead, exactly as the CBGM proposes, “a comprehensive hypothesis of the structure of the tradition”.

Accordingly, when elucidating the relationship between one witness and other witnesses, this relation will not be univocal (in the sense of one manuscript being its source and others its descendants). Several witnesses will appear related to it either because they have a common genealogical origin or because they belong to the same ritual circle. The relation to the different witnesses is not uniform, but variable. The degrees of relation between different texts or witnesses fluctuate. Thus the Coherence-Based Genealogical Method has developed a more complex concept of *stemma* in which the relations are not univocal (a witness can thus have different sources) and the different degrees of relationship between manuscripts can be represented properly. The traditional arrows have accordingly been substituted by vectors of different width.

For establishing such more complex *stemmata* we can use two different types of information: the external and the internal data.

### 5.1. The external data

The CBGM distinguishes clearly between the date of a witness and the date of the manuscript itself. A later manuscript could witness a text that is older than other texts contained in an earlier manuscript, as in fact is sometimes the case. A manuscript of the 18<sup>th</sup> century can witness a much older text with accuracy, while another older manuscript can contain a more corrupted or altered text. This is the case, for example, of the *Wīštāsp Sāde* manuscript K 4 (copied 1723 in India), which

reproduces quite exactly the text of an Iranian manuscript of the 14<sup>th</sup> century and is a much better witness of the long liturgy than many other Indian manuscripts from the same century and even from the 17<sup>th</sup> century. Hence external information like colophons, information about the physical shape of the manuscript (paper, ink, etc.), orthographic conventions and palaeographical analysis provide only indicators but no definitive criteria. They provide information about the material manuscript, but not necessarily about the witness it bears. Nevertheless, such indicators must, of course, be taken into account. Especially relevant is the information provided by the colophons and by palaeography. While the latter one yields information about the manuscripts alone, the colophons allow us, to a certain extent, to reconstruct the genealogical relations between different manuscripts.

### 5.1.1. The colophons<sup>42</sup>

Often manuscripts include colophons or introductions indicating their date, place and copyist and often additional information like the sponsor of the copy, the owner, the original manuscript from which the copy is made, etc. The usual place for the colophons is the end of a manuscript, but other places are also frequent.<sup>43</sup> The information provided by colophons is of two different types:

1. date, place and scribe, etc. of the manuscript, not of the witness;
2. genealogical information.

Of course, we cannot rule out, and it often is indeed the case, that colophons are reproduced in later copies. In such cases the colophon offers at the most a date and place for the witness and not for the manuscript, with the caveat that each process of copying is a source of error and of deviations. Among the clearest examples are the manuscripts E 10 and Bh 11 which reproduce exactly the same colophons. The latest colophon bears the date of 1383. But both manuscripts are copies from the 18<sup>th</sup> century and show important differences. Despite this caveat, the study of the colophons is essential.

The genealogical information is provided by the colophons in two different ways:

1. the copyist informs us about the original he has used;
2. the colophons of the successive manuscripts are accumulated at the end of the manuscript.

The second type is frequent only in the scriptural-exegetical tradition: the authority of the Pahlavi Wīdēwdād manuscripts is based essentially on the

42 A data-base of colophons has been initiated in the Avestan Digital Archive (<http://ada.usal.es/colofones/index>).

43 A usual place for colophons is the beginning of the ninth *fragard*. In some Sādes we also find colophons before the first *fragard*, as is the case of B2. Very seldom information about the copyist, place and date is also given at the beginning of the manuscript.

authority of its original. In the Sādes, in contrast, the name of the copyist seems to be authoritative enough, although sometimes, especially in the Iranian manuscripts, information about the source appears. This information is fundamental for establishing the genealogical relations between witnesses and is the only one that allows us to build *stemmata* in the same sense as done by GELDNER.

The history of the Pahlavi Wīdēwdād manuscripts according to their colophons is well known. The following manuscripts containing colophons with genealogically relevant information are known today:

- K 1 (4610): its colophons have been edited by SANJANA (1895).
- M13: probably in Bombay, but its actual location is unknown. It repeats the colophons of K 1 and has a further colophon edited and translated by SANJANA (1895).
- DJJ: at present in the Library of the Cama Oriental Institute. It repeats the colophons of M13 and has a further colophon in Pahlavi, Farsi and Sanskrit, edited and translated by JAMASP (1907).
- IM: its colophons are edited and translated by JAMASP (1907). It has three colophons:
  1. one colophon of the famous Marzbān Frēdōn Wahrom, written in Ker-  
man 1575/1595, after the 9<sup>th</sup> *fragard*;
  2. the first colophon is the one of Ardašīr Wahman Rōzweh, as in K 1 and  
L 4 but with some differences. According to it, the date of the manu-  
script of Ardašīr is 1205 and was handed out to Māhyār Dēnyār in the  
year 1231, who brought it to India. Hence, the colophon, like the first  
colophon of K 1 and L 4, was not written by Ardašīr Wahman Rōzweh,  
but later on in India, where it was created in order to recount its history  
and make it authoritative;
  3. another colophon by Marzbān Frēdōn Wahrom.
- Pt2: Its actual location is unknown and the colophons are not published. It  
reproduces the lost colophon of L 4 (the final folios of which are lost). For-  
tunately, we know the colophon of L 4 through other manuscripts.
- PB: Its actual location is also unknown, but its colophons are edited and  
translated by SANJANA (1895). It shares with K 1 the colophons of Ardašīr  
Wahman Rōzweh and Rōstām Mihrābān. It follows the colophon of  
Mihrābān Kayxōsrō with the date of 1323 and the place of Navsari. The last  
colophon is written by another Mihrābān in the year 1383. Furthermore,  
it includes a colophon in Sanskrit. This colophon in Sanskrit is omitted in  
other copies of the same manuscript, although they include the later colo-  
phon of the Mihrābān (1383).
- E 10 (4713): the complete manuscript, together with my edition and transla-  
tion of its colophons, is available in the Avestan Digital Archive (<http://ada.usal.es/paginas/metadada/812>). It includes the same colophons as PB except  
the Sanskrit one.

- Bh 11 (4712): again a copy from the same source as PB and E 10. This colophon has been edited by CERETI (1996).

The oldest colophon of the Pahlavi translation is the colophon telling the history of Ardašīr Wahman Rōzweh's manuscript, attested in K 1, IM and L 4 (indirectly) and their copies. It provides us with interesting information: its source is a manuscript copied by Hōmast Wahišt Bahlšādān Ohrmazd in Sīstān at some uncertain date. The manuscript of Ardašīr was copied in 1185/1205.<sup>44</sup> It begins by saying that it is the colophon of Ardašīr (copied in 554 = 1185/1205), but not in the first person as is usual in colophons. Furthermore, it says that the manuscript was handed out to Māhyār Māhdād who came to Iran for six years, according to the colophon of K 1 and L 4, and in the year 600 YE according to the version of IM (that is, 1231/1251). In any case this information is necessarily posterior to the copying process. Therefore the colophon must have been added when the manuscript was handed out to Māhyār or even later in India.

The colophons inform us that at least two different copies were then made from the manuscript of Ardašīr: one copy was made by Rōstam Mihrābān around 1270<sup>45</sup> in India, as clearly stated by the colophons of K 1 and L 4; the other one was made by Wizan Wahrāmšāh Wizan and copied later by Šahryār Ardašīr Ērič Rōstām Ērič, the final source of IM, written by Marzbān Frēdōn Wahrām Rōstām Bundār 1595<sup>46</sup> in Kermān. We have no information about the place and date of the copy of Wizan Wahrāmšāh, but a copy of it was made in Kermān in the 16<sup>th</sup> century. About the copy of Rōstam we don't know whether Rōstam returned to Iran with it<sup>47</sup> or whether the copy remained in India. Two new copies were later made in India by Mihrābān Kayxōsrō, a later member of the same family. He went to India, invited by a Parsi merchant, Čāhil Sānjan, and there he copied between 1323 and 1324 the most important manuscripts of the Pahlavi transmission of *Wīdēwdād* and *Yasna* (1323 L 4, Navsari, K 5, Cambay; 1324 K 1, Cambay). We do not know if he brought the original manuscripts from Iran or if the manuscripts were already in India. In any case it is clear that the copy of Rōstam travelled with him at least from Navsari to Cambay. Whether he also brought it from Iran or whether the copies were in Navsari cannot be determined with any certainty.<sup>48</sup>

44 The colophon gives the date 17.4.554. In Iran dates are usually given in the Parsīg Era (death of Yazdegird = + 651) and in India in the Yazdegird Era (from the coronation of Yazdegird on = + 631). This colophon does not inform us about the Era used, hence the year 554 could refer to 1185 or 1205.

