Computer Aided Stemmatics — The Case of Fifty-Two Text Versions of Carakasamhitā Vimānasthāna 8.67-157*

0. A hypothetical *stemma codicum*, i.e. a branching diagram that reflects the transmission history of a given text as truthfully as possible, is of fundamental importance for critical editing, since it enables the editor in many cases to judge the historical relationship of different text versions (cf. Maas 2009). The present paper shows that – and how – such a hypothetical stemma can be established for the passage Carakasamhitā Vimānasthāna (henceforth: CS Vi) 8.67-157 according to the numeration in Trikamji's authoritative third edition (Trikamji 1941),¹ although large parts of the transmission of this work as reflected in a collation of fifty-two paper manuscripts are heavily contaminated (see fig. 1).² The method

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 $^{^1\,}$ On the CS in general, see HIML 1A/1-200, and on the content of the passage under investigation, see Preisendanz 2007: 658ff.

² I worked mostly with digital photographs, microfilm and Xerox copies. The collation was proofread for all manuscripts, except for the following direct apographs of extant manuscripts, namely $C1^b$, $C3^b$, $C6^d$, U^d and $V5a^d$. The collation of $J1^d$, $J2^d$, $J3^d$, $Jn1^d$, $Jn2^d$ and $L3^d$ was proofread before the precise position of these witnesses in the stemma could be determined. Manuscripts $B2^d$, $B3^d$, $B4^d$, $B5^d$ and $B6^d$ were collated and the collation proofread at the Anup Library, Bikaner, during a three-week stay in August and September 2008. The regrettable restriction of access to the manuscripts prevented

towards this end integrates two complementary approaches: the computer-based cladistic analysis of variant readings (i.e. a quantitative approach) and the philological discussion of selected variants (i.e. a qualitative approach). For the integration of these two complementary approaches, MacClade 4 (cf. Maddison – Maddison 2003), a computer program specially designed to analyze phylogenetic trees, proved to be a useful text genealogical tool that provides clear pictures of the indepth structure of possible stemmata.

After brief introductory remarks on the theoretical foundations of textual criticism – based on the work of Paul Maas (1958) und West (1973) - and of cladistics - based on Forev et al. (1992) - I shall analyze the complete set of variant readings from CS Vi 8.67-157 with the help of the parsimony analysis contained in the computer program PAUP* 4.0 (cf. Swofford 1991). The result will be a phylogenetic tree, i.e. a diagram of the transmission similar to a stemma. The initial result will be discussed with regard to the overall structure of the diagram as well as to the position of individual manuscripts. The question that will be dealt with is whether the variants used by the computer program to establish the branching of the tree really reveal the genealogical relationship of manuscripts. The initial phylogenetic tree, a first approximation of the transmission history, is then modified and transformed into the hypothetical stemma according to the results of a philological discussion of variant readings. In a number of cases, the results of the philological discussion of variant readings are supported by the results of additional cladistic calculations, which are based upon reduced data sets.³ I include the results of these calculations in order to show that the philological discussion of variants is not guided by a biased selection of individual variants. Finally, I shall show that a cladistic analysis of substantial variants for selected manuscripts leads to a quite consistent cladogram, which may confidently be taken to represent the backbone of the stemma.

us from checking their individual readings after the completion of the on-the-spot collation.

³ Due to restrictions of time and space only a part of the transmission can be treated comprehensively here.



Figure 1: A hypothetical stemma of CS Vi 8.67-157⁴

⁴ Continuous lines show direct dependence. Broken lines indicate contamination. Variants of manuscripts with sigla printed in bold are decisive for the construction of the stemma (cf. below, 2.4 on p. 94f.). — This stemma supersedes the stemma in Maas 2009: 166, which was constructed on the basis of an initial cladistic analysis. Therefore it corresponds to the rooted cladogram in figure no. 4 (p. 80) of the present paper.

My approach here is similar to that of Salemans (2000) insofar as we both combine a cladistic analysis of variants with their philological judgement. An important difference is, however, that Salemans decides *a priori* which kinds of variants reveal relationships and only then analyzes the mechanically selected variants with cladistic software, whereas I start with a cladistic analysis of the complete set of variants and decide upon the quality of variants only *a posteriori*. Moreover, due to limitations of the computer software at Salemans' disposal, he analyzed exclusively so-called type-two variants, i.e. instances of variation which divide the transmission exactly in two groups of witnesses, whereas my analysis draws upon all types of variants.