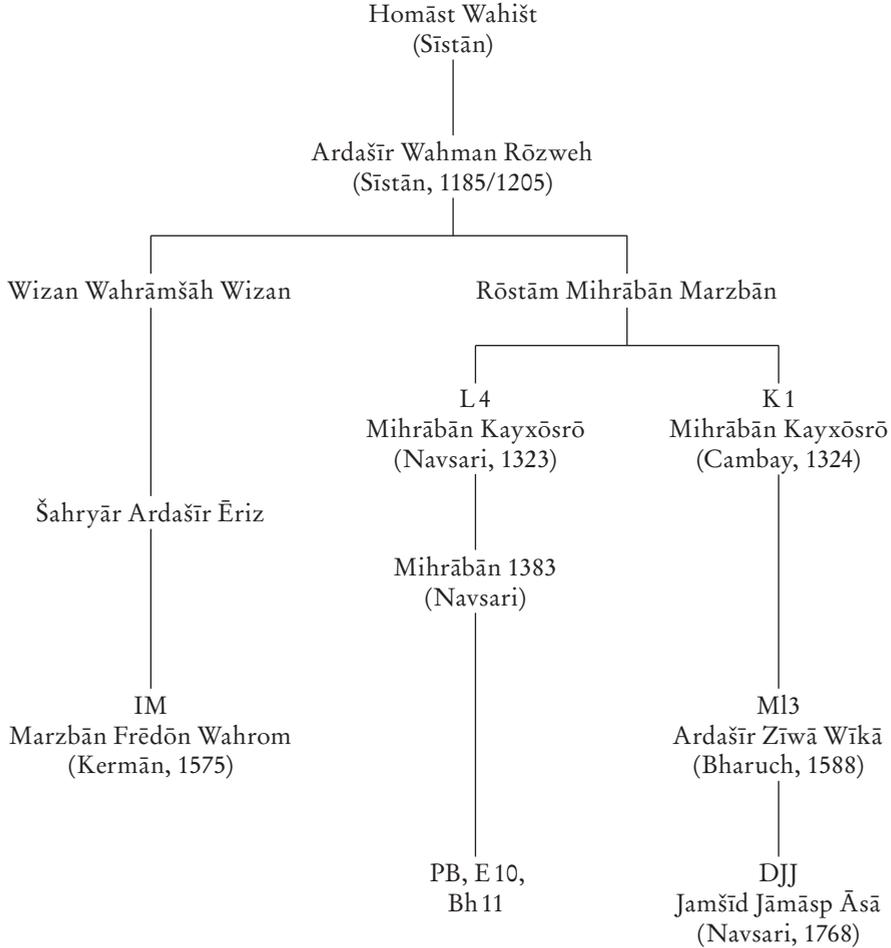
45 Unfortunately we know day and month, but there is no mention of the year, probably because of a transmission error.

46 The date 1575 is possible too, if we consider that the date might refer to the Yazdegird Era.

47 This possibility is explicitly considered by KELLENS (1998).

48 On this problem see KELLENS (1998, p. 61ff.)

According to these colophons we can follow the prehistory of the extant manuscripts and trace the following *stemma* of some extant Pahlavi manuscripts:



Of course, this *stemma* does not reproduce the real history of the extant manuscripts that contain these colophons. Intermediary items might have been omitted. Besides, the manuscript containing the colophon can be a later copy of the original source of the colophon, as is obviously the case with PB, E 10 and Bh 11.

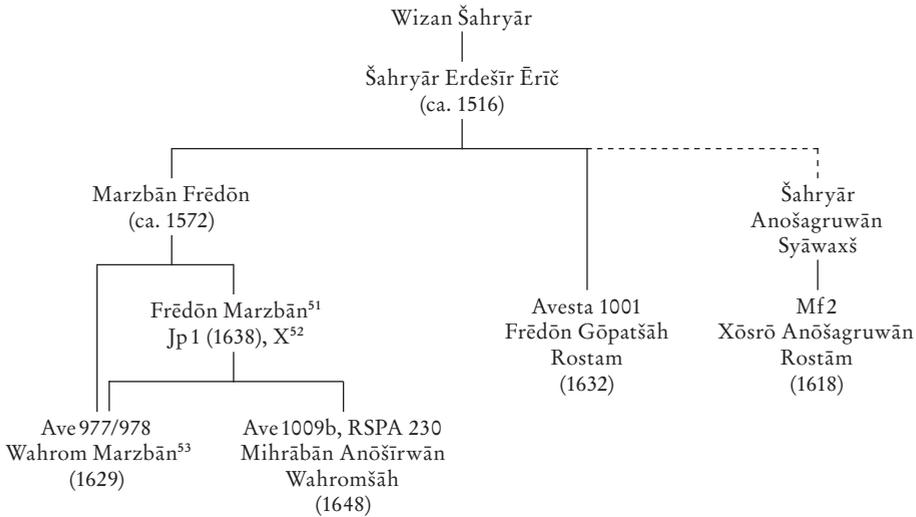
In contrast to the exegetical manuscripts, liturgical manuscripts seldom accumulate different colophons. Thus the genealogical information contained in the colophon is much more limited. Actually, only a few Iranian manuscripts have colophons giving information about their genetic filiation. In fact, we

know today 6 Iranian Wīdēwdād Sāde manuscripts with genealogical information in their colophons: Jp 1 (lost), Ave 977/978 (4010), Mf 2 (4020), Ave 1001 (4040), Ave 1007 (4050) and RSPA 230 (4060). Neither of them has been published. They allow a tentative and partial reconstruction of the Iranian Sāde transmission. The oldest Iranian Sāde mentioned is the copy of Wīzan Šahryār, one of the copyists mentioned in the colophons of the Dēnkard. This copy is mentioned only in Ave 1001 (4040). However this is, according to the second colophon of Ave 1001, the source of Šahryār Erdešīr Ērīz, who in 865 Parsīg Era (= 1516) made a copy of the Dēnkard (Unvala 1940) and of a further ancestor of IM. At least two copies were made of Šahryār Erdešīr Ērīz's manuscript: one by Marzbān Frēdōn, who in 1572 copied the manuscript K 35 of the Dādestān ī Dēnīg and in 1575/1595 the Pahlavi Wīdēwdād manuscript IM; the other is even Ave 1001 (4040). From the copy of Marzbān Frēdōn at least one copy was made by his son Frēdōn Marzbān Frēdōn: Jp 1 (1638), who also made another copy (Ave 976 [4000]), but, although his use of the same source is likely, we have no sure indication about this in the colophon. Another son of Marzbān Frēdōn, Wahrom, made at least two copies: the second part of Ave 992 (4030) and Ave 977/978 (4010), a copy made "from the manuscript of his father (Marzbān Frēdōn) and his brother (Frēdōn Marzbān)"<sup>49</sup>. Furthermore, Mf 2 was copied, according to its colophon, by Xōsrō Anōšagruwān Rostām<sup>50</sup>, near Yazd, in the year 1618, from a manuscript written by Šahryār Anōšagruwān Syāwaxš Šahryār Erdešīr. Its relation to the manuscript of Šahryār Erdešīr is not stated in the colophon, but the fact that the writer of the source of Mf 2 belongs to the family of Šahryār Erdešīr, makes possible a common origin for Mf 2 and the rest of the Iranian Wīdēwdād Sāde manuscripts. In fact, as we have already mentioned, Mf 2 shares important features with the Sāde manuscripts of Marzbān Frēdōn's family and with Ave 1001. Very interesting is the manuscript Ave 1009 or Atabak's Vendidad. The middle and final colophon indicates the same scribe in the same year, but it mentions two different sources. The final colophon gives as its source Frēdōn Marzbān Frēdōn, exactly like RSPA 230 (very similar and written by the same scribe), but the first colophon mentions as source an unknown manuscript by Irdašīr Anōšagruwān Sfandyād the position of which among the Iranian Wīdēwdād Sāde manuscripts is unknown.

The colophons allow us to reconstruct the history of the Iranian Sādes as follows:

49 The exact meaning of this expression is unclear.

50 The complete genealogy is Xōsrōw Anōšagruwān Rostām Šahryār Māhwīndād Wahrām Mīhrābān Anōšagruwān Rostām Šahryār Wahrām Sfandyār Mīhrābān.



The Indian Sāde manuscripts do not contain any genealogical information. The colophons inform us just about the place, date and copyist of the manuscript (and sometimes its sponsor and owner). The main information provided about the Indian Sāde manuscripts before 1700 is summed up in the following table:

15 <sup>th</sup> c.	[L 1 <sup>54</sup>	1435 (804 YE)(?)		
17 <sup>th</sup> c.	B 2 <sup>55</sup>	1626 (16.5.995 YE)	Dārāb Hīrā	Surāt
	R 278 (1654)	1634 (26.6.1023 YE)	Rūšatam Varada θuuθā Navarōz Tihimūr Xuršēt Narašāg	
	M 2 <sup>56</sup>	1657 (26.4.1713 Saṃvat)	Dārāb Hīrā	Surāt

51 He has copied at least two different Wīdēwdād Sāde manuscripts, since one copy (Jp1) is later than the copies from another Wīdēwdād Sāde manuscript of Frēdōn.

52 This could be Ave 976 written by Frēdōn.

53 He is also the copyist of the second part of Ave 992 (4030)

54 Actually this manuscript does not include a colophon, but the date 804 YE appears in Pazand in folio 245r. The date is most likely to be a secondary addition. The main reasons I can adduce for this are the following: 1) the ink is clearly different (and cannot be the result of some oxidation of the red ink in this page, since in other text portions of the same page the red ink is in perfect state); 2) the date is obviously written by a different hand than the rest of the Avestan or Pazand text; and 3) the date follows a strange Gujarati text which is not upside down as usual (even on the same page). The date is written in a small blank filled by two decorative flowers indicating the end of a section, and it is written over the flowers(!).

55 According to GELDNER, B2 does not include a colophon. A colophon in Pazand appears, however, in folio 58v–59r before V1.

56 The Gujarati colophon of M2 appears in folio 1v–2r. It has been edited by UNVALA (1940).

17 <sup>th</sup> c.	T 46 <sup>57</sup>	1664 (29.8.1033 YE)	Ērac Xarašəṭ Hōšang San.jāna	Navsari
	O 2 <sup>58</sup>	1681 (25.7.1050 YE)		

Further useful information provided by the colophons of the manuscripts is the genealogical information revealed in the names of the copyists. Their long names allow us to trace the history of several families of copyists and to know the relationship between different copyists. Since manuscripts are often clearly attached to families, this information is quite relevant.

### 5.1.2. Paleography and codicology

The origin of the Avestan script and the values of the different letters at the time of its invention have been analysed in depth by K. HOFFMANN and J. NARTEN (1989). However, the analysis of the evolution of the script from its origin to the first documented manuscripts and, above all, from the oldest extant manuscripts to the youngest ones written in the 19<sup>th</sup> century has been entirely neglected. Even the paleographical differences between the written transmission in India and Iran have never been closely analysed. Above we have already mentioned some features of the use of the Avestan script in India, but there has been no systematic analysis so far.

Nevertheless, it is obvious for the user of Avestan manuscripts that there are different types of Avestan scripts. Although some differences seem to be of a chronological nature (for example, the squared Avestan script that we find in the modern parts of L 4 seems to be typical of the 18/19<sup>th</sup> century), other differences are probably linked to priestly and scribal schools. Since the knowledge of the school to which the manuscripts belong is almost as important as their genetic filiation, an in-depth analysis of Avestan palaeography is an urgent *de-sideratum*.

An important aspect of the palaeographical analysis of the Avestan manuscripts is the analysis of the decorative motives and punctuation signs used in them. The paper of PANAINO on the use of red ink is interesting, but still only of a preliminary character (PANAINO 2003).<sup>59</sup> The first systematic approach in this field was presented by J. MARTÍNEZ PORRO in a small conference in Salamanca (MARTÍNEZ PORRO 2010).<sup>60</sup> He has been able to establish for the first

57 The ms. includes two colophons. The first before V 1 (folio 77r) has the date 1.7.1033 YE and the final one (folio 434r) 29.8.1033 YE, that is, it took around two months to copy T 46.

58 A brief colophon in Gujarati appears in folio 354r.

59 According to the author this paper is the first result of a project on Avestan paleography, but it seems that the project has not been continued. There is also a general paper by PIRAS (2005), where the problems of the different types of scripts attested in the manuscripts are not mentioned.

60 See <http://ada.usal.es/img/pdf/Adornos.pdf>.

time a classification of the manuscripts in different groups according to their decorative motives.

As a matter of fact, Avestan manuscripts make a very limited use of decorative motives. Where these appear, they mostly just mark the end of a section or the beginning of a new one. The Iranian manuscripts make a more liberal use of decorative motives: the representation of plants, animals and even human figures is not infrequent. We find plenty of them in the manuscript Ave 976. The same tradition is continued by Mihrābān's K 5 where we find a horse and a bird in black ink. Similar pictures in red ink appear in G 18. The most spectacular pictures are the images of big coloured trees and birds in Ave 1009 and RSPA 230.

In the Indian manuscripts decorative elements are purely geometrical, but even here we find different patterns that allow us to group some manuscripts into schools. One of the groups that can be established with more certainty is made up by the Yasna manuscripts B 3 and L 17 and the Viseprad Sāde P 12. In this fortunate case, the decoration makes it possible to link these three manuscripts to each other although B 3 and P 12 have no colophon. Their relationship is further confirmed by philological analysis.

## 5.2. The internal evidence: the analysis of agreements and errors

For determining the relations between witnesses and the structure of the transmission, the CBGM distinguishes clearly between two different steps. The analysis of the "pregenealogical coherence" establishes the indices of agreement between all the available witnesses, and the one of "genealogical coherence" shows the genealogical dependencies. The pregenealogical coherence determines that the witnesses A and B are related (that is, their index of agreement is higher than that with other manuscripts), but it does not allow us to know whether A depends on B or vice versa. This method cannot determine if the agreement is due to a process of copy or to the influence of the same ritual school. In the case of the Pahlavi Wīdēwdād manuscripts, where the influence of the ritual-oral tradition is limited, it is likely that groups of witnesses sharing a high index of agreement are also genealogically related.

### 5.2.1. Pregenealogical coherence

For determining the "pregenealogical coherence" the CBGM resorts to the contributions of the quantitative method. The number of total agreements (in preservation and variation) between witnesses is the central parameter. This agreement can be an indication of a "genealogical" relationship, but does not necessarily reveal it, for identical variations can appear independently in different witnesses, and variants can be switched back or can be the result of a contamination process, as we have already stated. The "Pregenealogical Coherence"

or “index of agreement” can easily be expressed in terms of percentage and an automated process allows us to determine the degree of “Pregenealogical Coherence” of each manuscript with the rest.

The process of determining the degree of agreement between two or more manuscripts can be automated without great difficulty on the basis of electronic transliterations. However, some precautions with respect to the distinction between “variant” and “reading” are necessary. Agreement does not always mean that exactly the same form appears in two witnesses. There are variants, for example, which are conditioned by paleographic uses or orthographic rules of the manuscripts. If in K 1 we find *yām* and in B 1 *yām*, that is an agreement even though two letters differ. Therefore, we distinguish between “reading” and “variant”. B 1 *yām* is not a variant of K 1 *yām*, but only a reading of it and could be counted as an agreement for the analysis of pregenealogical agreements. Only variants are significant for determining the relationship between manuscripts. Therefore, in each instance of variation each altered form must be evaluated either as a “reading” of another variant or as a “variant”.

A variant in the definition of the CBGM is “one of at least two readings which is grammatically correct and logically possible” (ALAND et al. 1997). In the Avestan manuscripts, “variants” that are “grammatically correct and logically possible” are not frequent. Hence we make a different use of this concept. We consider a variant each “reading” that *can* (just can, not must) “reveal dependence between two witnesses”. It is a concept similar to the “error significativus” of traditional stemmatics. Since not every error is significant in the same way or to the same degree, I distinguish between three different kinds of variants (1, 2 or 3). Variant of the type 1 are frequent variations of single letters, such as the usual variation between *ī* and *ii* or the confusion between *ar*, *ar*, *r*, etc. More significant are the variants of level 2 like haplogogies, dittographies, metatheses, accumulations of changes of level 1, etc. And finally level 3 is reserved for aberrant variants that are quite unlikely to arise independently.

With these precautions the analysis of the index of agreement can provide us with very useful information. If we make a query<sup>61</sup> about the index of agreement of K 1, we obtain the following results:

K 1	words	Total A		A 1		A 2		A 3	
B 1	15256	13835	90.69 %	193	1.27 %	36	0.24 %	12	0.05 %
P 10	15660	13850	88.44 %	191	1.22 %	37	0.24 %	12	0.05 %
M 3	15664	13847	88.4 %	184	1.17 %	36	0.23 %	13	0.06 %
L 4	9986	8431	84.43 %	136	1.36 %	23	0.23 %	3	0.03 %

61 The possibility of such queries is open to the public in the Avestan Digital Archive at: <http://ada.usal.es/analizador/palabras/index>.

K 1	words	Total A		A 1		A 2		A 3	
D 62	15597	12826	82.23 %	170	1.09 %	30	0.19 %	6	0.04 %
Mf2	2872	2249	78.31 %	53	1.85 %	2	0.07 %	1	0.03 %
P 1	2210	1730	78.28 %	59	2.67 %	1	0.05 %	1	0.05 %
L 1	2840	2221	78.2 %	64	2.25 %	3	0.11 %	1	0.04 %
B 2	2858	2177	76.17 %	57	1.99 %	1	0.03 %	0	0 %
P 2	15527	11812	76.07 %	149	0.96 %	19	0.12 %	6	0.04 %
O 2	2848	2151	75.53 %	56	1.97 %	0	0 %	1	0.04 %
Ave 992	2861	2146	75.01 %	46	1.61 %	1	0.03 %	0	0 %
L 2	2855	2127	74.5 %	57	2 %	0	0 %	0	0 %
T 46	2859	2123	74.26 %	59	2.06 %	1	0.03 %	0	0 %
M 2	2860	2122	74.2 %	58	2.03 %	0	0 %	1	0.03 %
G 34	9906	7045	71.12 %	117	1.18 %	10	0.1 %	2	0.02 %
T 44	9967	6727	67.49 %	115	1.15 %	9	0.09 %	4	0.04 %
E 10	9913	6608	66.66 %	120	1.21 %	3	0.03 %	3	0.03 %
G 25	7162	4578	63.92 %	56	0.78 %	4	0.06 %	0	0 %
G 106	2849	1806	63.39 %	51	1.79 %	0	0 %	2	0.07 %
E 4	2824	1684	59.63 %	49	1.74 %	0	0 %	0	0 %
L 5	2666	1538	57.69 %	48	1.8 %	1	0.04 %	2	0.08 %
Bh 11	3429	2469	72 %	5	0.15 %	1	0.03 %	1	0.03 %

Five Pahlavi Wīdēwdād manuscripts show a high index of agreement (over 80 %) with K 1 which connects them clearly: B 1, P 10, M 3, L 4 and D 62. The high index of agreement with L 4 corresponds with the fact that, according to external data (the information provided by the colophons and the paleographical analysis), K 1 and L 4 are copies of the same manuscript by the same copyist within a space of just one year. We might wonder why B 1, M 3 and P 10 show a higher percentage of agreements with K 1 than L 4 does. Mihrābān was indeed not the most accurate copyist.