0.1 As is well known, the existence of a huge number of variants should not create difficulties for the construction of a stemma if the theoretical foundations of lower textual criticism as formulated by Maas (1958) and West (1973) are applicable.

In copying a text, each scribe normally creates a new version of his text that differs from its exemplar. When this new version is copied, the next scribe reproduces variants of the previous copy.⁵ Moreover, he introduces new variants himself and possibly also eliminates some variants by correcting obvious mistakes. The process of copying and recopying produces a hierarchical pattern of variants, so that some variant readings can be identified as being characteristics of whole lines of the transmission. The detection of the hierarchical pattern of variants transmitted in the extant manuscripts provides the key to establishing a hypothetical stemma, since this pattern mirrors the history of the textual transmission. Mistakes that can be easily corrected do not reveal the genealogical relationship of manuscripts in their own right. If, however, these variants occur frequently within a genealogically closely related group of witnesses, they add credibility to the stemmatical hypothesis.

Two obstacles may prevent the success of stemmatics to different degrees, namely "contamination" and "parallelism". Parallelism is the phe-

⁵ In theory, a "variant reading" may be a "scribal innovation", a "reading of secondary origin", an "error", a "writing mistake", or even the "original reading". The value-neutral term "variant reading" accounts for the fact that in dealing with a real manuscript tradition, of which the transmission history is unknown, it is frequently impossible to decide with confidence which out of two or more variants belong to the oldest reconstructable text version. The Wellcome manuscript of Rājānaka Ratnakaṇṭha's Sūryastutirahasya and Ratnaśataka apparently hardly reproduces a single characteristic variant from its exemplar, the Bodleian manuscript. Cf. Stanislav Jager's contribution to this volume.

nomenon that identical mistakes affect different lines of transmission independently and by chance. As a consequence, versions belonging to different lines of transmission share characteristics that make them seem to be genealogically more closely related than they really are. In practice, however, parallelism should not blur the picture of the transmission too much, as independent textual changes will occur to a similar degree in all parts of the transmission as well as in all parts of the text.⁶

Textual contamination, on the other hand, which is a serious challenge for the reconstruction of the transmissional history, is the process of two (or more) text versions being combined into one. When scribes do not use a single exemplar but compare several versions, they change their main text in accordance with readings from one or more secondary exemplars. The new version may then appear to be closer to the archetype than it really is because it has fewer characteristic variants than it would have if it were a plain copy of its exemplar.

As a result of the lack of consistency in any stemmatical hypothesis some scholars completely abandoned stemmatics. Srinivasan (1967), for example, in preparing his quite influential⁷ critical edition of Vācaspatimiśra's Tattvakaumudī, refrains completely from taking the stemmatic position of textual witnesses into consideration. Instead, he judges each and every variant reading on a more or less fixed set of rules,⁸ which he derives from the so-called "genealogical principle". In judging the historical relationship of individual variants, Srinivasan compares different scenarios that may have led to the distribution of variants among the available witnesses. When he finds that a reading can be taken as the

⁶ If manuscripts that are genealogically only weakly related are written in the same local script and then transcribed into a new script, the misreading of homograph or semi-homograph *akṣaras* may, however, cause an increased amount of parallel scribal errors within these parts of the transmission

⁷ Srinivasan (1967: 29f.) was influenced by Pasquali (1934) and Dawe (1964), but he followed mainly Barbi (1921). Srinivasan's line of thought was taken up, for example, by Hanneder (1998), Goodall – Isaacson (2003) and myself (Maas 2006). On the intellectual background of Pasquali's work, cf. Timpanaro 2005: 129-138.