It is not easy to decide which of Mihrābān's two copies is more accurate, since we do not have their common source. The safest way would be to compare their index of agreement with IM, but unfortunately its actual location is unknown. Thus only the Iranian Sādes remain to serve as a touchstone for the accuracy of L 4 and K 1. This test is passed better by K 1 than L 4. The indices of agreement with the Iranian Sādes (Mf2 and Ave 992) and also with the old Indian Sāde are lower for L 4 than for K 1:

	K 1			L 4		
	Words total	Total agreements	Percentage	Words total	Total agreements	Percentage
Ave 992	2861	2146	75.01 %	2776	1992	71.76 %
B 2	2858	2177	76.17 %	2775	2037	73.41 %
L 1	2840	2221	78.2 %	2757	2033	73.74 %
L 2	2855	2127	74.5 %	2772	1993	71.9 %
L 5	2666	1538	57.69 %	2581	1438	55.71 %
M 2	2860	2122	74.2 %	2777	1966	70.8 %
Mf 2	2872	2249	78.31 %	2786	2066	74.16 %
O 2	2848	2151	75.53 %	2765	2009	72.66 %
P 1	2210	1730	78.28 %	2130	1611	75.63 %
T 46	2859	2123	74.26 %	2776	1992	71.76 %

An additional argument: If we take GELDNER's text as a reference, in V 9 e.g. K 1 has omitted 28 words. All these omissions are shared by L 4 and probably derive from Rōstam's copy. In L 4 further 86 words are missing. Although this does not mean that the variant of K 1 is to be preferred at all times, K 1 on the whole seems to be a more careful copy than L 4.

The next Pahlavi *Widēwdād* witness with the highest index of agreement (76.07 %) is P 2. The rest of the Pahlavi *Widēwdād* manuscripts shows a higher index of agreement with L 4 than with K 1, but P 2's index of agreement with K 1 is higher than that with L 4. Hence we can deduce that P 2 also belongs to the witnesses related to K 1. P 2 has indeed the highest index of agreement with D 62, gradually decreasing in its agreement with the rest of the members of this group:

P 2	words	total A	Percentage
D 62	15299	12462	81.46 %
P 10	15226	11705	76.88 %
M 3	15265	11682	76.53 %
B 1	14923	11410	76.46 %
K 1	15527	11812	76.07 %
L 4	9558	6764	70.77 %

In order to establish the relations between the manuscripts of the group, we must compare the different indices of agreement of the manuscripts:

K 1		B 1		P 10		M 3		D 62		P 2	
B 1	90.69 %	M 3	93.18 %	B 1	93.06 %	B 1	93.18 %	P 10	85.33 %	D 62	81.46 %
P 10	88.44 %	P 10	93.06 %	M 3	90.24 %	P 10	90.24 %	B 1	84.3 %	P 10	76.88 %
M 3	88.4 %	K 1	90.69 %	K 1	88.44 %	K 1	88.4 %	M 3	83.03 %	M 3	76.53 %
D 62	82.23 %	D 62	84.3 %	D 62	85.33 %	D 62	83.03 %	K 1	82.23 %	B 1	76.46 %
P 2	76.07 %	P 2	76.46 %	P 2	76.88 %	P 2	76.53 %	P 2	81.46 %	K 1	76.07 %

The very high indices of agreement among B 1, M 3 and P 10 (over 90 %) and with K 1 (over 88 %) point out these witnesses as worthy representatives of the scriptural tradition, almost free from the influence of the ritual tradition. They reproduce their source (K 1) accurately, even where it shows important disorders, as is the case with Fragarad 3, 9 and 18. Among them B 2 seems to be the most accurate copy and this information is relevant when editing the texts of the missing parts of K 1.

D 62 and P 2 are clearly of a different order. Their indices of agreement with K 1 are considerably low, especially those of P 2. The highest index of agreement of D 62 is with P 10, whereas P 2's closest relative seems to be D 62. Their lower indices of agreement with K 1 have to be explained with a view to the deep influence of the ritual on the scriptural tradition and to the process of reshaping Pahlavi Wīdēwdād manuscripts in the 18<sup>th</sup> century in India that evidently has affected both manuscripts. They were certainly also collated with manuscripts of the tradition of L 4. For example, they try to rearrange the disorders in book 9. D 62 reproduces the text twice, in the correct place and where it appears in K 1; P 2 only in the correct place. However, they do not rearrange the misplacements of V 3 and 18, because these happen also in L 4, a clear sign that they were collated with L 4 or with witnesses similar to it. However, their indices of agreement with L 4 are far lower than those with K 1. According to their index of agreement we might group the Pahlavi Wīdēwdād manuscripts closely related to K 1 as follows:

- K 1
- M 3, B 1, P 10
- D 62, P 2 (these two clearly influenced by witnesses close to L 4)

The difficulties of analysing the IndVS have already been recognised by GELDNER who refrained “from setting up a genealogical tree”; and this situation has remained the same until today.<sup>62</sup> The Sāde manuscripts are closely linked to the priestly schools where the right performance of the ceremonies

62 The only classification of the Indian Wīdēwdād Sāde that everyone repeats is GELDNER's classification according to quality: a) better: Br1, L2, K10; b) middle: Dh1, M1, S2; c) worse: L1, M2, O2, B2, P1, L3, Bb1, L5, Jm2, Jm3. Strikingly some of the oldest manuscripts (like L 1, M 2, O 2, B 2, P 1) appear in the third group.

was taught and the text was learnt by heart. In the case of the *Wīdēwdād* manuscripts it is likely that the *Yasna* parts were better known by the priests than the intercalated *Wīdēwdād* parts. Accordingly important parts of the *Yasna*, especially the central *Staota Yesniia* (*Gāθās* + *Yasna Haptaŋhāiti*), are abbreviated in some manuscripts (like M2, O2). Actually, the indices of agreement we get in Y 28–34 are far lower than in *Wīdēwdād* (see p. 301). This fact points out that the influence of the ritual practice is not to be recognised in high indices of agreement, but rather in the sharing of very significant variants. However, we must admit that the analysis of this highly contaminated transmission line is very difficult. Besides, the set of electronic transliterations at our disposal is still quite limited, so that conclusions have a merely provisional character.

Nevertheless, some facts emerge with clarity from the values we obtain in *Wīdēwdād* 2,9, 19:

L1	P1	B2	L2	O2	M2	T46	E4	G106	L5
%	91.63	84.13	82.5	81	80.37	80.34	65.8	64.53	59.09
P1	L1	B2	L2	T46	O2	M2	E4	G106	L5
%	91.63	86.38	85.42	83.64	83.46	81.14	67.43	65.7	60.85
B2	T46	P1	L1	O2	L2	M2	E4	G106	L5
%	89.88	86.38	84.13	83.34	81.97	80.46	65.1	64.4	59.99
T46	B2	P1	O2	L1	L2	M2	G106	E4	L5
%	89.88	83.64	81.16	80.34	79.4	78.4	64.81	63.88	59.69
M2	O2	L2	P1	B2	L1	T46	E4	G106	L5
%	85.02	81.87	81.14	80.46	80.37	78.4	65.75	64.89	60.54
O2	M2	P1	B2	L2	T46	L1	E4	G106	L5
%	85.02	83.46	83.34	83.12	81.16	81	65.96	65.11	60.09
L2	P1	O2	L1	B2	M2	T46	E4	G106	L5
%	85.42	83.12	82.5	81.97	81.87	79.4	72.39	66.68	61.51
E4	L2	P1	O2	L1	M2	B2	T46	L5	G106
%	72.39	67.43	65.96	65.8	65.75	65.1	63.88	60.69	58.67
G106	L2	P1	O2	M2	T46	L1	B2	E4	L5
%	66.68	65.7	65.11	64.89	64.81	64.53	64.4	58.67	57.41
L5	L2	P1	E4	M2	O2	B2	T46	L1	G106
%	61.51	60.85	60.69	60.54	60.09	59.99	59.69	59.09	57.41

The division in two groups is an obvious one:

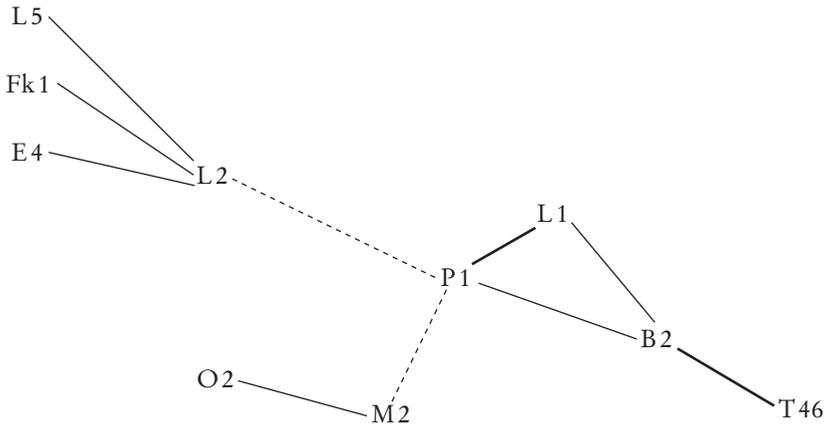
1. L 1, P 1, B 2, M 2, O 2, L 2 and T 46, witnesses which, with the exception of L 1 (?) and L 2, belong to manuscripts written down during the 17<sup>th</sup> century;
2. E 4, L 5 and G 106. Two of them (E 4 and L 5) were written in the same year, 1792. G 106 bears no date.

The first group shows high pregenealogical coherence values and constitutes a relatively coherent group. Some indices, like the agreement between P 1 and L 1, are comparable only with the indices we saw among K 1 and B 1. The values in the second group are very low and they seem to be quite apart from each other.

Another fact that seems unmistakable is that the link between the first and the second group is L 2. The highest value of agreement between the three manuscripts (E 4, L 5 and G 106) points to L 2. These data fit well into my explanation of the peculiar passage V 3.41 (see p. 305f.) that divides the Sādes in two groups: P 1, L 1, B 2, M 2, O 2 on the one hand and L 2, E 4, L 5, G 106 (together with the manuscripts G 34 and B 4 not analysed here) on the other.

Within the first group, P 1 and L 1 show a very high index of agreement. There is also an obvious connection between B 2 and T 46. They share a high index of agreement and this with almost perfect coherence. M 2 and O 2 also show a high index of agreement, but the decreasing list of agreements does not run parallel in this case. The low agreement between the witnesses of B 2 and M 2 is striking, two manuscripts written by the same copyist and with a similar ductus, but with a difference of 31 years and probably taken from different sources. The fact that manuscripts sharing a high index of agreement do not always share the same dedicatory in the same places also commands our attention. P 1 for example shows the dedicatory to Sraoša in Y 0 and Y 22, but L 1 to Ahura Mazdā in Y 0 and Sraoša in Y 22. It seems that the dedicatory were easily interchangeable.

The pregenealogical relations of the analysed Sāde can be represented as follows:



This diagram is by no means a stemma. It does not depict the historical process of copying different manuscripts, but just the relations between the texts contained in them without any indication of time.

### 5.2.2. Genealogical Coherence

For transforming the “pregenealogical” into a “genealogical coherence” we have to introduce into our data the factor *time* or “relative chronology”. This part of the process cannot be automated. The first source of time information is the external evidence, but we must clearly distinguish between the date of the manuscript and the date of the witness. Consequently external information like colophons, information about the physical shape of the manuscript, orthographic conventions, paleographic analysis (a desideratum of Avestan philology) are only indicators, not definite criteria. A further aspect that offers important chronological information is the analysis of transmission errors that allows us to know the physical shape of the manuscript.

One of the most conclusive criteria for establishing the (direct or indirect) dependence of one manuscript from another is the presence of mistakes that reveal a physical aspect of the source, such as its exact pagination or the exact shape of a line or even some paleographical features. The most conclusive ones are those that allow us to know the exact pagination of the source, for it is very unlikely for two manuscripts to have pages starting and ending exactly with the same words. Two different kinds of mistakes reveal the pagination of the source: an omission corresponding to one or more folios and misplacements due to the wrong binding of some folios. Such errors are more frequent in the scriptural tradition than in the oral ritual, in which the ritual recitation prevents such big mistakes.

A scribe can easily jump a line and leave it out. If we find a manuscript B where the text omitted in A takes exactly one line, it is likely that this manuscript B is the (direct or indirect) source for A. A clear example appears in the Yasna manuscript L 17 (cf. the more detailed analysis in this volume, p. 443ff.). Y 51.1 is recited twice. In L 17, after the first quoting of the stanza, the indication “twice” appears and a mysterious *šānē* follows. The explanation is quite simple. In B 3 the indication that the text is to be recited twice is given, as so often, through the repetition of the first two words of the stanza, the indication of an abbreviation and the final word: *vohū xšaθrəm vairīm ... varəšānē*; and the sequence *vohū xšaθrəm vairīm ... varə* takes up one line. Obviously a scribe jumped this line, left it out and proceeded directly to *šānē* after the end of Y 51.1. Hence we can conclude that L 17 is a direct or indirect copy of B 3.

As already mentioned above (p. 305f.), in V 3.41 the manuscripts L 5 and G 106 show an omission which is clearly the result of the fact that the copyist of their source left out the line *spaiieite yātuynīm spaiieiti aš*, so that we know that the omitted text was a line in its source. Unfortunately this time we do not know the source.

The omissions due to the loss of a complete page in the source are easier to recognise. The most obvious case in *Wīdēwdād* is the V 19.41–44. One omission shared by L 4 and K 1 allows us to know that their common source had a folio beginning with V 19.41b *danhāuuō yaoždāšriiāt bacā frakaire* and ending with V 19.44 *daēuuō uiti dauuata hō yō duždā. aṅrō mainiiuš*. (CANTERA 2010a, p. 185).

The source of L 4 and K 1 was, indeed, already quite damaged at the time they were copied from it. This is not the only lost folio and besides, important misplacements of folios have already emerged. The most important ones appear in V 18. When L 4 and K 1 were copied from it, the order of the folios of V 18 in their source was: 1<sup>63</sup>, 2, 6, 7, 8, 9, 10, 11, 12, 13, 5, 14, 3, 4, 16 et seq. Three folios (3, 4, 5) were separated from the manuscript and bound in the wrong place. Through a detailed analysis we are able to know today the exact pagination of these folios in the common source of L 4 and K 1 (CANTERA 2010a, p. 181 ff.).

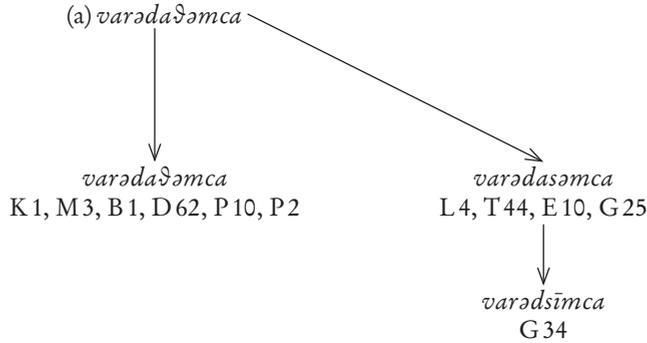
Other mistakes inform us about features of the manuscripts which are not as significant as the omissions of lines or pages. Most of them are paleographical. Very common is the confusion between *b* and *n*. In Y 52.2, for example, L 17 reads *narənti* and *naēšazā* instead of the right *barənti* and *baēšazā*.<sup>64</sup> Some manuscripts write *b* in two different ink types: the vertical one in black and the horizontal one under the line in red. Red strokes were written when the black text of the page was finished. Consequently some of them were occasionally forgotten or the red ink grew pale. Therefore, when we find such mistakes we can be sure that the source wrote the *b* in two strokes with the horizontal one in red and in fortunate cases we can even find the manuscript where the stroke was left out. Since B 3 writes the *b* in two strokes, but in Y 52.2 shows clearly *barənti* and *baēšazā*, we can be sure that L 17 is an indirect copy of B 3 and cannot depend directly from it.

The key, however, for establishing genealogical coherence is the analysis of errors, like in traditional stemmatics. If the pregenealogical coherence is based on agreement, the genealogical coherence is based on error. The fundamental way to determine the relative chronology of a manuscript is to determine the relative chronology of its variants. This information can be obtained through the application to each place of variation of the tools of Avestan philology and of traditional stemmatics. Thus we build local substemmata for each place of variation. A “local stemma” “is a stemma representing the presumed genealogical relationship between variants at one place of variation” (MINK 2004). The information obtained in each local stemma contributes to the establishment of a general stemma. A general stemma would be the one which is most coherent with many local substemmata. The first substemmata can be uncertain, but in

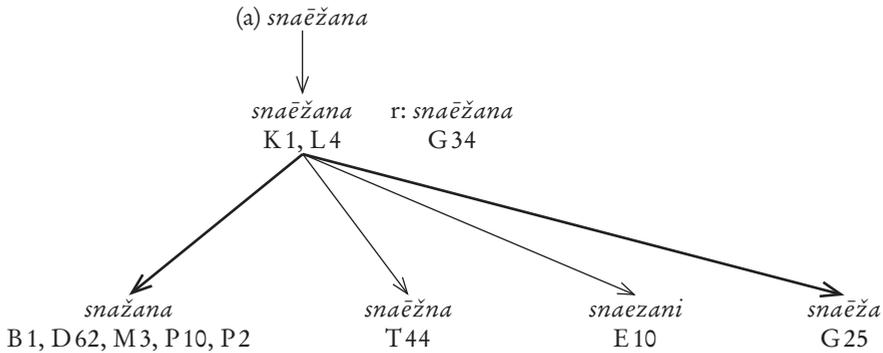
63 Considering as folio 1 the first folio of V 18.