⁸ See Srinivasan 1967: 29-53 (\S 1.4. Prinzipien der Textkonstituierung). The question as to whether the development of a stemmatical hypothesis for the transmission of the Tattvakaumudī would be possible can only be answered by future research. Srinivasan himself concludes that the witnesses at his disposal are not genealogically related – being connected only by contamination – because they share only a few common readings that are, according to Srinivasan, of secondary origin (Srinivasan 1967: 18 [\S 1.3.1]).

genealogical starting point for changes that eventually lead to the extant variants, he adopts this reading – either an extant variant transmitted among the available witnesses, or an emendation or even a conjecture – as being the most original. The process is repeated for each and every variant of the whole text.

This approach is problematic. As Srinivasan clearly states himself,⁹ the genealogical principle cannot establish the genealogical relationship of synonymous or quasi-synonymous variants. Likewise, without a well-founded stemmatic hypothesis it is often impossible to decide whether a text portion that is missing in one or several witnesses was part of the oldest reconstructable text. Comparable difficulties occur with regard to syntactical variants and other cases of text portions appearing in different text versions at different positions.¹⁰ Even more seriously, alternative scenarios for textual changes in the course of transmission can in many cases only be developed on the basis of perfect knowledge of the way scribes and redactors change the text, as well as an almost perfect knowledge of the authorial intention.

0.2 As has been convincingly argued by West (1973: 38f.), the fact that no stemmatic hypothesis explains the distribution of variant readings among the available witnesses consistently is in itself not a sufficient reason to discard stemmatics altogether. In dealing with a contaminated transmission one should try one's best to determine the degree of reliability of a hypothetical stemma as a whole as well as the degree of reliability of its individual parts. The question is, however, how the reliability of a stemmatical hypothesis (or even of its parts) can be measured.

It is possible to find an answer by taking recourse to a method called "cladistics", whose algorithms have more recently been integrated into sophisticated computer software.¹¹ This software is in wide use in a field of evolutionary biology called "phylogenetic systematics". Phylogenetic systematics aims at a classification of the species of living beings according to their evolutionary history. Through the long course of reproduction and divergence in the evolutionary past, the rich diversity of species has developed by means of "descent with modification".¹²

⁹ See Srinivasan 1967: 47-50 (§ 1.4.5.19-23).

¹⁰ On the usefulness of a reliable stemmatical hypothesis for the reconstruction of a comparatively early text version, cf. Maas 2009.

¹¹ Cf., also for the following paragraphs, O'Hara – Robinson 1993: 53ff.

¹² See Darwin 1872: 133ff. and 404ff.

Phylogenetic systematics tries to reconstruct the history of this process. It starts with the determination of differences between species, so-called characters. Subsequently, the distribution of characters among the species becomes subject to a numerical calculation resulting in the formation of an ancestral tree. The one method in use which stands out for its similarity to "classical" stemmatics is called cladistics.

A number of obstacles frequently hinder the construction of genealogical trees in biology. It may be unclear whether or not seemingly identical characters are genealogically derived or whether they represent parallel developments in evolution. Moreover, processes like hybridisation play a part in the development of new species which cannot be properly represented in a strictly bifurcated genealogical tree. Nevertheless, these obstacles – which are comparable to parallelism and contamination in textual criticism – have not prevented the success of cladistics in phylogenetic systematics and other fields of biology.

The potential of cladistics for investigations into text genealogy was recognized as early as 1977 by Platnick and Cameron (Platnick – Cameron 1977). In 1996 Robinson and O'Hara demonstrated its usefulness for the reconstruction of the manuscript history of an Old Norse narrative (Robinson – O'Hara 1996). Since then the variant readings of quite a number of ancient and medieval European texts¹³ as well as a short passage from the Tibetan Kanjur (Maas 2008b) have been analysed by means of cladistic software. An initial assessment of the potential of cladistics in Sanskrit textual criticism was made in Maas 2008a (p. 105-108), which is, however, largely superseded by the present publication. Moreover, the reliability of cladistic software in text genealogy has been tested on two different artificially created textual traditions by Macé and Robinson (Macé – Robinson 2006) and Roos and Heikkilä (Roos – Heikkilä 2009).