64 Sometimes hypercorrections of *b* appear instead of *n*. In V 5.47 K 1 writes wrongly *barəbiūō* instead of *narəbiūō*. This is clearly a hypercorrection which makes it likely that the source of K 1 and L 4 wrote the *b* in two colours.

the course of work the results obtained in other stemmata are recorded and help us to interpret as substemmata places of variation that were at first difficult. At the beginning of the work we have to choose the most obvious. Actually, there are lots of them. V 13.52 *varādaḍamca* is a clear example:



Then we must check if the results are coherent with our analysis of the pregenealogical coherence. The manuscripts with the original variant are the manuscripts with a high degree of pregenealogical coherence analysed before; and also the other group as JAIME MARTÍNEZ shows in his contribution to this volume (p. 347ff.). The thickness of the lines represents the degree of pregenealogical coherence between the witnesses. It would not be difficult to find other substemmata confirming this data (V 3.40):



The results of each place of variation must be recorded electronically so that we can determine the “general textual flow”, that is, in which direction, from which manuscripts to which other manuscripts the text usually “flows”. Since the relative chronology of each variant is recorded, we can make queries to see the relative position of the manuscripts. For example, a query about book 9 leads us to observe in our data bases that the number of variants of K 1 prior to others variants is greater than the number of posterior variants for all manuscripts, except for Mf 2:

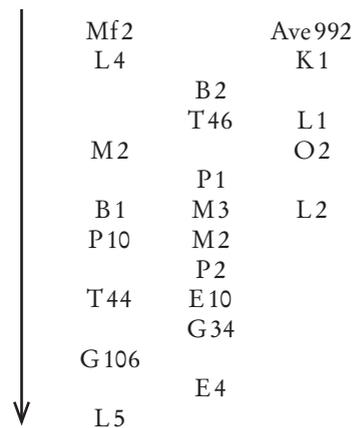
K1	Total	< O		< NO		O >		NO >	
B1	1687	56	3.32 %	9	0.53 %	12	0.71 %	1	0.06 %
D62	1675	115	6.87 %	16	0.96 %	39	2.33 %	0	0 %
REF	1691	1	0.06 %	0	0 %	1	0.06 %	0	0 %
L4	1627	66	4.06 %	3	0.18 %	52	3.2 %	2	0.12 %
M3	1686	70	4.15 %	8	0.47 %	9	0.53 %	0	0 %
P10	1691	86	5.09 %	11	0.65 %	31	1.83 %	0	0 %
P2	1684	128	7.6 %	14	0.83 %	42	2.49 %	0	0 %
Mf2	1677	98	5.84 %	2	0.12 %	105	6.26 %	1	0.06 %
L1	1654	108	6.53 %	4	0.24 %	66	3.99 %	1	0.06 %
P1	1613	102	6.32 %	4	0.25 %	64	3.97 %	0	0 %
B2	1654	104	6.29 %	2	0.12 %	77	4.66 %	0	0 %
T46	1662	115	6.92 %	1	0.06 %	74	4.45 %	0	0 %
L2	1661	112	6.74 %	3	0.18 %	65	3.91 %	0	0 %
E4	1648	239	14.5 %	10	0.61 %	44	2.67 %	0	0 %
L5	1484	260	17.52 %	10	0.67 %	47	3.17 %	0	0 %
G106	1655	223	13.47 %	10	0.6 %	52	3.14 %	1	0.06 %
T44	1691	148	8.75 %	9	0.53 %	48	2.84 %	0	0 %
E10	1675	161	9.61 %	14	0.84 %	59	3.52 %	0	0 %
G34	1592	170	10.68 %	7	0.44 %	50	3.14 %	1	0.06 %
O2	1649	116	7.03 %	3	0.18 %	69	4.18 %	1	0.06 %
M2	1661	134	8.07 %	2	0.12 %	63	3.79 %	0	0 %
G25	16	0	0 %	0	0 %	0	0 %	0	0 %
Ave992	1673	70	4.18 %	0	0 %	86	5.14 %	1	0.06 %
Bh11	17	0	0 %	0	0 %	0	0 %	0	0 %

Higher numbers in the left column than in the right one show a textual flow from witness 1 to witness 2. When numbers are higher in the right than in the left column, the contrary obtains. In that case, we perceive a textual flow from Mf2, Ave992 and L4 to K1 and from K1 to the rest of the manuscripts. Therefore, with respect to the direction of textual flow, we must locate K1 almost at the top, only after Mf2, Ave992 and L4 (with a minor distance).

If we regard the numbers of P1:

P1	Total	< O		< NO		O >		NO >	
B1	1604	92	5.74 %	2	0.12 %	87	5.42 %	6	0.37 %
D62	1607	109	6.78 %	6	0.37 %	72	4.48 %	7	0.44 %
L4	1536	70	4.56 %	1	0.07 %	81	5.27 %	7	0.46 %
K1	1613	64	3.97 %	0	0 %	102	6.32 %	4	0.25 %
M3	1603	101	6.3 %	2	0.12 %	80	4.99 %	6	0.37 %
P10	1616	96	5.94 %	4	0.25 %	78	4.83 %	7	0.43 %
P2	1909	110	5.76 %	11	0.58 %	68	3.56 %	6	0.31 %
Mf2	1945	49	2.52 %	0	0 %	92	4.73 %	7	0.36 %
L1	1952	21	1.08 %	4	0.2 %	20	1.02 %	3	0.15 %
B2	1936	35	1.81 %	6	0.31 %	49	2.53 %	6	0.31 %
T46	1949	40	2.05 %	5	0.26 %	41	2.1 %	4	0.21 %
L2	1924	36	1.87 %	7	0.36 %	33	1.72 %	5	0.26 %
E4	1913	175	9.15 %	29	1.52 %	31	1.62 %	3	0.16 %
L5	1738	201	11.57 %	36	2.07 %	29	1.67 %	8	0.46 %
G106	1942	159	8.19 %	28	1.44 %	29	1.49 %	6	0.31 %
T44	1629	122	7.49 %	11	0.68 %	62	3.81 %	7	0.43 %
E10	1637	131	8 %	12	0.73 %	63	3.85 %	5	0.31 %
G34	1511	152	10.06 %	5	0.33 %	69	4.57 %	6	0.4 %
O2	1938	43	2.22 %	7	0.36 %	37	1.91 %	7	0.36 %
M2	1950	73	3.74 %	7	0.36 %	43	2.21 %	7	0.36 %
Ave992	1950	45	2.31 %	1	0.05 %	80	4.1 %	4	0.21 %

we see that P1 is in a middle position. Clearly, Mf2, Ave992, K1, L4 are prior to P1. P2 has similar values with T46, L1 and B2. In case of similar numbers we have to look at the more relevant variants, as long as the prior variant is not the initial text. Of P2's posterior variants L2, B1, M3, etc. have a slightly superior number. With these data from all witnesses we can draw the following picture of the "textual flow" of the witness analysed:



The same data allow us to determine the potential ancestors of witnesses. Potential ancestors are those witnesses with a higher number of prior than of posterior variants. Potential ancestors for P2 are K1, B1, M3, P10 and D62:

P2	Total	O >		NO >		>		> 1	> 2	> 3
B1	1675	91	5.43 %	24	1.43 %	102	6.09 %	15	4	2
D62	1682	51	3.03 %	19	1.13 %	67	3.98 %	13	4	1
L4	1608	101	6.28 %	17	1.06 %	100	6.22 %	12	2	0
K1	1684	125	7.42 %	14	0.83 %	118	7.01 %	10	0	2
M3	1674	84	5.02 %	21	1.25 %	94	5.62 %	12	5	2
P10	1689	75	4.44 %	20	1.18 %	89	5.27 %	12	5	2
Mf2	1953	161	8.24 %	6	0.31 %	138	7.07 %	4	1	0
L1	1950	111	5.69 %	11	0.56 %	106	5.44 %	10	1	0
P1	1909	109	5.71 %	11	0.58 %	102	5.34 %	9	1	0
B2	1942	120	6.18 %	10	0.51 %	109	5.61 %	9	0	0
T46	1948	102	5.24 %	11	0.56 %	93	4.77 %	10	1	0
L2	1932	105	5.43 %	10	0.52 %	97	5.02 %	9	1	0
E4	1922	66	3.43 %	4	0.21 %	58	3.02 %	2	1	0
L5	1755	51	2.91 %	6	0.34 %	51	2.91 %	3	2	0
G106	1948	51	2.62 %	4	0.21 %	49	2.52 %	3	0	0
T44	1688	68	4.03 %	13	0.77 %	71	4.21 %	11	0	1
E10	1689	65	3.85 %	8	0.47 %	63	3.73 %	5	1	1
G34	1575	73	4.63 %	8	0.51 %	70	4.44 %	5	2	0
O2	1937	102	5.27 %	14	0.72 %	99	5.11 %	12	1	0
M2	1951	97	4.97 %	14	0.72 %	97	4.97 %	12	1	0
Ave992	1955	138	7.06 %	4	0.2 %	114	5.83 %	3	0	0

Among the different potential ancestors the most probable ancestor is the witness with the greatest pregenealogical coherence. In the case of P2 this is clearly D62. Both have an index of agreement of 81.46 %. However, this does in no way mean that D62 is the original from which P2 is copied. We have established only a genealogical relation, but we are not able to reconstruct a historical event.