0.3 Before I present the results of a first cladistic analysis of the complete set of variant readings contained in the above-mentioned collation of CS Vi 8.67-157, it may be useful to explain the principle which leads to a decision in favour of one or another genealogical tree. A tree should account for the distribution of characters (or variants) among the species (or manuscripts) under investigation. In choosing the tree which fits the data best, the so-called parsimony principle is used. This principle – frequently referred to as Occam's razor – is based on the assump-

 $^{^{13}\,}$ For a list of recent publications cf. Macé – Baret 2006: 89 and Windram et al. 2008: 444a.

tion that if there are several alternative solutions for a scientific problem, the most economical – or parsimonious – solution is normally to be preferred.¹⁴ It translates into textual cladistics as follows: Different versions of a text differ from each other in their variants. If two or more textual witnesses share the same variant as against all other witnesses, there are basically two possible explanations. Either one and the same variant occurred several times in the history of transmission or the variant occurred only once and was subsequently copied. The second explanation, the more parsimonious one, is the one to be preferred under normal conditions. I would like to clarify this point by an example.



Figure 2: Three stemmata reflecting the distribution of six variants in four manuscripts¹⁵

The table in figure 2 above shows the distribution of six variant readings A-F among four manuscripts 1-4. It indicates the presence of a variant by "yes" and its absence (i.e. the presence of a different reading or of an omission of text) by "no". We take the variants to reveal the his-

¹⁴ On the wider, philosophical implication of parsimony see Sober 1988, chapter 2.

¹⁵ Cf. Forey et al. 1992: 6, table 1.1 and fig. 1.2f.

torical relationship between text versions. Three different trees can be built from this data if we assume that manuscripts 2, 3 and 4 form a single group with one single common ancestor, which was not the ancestor of manuscript 1.

The mapping of variant readings from the table onto the branches of the alternative stemmata indicates that variant A classifies manuscripts 2, 3 and 4 into a single group, which does not include manuscript 1. Variant B is peculiar to manuscript 2, as is variant D for manuscript 3. Variants C and E appear only in manuscripts 3 and 4. These variants were either part of a common ancestor of manuscripts 3 and 4, as shown in stemma (a), or the variants occurred at two positions of the stemma independently, as depicted in stemmata (b) and (c). So far, all variants are logically in harmony with stemma (a). This, however, does not hold good for variant F, which is peculiar to manuscripts 2 and 3. This finding can again be judged as pointing to the existence of a common exemplar of manuscripts 2 and 3, as shown in stemma (c), or the variant would have become part of the transmission at two different instances independently, as depicted in stemma (a) and (b).

Which of the three stemmata is the best one? When we compare the total number of variants, i.e. six, to the total number of textual changes that must have happened in order to account for the distribution of variants among the manuscripts by simply counting the number of capital letters mapped on each tree, we find that stemma (a) requires seven changes (or, to use the correct terminology: it is seven steps long), stemma (b) is nine steps long, and stemma (c) is eight steps long. By applying the principle of parsimony, a choice has to be made in favour of stemma (a) as the most parsimonious representation of the data.

The numerical relation between the minimum number and the actual number of steps needed to map all variants on a stemma indicates how many variants are in conflict with the structure of this stemma. This relation can be transformed into what is called the "Consistency Index" (CI). If there is a perfect congruence between variants and stemma structure (i.e. all binary variants can be mapped upon the stemma with a single step, all tripartite variants with two steps, etc.), the CI is 1.0. Variants being peculiar to one single manuscript do not provide cladistically relevant information about the genealogical relationship of two or more (available or inferred) witnesses. These variants are therefore called "genealogically uninformative". Genealogically uninformative variants can only be taken to indicate that a manuscript has to be located at the end of a line of transmission and was not the exemplar of another available witness. The meaningfulness of a comparison of different Consistency Indices is enhanced if all variants that are genealogically uninformative are excluded from the calculation.

In the present example, variant readings A, B and D are peculiar to manuscripts 1, 2 and 3, respectively, so that only variants C, E and F – the genealogically informative variants – should be included in the calculation of consistency indices. For three binary variants the minimum length of a tree (or a stemma) is three steps. The actual length of stemma (a), leaving uninformative characters out of consideration, is four steps, which amounts to a CI of 3/4 = 0.75. Without peculiar variants the CI for stemma (a) is 0.75, for stemma (b) 0.50, and for stemma (c) 0.60.