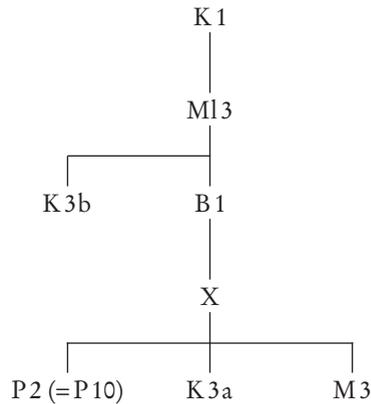
When building substemmata, the data of the pregenealogical and genealogical coherence are essential. A substemma with perfect pregenealogical and genealogical coherence has a greater value for the building of the global stemma than the rest. A substemma has pregenealogical coherence when the witnesses of all variants different from the initial text have a high degree of pregenealogical coherence. Furthermore, a substemma has genealogical coherence when among the witnesses of a prior variant we find at least one potential ancestor of

the witnesses of the posterior variant. If we take a reduced number of witnesses, perfect coherence is easy to find, less so however with several manuscripts belonging to different groups. Let us take as an example the variants of V 15.8 *pipišīiušum*. Four variants are attested:

- (a) *pipišīiušum*: L 4, K 1
- (b) *pipišīiušəm*: B 1, M 3
- (c) *pipšīiušum*: D 62, P 10
- (d) *pipšīiušim*: P 2

B 1 and M 3 show a high index of agreement, as do D 62 and P 10. The pre-genealogical agreement is perfect. So is the genealogical one: K 1 is a potential ancestor of B 1; B 1 is a potential ancestor of P 10 and P 10 is a potential ancestor of P 2. A perfect chain explaining the variant can be established: *pipišīiušum* > *pipišīiušəm* > *pipšīiušum* > *pipšīiušim*.

The information obtained in each local substemma is integrated into the data base and helps us in the end to build a global stemma. The combination of the data about the pre-genealogical and the genealogical coherence are the data that should be used by an algorithm for building the global stemma. We have not yet developed the algorithm and the provisional global stemmata are built through individual combination of the indices of agreement and the comparison between the number of prior and posterior variants. Let us regard the method applied for the analysis of B 1, M 3 and P 10, the three most similar manuscripts we know in the Avestan transmission, and the main differences with GELDNER's approach. GELDNER derives P 10 (P 2 in the Prolegomena) from B 1 through the mediation of X:



In fact, the highest index of agreement connects P 10 with B 1

P 10	words	agreements	1		2		3	
B 1	15299	14115	92.26 %	323	2.11 %	85	0.56 %	12
M 3	15707	13995	89.1 %	293	1.87 %	76	0.48 %	13
K 1	15603	13340	85.5 %	184	1.18 %	48	0.31 %	11
D 62	15493	13066	84.33 %	327	2.11 %	85	0.55 %	9

However, other data seem to lead to a different conclusion. The textual flow puts P 10 clearly after B 1, but a dependence of P 10 from B 1 is not obvious. The comparison of prior and posterior variants of P 10 gives following results:

Prior variants:

P 10	Total	Prior original		Prior non-original		<	% <	< 1	< 2	< 3
P 2	15169	400	2.64 %	69	0.45 %	444	2.93 %	43	18	3
M 3	15707	153	0.97 %	11	0.07 %	156	0.99 %	2	8	1
D 62	15493	147	0.95 %	48	0.31 %	188	1.21 %	38	8	1
B 1	15299	99	0.65 %	8	0.05 %	104	0.68 %	5	2	1
K 1	15603	81	0.52 %	0	0 %	81	0.52 %	0	0	0

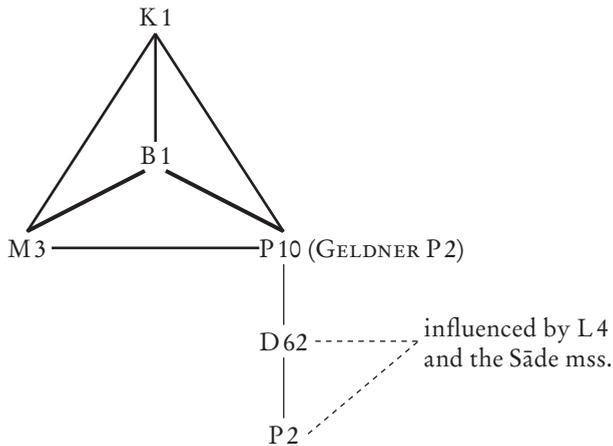
Posterior variants:

P 10	Total	Posterior original		Posterior non-original		>	% >	> 1	> 2	> 3
K 1	15603	312	2 %	28	0.18 %	312	2 %	13	7	3
P 2	15169	166	1.09 %	10	0.07 %	167	1.1 %	5	2	2
M 3	15707	147	0.94 %	27	0.17 %	165	1.05 %	13	9	4
B 1	15299	126	0.82 %	26	0.17 %	142	0.93 %	13	8	4
D 62	15493	72	0.46 %	16	0.1 %	86	0.56 %	9	4	2

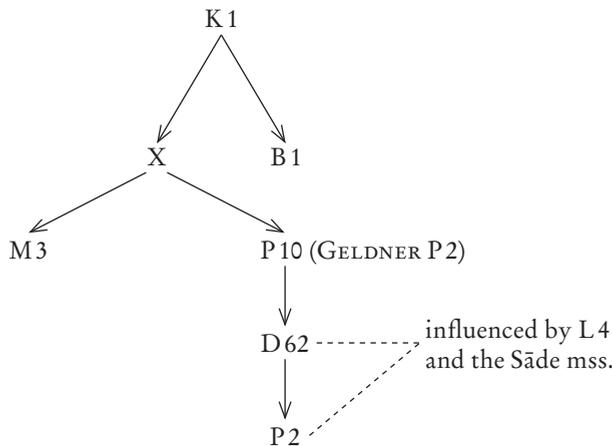
The position regarding K 1 is the clearest. P 2 and D 62 seem also to be dependent on P 10 as the number of non-original prior variants of P 10 shows. For the relationship between B 1, M 3 and P 10 the data are, however, not so clear. Nevertheless, the number of non-original posterior variants of P 10 with B 1 and M 3 are very similar to the prior variants to K 1 so that they do not allow assuming a direct dependence of P 10 from B 1 or M 3. In fact, with the assistance of the “Advanced Collating” tool of the Avestan Digital Archive, we know that P 10 shares agreements with K 1 232 which are different in B 1 and M 3 and there are 727 agreements between K 1 and P 10 which are different in B 1. Thus it is unlikely that P 10 goes back to K 1 through the mediation of B 1 or another common source of P 10 and M 3. This is confirmed by the analysis of single passages. In L 4 and K 1 *aṇhām auuaiti* appears in V 13.15 instead of *aṇhām hām. bauuaiti*. B 1 and M 3 correct this into *aṇhām hām. bauuaiti*, but P 10, D 62 and P 2 have the same variant like K 1. Obviously they do not derive directly from B 1. Obvious is also V 7.42, where the wrong K 1 *vīspō vīspaitīm* is corrected into *vīsō vīspaitīm* in B 1, M 3, D 62 and P 2, whereas P 10 shows *vīspō vīspaitīm*. A similar situation appears in the case of M 3: there are 699 agreements between M 3 and K 1 that are not shared by B 1. There are further 678 agreements shared by M 3 and P 10 that are different in B 1. It is obvious that B 1, M 3 and P 10 are closely related to each other and that B 1 seems to bear an older witness than the other two, but none of the three is the direct source of the others and it is not possible to assume a common ancestor (but K 1) for two or three of them. We can just state the relationship between the three and the different intensity of this relationship.

For establishing these relations we combined the data of genealogical coherence with the data of pregenealogical coherence. Therefore, since B1 has the highest index of agreements and almost the highest index of direct non-initial prior variants of P10, we establish a genealogical hypothesis linking P10 with B1, bearing in mind that most likely P10 was not copied directly from it. Since there are also places of variation which rule out the intervention of B1, we must also use a line linking P10 directly to K1.

Using this method we can build the following provisional global stemma of the manuscripts of K1<sup>65</sup>:



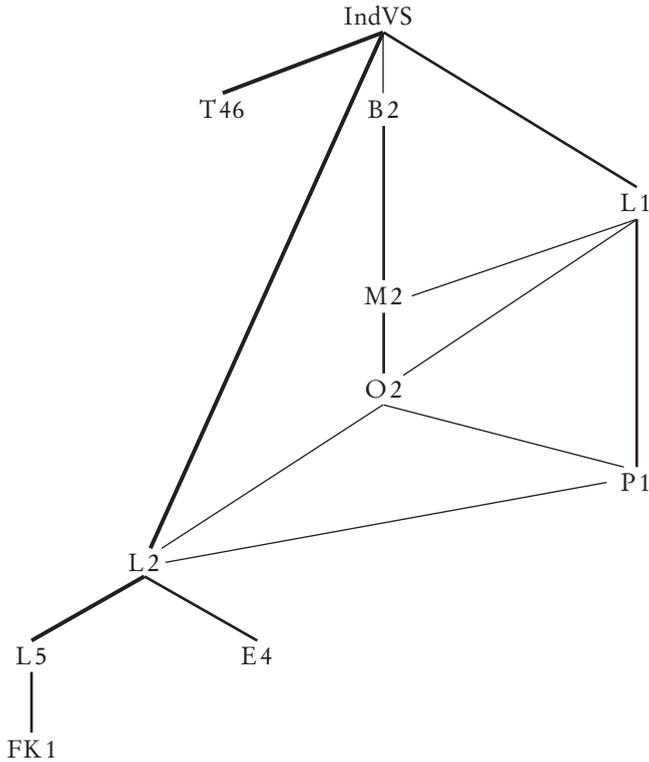
If we want to translate it into a traditional *stemma* representing one hypothesis on the real historical process of copy, we could build following *stemma*:



65 For L4 see the contribution of MARTÍNEZ PORRO in this volume (p. 347ff.).

There are, however, many other possible *stemmata*. In fact, any combination that does not establish a dependence of B 1, M 3 and P 10 on another one of these three manuscripts is possible and we could add other nexuses like a manuscript Y depending from K 1 as an ancestor for P 10. But among the many possible *stemmata*, GELDNER's remains very unlikely.

More complicated and absolutely provisional is the global stemma I propose for some of the liturgical manuscripts of the Widewdad ceremony, because of the minimal sample used for the analysis and because the method needs further developing:



## Bibliography

- ALAND, B./K. ALAND et al. 1997: *Novum Testamentum Graecum: editio critica maior*. Stuttgart.
- BARBROOK, A./C. HOWE et al. 1998: "The phylogeny of The Canterbury Tales." In: *Nature* 394, p. 839.
- CANTERA, A. 1999: "Die Stellung der Sprache der Pahlavi-Übersetzung des Avesta innerhalb des Mittelpersischen." In: *StIr* 28, pp. 173–204.
- 2004: *Studien zur Pahlavi-Übersetzung des Avesta*. Wiesbaden (Iranica 7).
- 2007: "The Pahlavi Wīdēwdād Manuscripts of the Meherji Rana Library (Nawsari, India)." In: *MVNVS QAESITVM MERITIS. Homenaje a Carmen Codoñer*. Salamanca, pp. 131–140.
- 2009: „Die Staota Yesniia der textuellen ratu des Visparad.“ In: É. PIRART/X. TREMBLAY: *Zarathushtra entre l'Inde et l'Iran. Études indo-iraniennes et indo-européennes offertes à Jean Kellens à l'occasion de son 65<sup>e</sup> anniversaire*. Wiesbaden, pp. 17–26.
- 2010a: "Lost in transmission: The case of the Pahlavi-Wīdēwdād manuscripts." In: *BSOAS* 73, pp. 179–205.
- 2010b: "Rituales, manuscritos y ediciones del Avesta: Hacia una nueva edición de los textos avésticos de la liturgia larga." In: *Boletín de la Sociedad Española de Iranología* 1, pp. 28–42.
- 2011: "Breve tipología e historia de los manuscritos avésticos de la liturgia larga." In: *Aula Orientalis* 29, pp. 199–238.
- 2012 (in press): "Daeuwas vertreibende Worte." In: *Questions zoroastriennes 1. Démonologie iranienne*. Liège.
- CANTERA, A./M. Á. ANDRÉS-TOLEDO 2008: "The transmission of the Pahlavi Videvād in India after 1700 (I): Jamasp's visit from Iran and the rise of a new exegetical movement in Surat." In: *Journal of the Cama Oriental Institute*, pp. 81–142.
- CANTERA, A./M. DE VAAN 2005: "The colophon of the Avestan manuscripts Pt4 and Mf4." In: *StIr* 34, pp. 31–42.
- CERETI, C. 1996: "Zoroastrian Manuscripts Belonging to the Bhandarkar Institute Collection." In: *EW* 46, pp. 441–451.
- GELDNER, K. F. 1886: *Avesta. The sacred books of the Parsis*. Stuttgart.
- HARTMAN, S. 1956: "La disposition de l'Avesta." In: *Orientalia Suecana* 5, pp. 30–78.
- HOFFMANN, K. 1969: "Zur Yasna-Überlieferung." In: *MSS* 26, pp. 35–38.
- HOFFMANN, K./J. NARTEN 1989: *Der Sasanidische Archetypus. Untersuchungen zu Schreibung und Lautgestalt des Avestischen*. Wiesbaden.
- HOWE, C./A. BARBROOK et al. 2004: "Parallels between stemmatology and phylogenetics." In: P. VAN RENNEN/A. DEN HOLLANDER/M. VAN MULKEN (eds.): *Studies in Stemmatology II*. Amsterdam, pp. 3–12.
- HUMBACH, H. 1973: "Beobachtungen zur Überlieferungsgeschichte des Avesta." In: *MSS* 31, pp. 109–122.
- IVANOW, W. 1934: "The Gabri dialect spoken by the Zoroastrians of Persia." In: *Rivista degli studi orientali* 16, pp. 31–97.
- JAMASP, H. 1907: *Vendidād. Avesta with the Pahlavi translation and commentary and glossarial index*. Bombay.

- JOSEPHSON, J. 1997: *The Pahlavi Translation technique as Illustrated by Hōm Yašt*. Uppsala.
- KELLENS, J. 1998: "Considérations sur l'histoire de l'Avesta." In: JA 286, pp. 451–519.
- KREYENBROEK, G. 2004: "Ritual and rituals in the Nerangestan." In: M. STAUSBERG (ed.): *Zoroastrian Rituals in Context*. Leiden/Boston, pp. 316–331.
- MAAS, P. 1927: *Textkritik*. Leipzig.
- MARTÍNEZ PORRO, J. 2010: "Signos de puntuación y adornos en los manuscritos avésticos." In: *I Encuentro de la Sociedad Española de Iranología*. Salamanca.
- MINK, G. 2000: "Editing and Genealogical Studies: the New Testament." In: *Literary and Linguistic Computing* 15, pp. 51–56.
- 2003: "Was verändert sich in der Textkritik durch die Beachtung genealogischer Kohärenz?" In: W. Weren/A. D. Koch (eds.): *Recent Developments in Textual Criticism. New Testament, other Early Christian and Jewish Literature*. Assen, pp. 39–68.
- 2004: "Problems of a Highly Contaminated Tradition: the New Testament. Stemmata of variants as a source of a genealogy for witnesses." In: P. VAN REENEN/A. DEN HOLLANDER/M. VAN MULKEN (eds.): *Studies in Stemmatology II*. Amsterdam, pp. 13–85.
- O'HARA, R./P. ROBINSON 1993: "Computer-assisted Methods of Stemmatic Analysis." In: N. F. BLAKE/P. ROBINSON: *The Canterbury tales project occasional papers*. Oxford, pp. 53–74.
- PANAINO, A. 2003: "A proposito dell'uso dell'inchiostro rosso nei manoscritti avestici." In: *Quaderni di Scienza della Conservazione* 2, pp. 36–52.
- PASQUALI, G. 1934: *Storia della tradizione e critica del testo*. Firenze.
- PIRART, É. 2004: *L'éloge mazdéen de l'ivresse. Édition, traduction et commentaire du Hōm Stōd*. Paris.
- PIRAS, A. 2005: "Paleografia e Filologia dei testi avestici." In: *Litterae Caelestes* 1, pp. 165–176.
- ROBINSON, P. M. W./R. J. O'HARA 1996: "Cladistic analysis of an Old Norse manuscript tradition." In: *Research in Humanities Computing* 4, pp. 115–137.
- SANJANA, D. P. 1895: *The Zand î javîr shêda dâd. The Pahlavi Version of the Avesta Vendidâd*. Bombay.
- SCHMID, U. 2004: "Genealogy by chance! On the significance of accidental variation (parallelisms)." In: P. VAN RENNEN/A. DEN HOLLANDER/M. VAN MULKEN (eds.): *Studies in Stemmatology II*. Amsterdam, pp. 99–112.
- SKJÆRVØ, P. O. 2007: "The Videvdad: its Ritual-Mythical significance." In: *The Videvdad: its Ritual-Mythical significance*. London, pp. 105–141.
- TIMPANARO, S./G. W. MOST 2005: *The genesis of Lachmann's method*. Chicago.
- UNVALA, J. M. 1940: *Collection of colophons of manuscripts bearing on Zoroastrianism in some libraries of Europe*. Bombay.
- WACHTEL, K. 2008: "Towards a Redefinition of External Criteria: The Role of Coherence in Assessing the Origin of Variants." In: H. A. G. HOUGHTON/D. C. PARKER (eds.): *Textual Variation: Theological and Social Tendencies?* Piscataway, pp. 109–127.