A cladistic analysis of variant readings starts with the conversion of the data contained in the apparatus of a collation or edition into a computer-readable data matrix.¹⁶ A data matrix is basically a text file in tabular form. The table consists of as many columns as the apparatus has lemmata plus one column listing the sigla. Within a "variant column" each reading of every instance of variation is encoded by a number or by a character. Textual witnesses sharing a variant reading at one place in the apparatus have identical numbers or characters in the respective column of the table.

We treat all differences in reading between manuscripts as variants. The only exceptions are cases in which variants may occur at random, simply due to scribal conventions: variants of external *sandhi*, writing of *anu-svāra* or class nasal, single consonants or consonant gemination after r (*mārgga* versus *mārga*), writing of an aspirate or non-aspirate voiceless retroflex stop in conjunction with a preceding retroflex sibilant (*tiṣtati* versus *tiṣthati*), writing of one or two identical consonants in a cluster of three consonants (*satva* versus *sattva*), writing of a single or double voiceless aspirate palatal stop (*gachati* versus *gacchati*), and most variants of punctuation. We did not attempt to distinguish between homograph and semi-homograph *akṣaras*.

Since the subsequent numerical calculation does not presuppose knowledge of the genealogical relationship of variants, it does not matter

¹⁶ A data matrix can be generated (almost) automatically from a positive critical apparatus entered in Stefan Hagel's software Classical Text Editor (see http://www.oeaw. ac.at/kvk/cte) by using the command "export genealogical data".

which variant is encoded by which number – any symbol can be used; it is only important that one and the same symbol represents one and the same reading within a single lemma.

1. In the collation of CS Vi 8.67-157, variant readings are recorded under lemmata of a completely positive apparatus that lists the readings of all available manuscripts in each and every lemma.¹⁷ The lemmata generally refer to one single word (or a nominal word stem within a compound) that is not joined to another word by vocalic *sandhi*. Two or more words that are connected by vocalic *sandhi* may occur in a single lemma if the resulting lemma is not too long to be easily comprehensible. In cases where lemmata consisting of several words would be too long, the long units are divided into two or more shorter lemmata, usually by taking a prefix or suffix as the point of separation. In contrast to these general rules, the lemmata refer to more than a single word whenever pragmatic considerations suggest such recording.¹⁸

Omissions comprising several words (or other semantic units) as well as longer lacunae and passages missing due to the physical damage of a manuscript are recorded under single lemmata as one single variant. The same holds good for transpositions and repetitions. Under lemmata referring to text passages affected by omissions, lacunae or physical damage of manuscripts, the respective manuscripts are noted as missing, which means that their readings are unknown. In the case of transpositions, variants occurring within the transposed passages are noted in accordance with the sequence of text in Trikamji's edition. Variants from repeated text passages are recorded with the abbreviation (vl)added to the siglum of the manuscript. These variants, as well as scribal corrections, did not find their way into the data matrix that is used for the present cladistic analyses of variant readings.

1.1 The result of the initial cladistic analysis of the complete set of 4,112 variant readings for fifty-two manuscripts with PAUP* 4.0b10 using the heuristic search option for unordered and equally weighted characters leads to one most parsimonious tree (see fig. 3).

¹⁷ A specimen of collated text passages is reproduced in Maas 2009: 175-181.

 $^{^{18}\,}$ Cf., e.g., [16], [81] and [83] in the appendix below.



Figure 3: Unrooted cladogram for CS Vi 8.67-157¹⁹

The tree is 24,312 steps long, and its CI for the 2,975 genealogically informative variants is ca. 0.75. This is a much higher value than I would have expected, considering that the collation contains all kinds of simple and insignificant scribal errors like, for example, variants in writing or omitting an *anusvāra*, variation of different sibilants at the same position, simplification of consonant clusters, variation in short or long *a*vowels, etc. The calculation assigned the same logical weight to these philologically insignificant variants as to much more significant ones,

¹⁹ Calculated from 2,975 genealogically informative variants for fifty-two witnesses. CI ca. 0.75. The length of branches is not in proportion to the number of peculiar variant readings.

like changes in the syntax of sentences, omissions and replacements of one word by another, etc.

1.2 In order to serve as a hypothesis on the development of the text in time, the unrooted tree has to be rooted. Rooting does not affect the structure of the tree. All the lines that make up the tree remain unchanged. Rooting is nothing more than identifying the particular point on a tree which deserves the apex position, and then pulling this point upwards, which leaves the lines of the tree hanging down.

As far as I can see, there is no way in text genealogy to identify the root, i.e. the position of the archetype (or the oldest reconstructable witness) in a stemma, by mere numerical calculations. At least one substantial variant which is exclusively transmitted by a single group of manuscripts and which can confidently be judged as being original has to be identified on the basis of philological considerations. If the same group of manuscripts also contains at least one clear error, this group must go back to one of two (or more) hyparchetypes.²⁰ The entire group of all the other available witnesses accordingly goes back to the other hyparchetype(s), so that the archetype can be located at that part of an unrooted tree which connects the hyparchetypes.

As I shall show below, in the case of the passage under investigation one hyparchetype can be identified to be the common most recent youngest exemplar of all manuscripts belonging to the Kashmir-group (siglum K). The other hyparchetype is the most recent common ancestor of all other manuscripts (siglum E).

Before entering into the discussion of variant readings, I would like to clarify my terminology. In the following part of this paper I differentiate four kinds of variants: (1) possible variants, (2) unambiguous variants, (3) substantial variants, and (4) peculiar variants.

(1) A variant is a "possible variant" if its identification depends on how textual changes along different branches of the stemma are interpreted. For example, if we take two manuscripts that share one inferred ancestor, and both manuscripts have slightly different readings at the same place of variation, it depends on the interpretation of the reading (and possibly also on which textual changes happened along other branches of the stemma), which reading one is willing to ascribe to the common exemplar. Since MacClade does not make any assumptions on variants of

²⁰ The existence of more than two hyparchetypes can be established when three or more groups of manuscripts contain original readings at instances where the remaining manuscripts transmit one or more readings of secondary origin.

the archetype, all textual changes that occurred along the two branches leading to the hyparchetypes are "possible" variants.

(2) A variant is "unambiguous" if its identification does not depend on the interpretation of textual changes. It simply agrees with the most parsimonious resolution (cf. Maddison – Maddison 2003: 68-70) of the variant under discussion.

(3) A "substantial variant" is an unambiguous variant which can confidently be judged (by philological criteria) not to have been caused by chance, i.e. by an insignificant scribal mistake.

(4) "Peculiar variants" are all variants of secondary origin contained in an available or inferred witness, minus those variants of secondary origin that were already present in its inferred exemplar. "Peculiar" therefore has to be understood in the rather limited sense of "peculiar to a certain witness". In case of parallelism or contamination, one identical reading that is shared by several witnesses is, notwithstanding, peculiar.

Within the passage under investigation, the inferred hyparchetypes K and E are separated from each other by more than 340 possible variant readings. This number (as well as the following discussion of variant readings) does not take into consideration readings of manuscripts JI^d , $J3^d$ and $P2^d$. As I shall show below, these three manuscripts are strongly contaminated from outside group K. In consequence, their stemmatic position does not agree with their position in the initial phylogenetic tree (cf. figures 3 and 4, as well as below, p. 83ff.).

Since in the present stemmatical hypothesis the archetype is not only taken to be the oldest but also the "best" reconstructable witness, this inferred manuscript contains by definition as many original readings as is logically possible. Accordingly, the more than 340 variant readings that separate the two hyparchetypes must have crept into the transmission when either of the two witnesses K or E were copied from the archetype.²¹

In order to prove that K and E are indeed hyparchetypes, I am going to discuss three archetypal readings preserved exclusively in K, and two archetypal readings preserved exclusively in E.

²¹ This does, of course, not imply that K and E were both directly copied from the same manuscript. An unknown number of intermediate copies separates the archetype from the two hyparchetypes. The possibility of the existence of intermediate copies always has to be kept in mind when the present stemmatical hypothesis postulates the relationship of exemplar and copy between two witnesses.

1.2.1.1 CS Vi 8.119 deals with the patient's mind (*sattva*). Caraka²² divides patients into three classes according to the quality of their minds and explains that patients "having a poor mind cannot encourage themselves towards strength of mind, nor can they be encouraged by other persons".²³ The passage continues in version K with

mahāśarīrā api te svalpānām api vedanānām asahā dršyante samnihitabhayaśokalobhamohamānāh.

Even if the [patients with a poor mind] have huge bodies, one observes that they cannot endure even little pain, and are subject to fear, grief, greed, delusion and haughtiness.

In contradistinction to this, version E starts with $mah\bar{a}\dot{s}ar\bar{i}r\bar{a}$ hy api "because even though" [83].²⁴ The particle hi is almost certainly of secondary origin, since the clause beginning with $mah\bar{a}\dot{s}ar\bar{i}r\bar{a}$ is not in a causal relationship to the preceding clause. Accordingly, hi was inserted in E to serve as "a mere expletive ... to avoid a hiatus" (MW, p. 1297, col. 2, s.v. hi).

1.2.1.2 CS Vi 8.122 deals with the physician's examination of patients according to their age. Caraka divides the human life into three phases: youth $(b\bar{a}lam vayah)$, middle age (madhyam vayah) and old age $(j\bar{\imath}rnam vayah)$. With regard to the first category, youth, we read [87ff.]:

tatra bālam aparipakvadhātv ajātavyañjanam sukumāram akleśasaham asampūrņabalam śleșmadhātuprāyam āșoḍaśavarṣam.

aparipakva-] E; apakva $A^d(pc) Ch^d(pc) P2^d$; pakva K (ac $A^d Ch^d$); † $Jp3^d$ -dhātv] K; dhātum E

In this context, youth has not completely mature bodily constituents, undeveloped [secondary sexual] characteristics, is very delicate, does not bear hardship, has incomplete strength, is full of the bodily constituent phlegm and lasts until [the age of] sixteen years.

Hyparchetype E transmits *aparipakvadhātum* as against *pakvadhātv* in K with two variants within the one compound. While version E reads the original *aparipakva* "not completely mature" in the initial position of this compound as against *pakva* "mature" in version K, the situation is different with regard to the genealogical relationship of $-dh\bar{a}tv$ and $-dh\bar{a}tum$ at the end of the compound. The reading $-dh\bar{a}tv$ of version K with a neuter nominative singular case ending is the original one, since

²² I use the name "Caraka" as a convenient designation for the several authors and redactors who were involved in the composition of the CS in its present form.

²³ hīnasattvās tu nātmanā na paraiķ sattvabalam prati śakyanta upastambhayitum.

²⁴ Throughout this paper numbers in square brackets refer to the numeration of variants in the Appendix ("Variant Readings") on p. 97-114 below.

this grammatical gender, number and case are required to establish congruence between the *bahuvrīhi* compound *aparipakvadhātu* and the qualified substantive (*bālam*) vayas.

1.2.1.3 The final place of variation I am going to discuss in order to show that K contains archetypal readings which are lost in the rest of the transmission, is from the beginning of CS Vi 8.127. This passage gives the reason why five kinds of medical treatment should not be practiced during the three seasons of the year characterized by harsh weather conditions, viz. summer, winter and rainy season.²⁵ Towards the end of the passage the presumed original version reads:

tasmād vamanādīnām nivŗttir vidhīyate varṣābhāgāntebhya ṛtubhyo na ced ātyayikam karma.²⁶

varṣābhāgāntebhya] $J3^d Jp1^d P2^d U^d$; varṣābhāgāt tebhya K $(-Jp1^d) J3^d$; varṣābhāgānteṣv E $(-M^k)$; varṣānteṣv M^k rtubhyo] K $(-A^d) J1^d J2^d J3^d P2^d U^d$; rtuṣu E $(-B1^d C2^b C4^b Jp2^d L1^d V1^b)$; rtu $C2^b C4^b Jp2^d V1^b$; atubhyo rpu $L1^d$; dhātupye $B1^d$; om. A^d

Therefore the suspension of emetic therapy, etc. is prescribed for seasons [the enumeration of which is] ending with the part [of the year called] rainy season, unless there is an emergency treatment.

Quite interestingly, the original reading varṣābhāgāntebhya rtubhyo was presumably already lost in the archetype, which may well have read varṣābhāgāt tebhya rtubhyo as preserved in K. This obviously meaningless reading would have been the starting point for an emendation that led to the reading found in E (varṣābhāgānteṣv rtuṣu), which is grammatically correct and parallel to the passage CS Vi 8.126,1f., where Caraka construes nivrtti with the locative case.²⁷ This agreement with the preceding passage makes, however, the comparatively unusual dative construction more difficult – and accordingly more likely to be authorial – than the locative construction. There is no apparent reason why a scribe should have changed the completely unobjectionable locative construction into a dative construction, whereas the opposite is easily conceivable; this even more so if the original reading was already affected

²⁵ The five kinds of treatment are (1) emetic therapy (*vamana*), (2) purgative therapy (*virecana*), (3) non-oleaginous enemas ($\bar{a}sth\bar{a}pana$), (4) oleaginous enemas (*anuvāsana*) and (5) head-evacuation therapy (*śirovirecana*); see CS Vi 8.135-151 and Preisendanz 2007: 659f.

²⁶ CS Vi 8.127,16ff. [99f.] critically edited with selected variants.

²⁷ tatra sādhāraņalakṣaņeṣv rtuṣu vamanādīnām pravrttir vidhīyate, nivrttir itareṣu. "Among these [seasons of the year] the employment of emetics, etc. is prescribed for seasons that are characterized as temperate; their suspension [is prescribed] for the other [seasons]."

by the small scribal error $-bh\bar{a}g\bar{a}t\;tebhya$ for $-bh\bar{a}g\bar{a}ntebhya$ in the archetype.

1.2.2 Even though exclusively version K preserves a number of original readings, its textual quality is on the whole by no means superior to that of version E. In quite a number of cases version K is quite corrupt. Two examples may sufficiently prove the point.

1.2.2.1 CS Vi 8.84,1 lists ten short definitions of topics a physician has to know in order to reach his aim without too much effort. This list defines the basis (or starting point) of medical treatment to be the unsuitable ratio of bodily constituents ($k\bar{a}ryayonir dh\bar{a}tuvaisamyam$). Due to a simple writing error, the second aksara of the first word $k\bar{a}rya$ - is missing in version K. Accordingly, the definition appears in K as the meaningless question $k\bar{a}$ yonir dh $\bar{a}tuvaisamyam$ [21].²⁸

1.2.2.2 CS Vi 8.125.4-5 states that the six seasons of the year fall into two categories, i.e. into the category of being temperate and into that of being excessively cold, hot and wet (cf. table 1).

version E	version K	
hemanto grīsmo varsāś ceti śītosņavarsalaksaņās traya	hemanto grīșmo varșāś ceti	
rtavo bhavanti; teṣām antareṣv itare sādhāraṇalakṣaṇās	śītoṣṇavarṣalakṣaṇās traya	
traya rtavah – prāvrt, šarat, vasantā iti.	ŗtavaḥ –	
	prāvṛṭ, śarat, vasantā iti.	
Winter, summer and rainy season are the three <i>seasons</i> which are characterized by		
coldness, heat and rain. In between these, there are three different seasons which are		
characterized by being temperate: pre-rainy season, autumn and spring.		

Table 1: CS Vi 8.125.4-5 [94]

When version K was copied, the two occurrences of the identical word *rtavah* within one passage caused the scribe's eye to skip. In consequence, version K lacks information that is indispensable for the understanding of the following passage, which prescribes the administration of emetics and similar treatments in temperate seasons only (cf. above, p. 78).

2. The computer-generated phylogenetic tree (see fig. 4) is almost certainly the most parsimonious representation of the analyzed data.²⁹

²⁸ The reason for this error was apparently a kind of haplography of two similar *akṣara*s, viz. *rya* and *yo*. If this is true, the error must have occurred at a time of the transmission when version K was not (yet?) written in Śāradā script, in which the *akṣara*s *rya* and *yo* are dissimilar (cf. Slaje 1993: 34 and 57).

²⁹ If the computer has to deal with more than twelve witnesses, the number of possible combinations of witnesses is too high to be calculated by a desktop computer. If



Figure 4: The same cladogram as in fig. 3, rooted

Nevertheless, for several reasons it is not the best possible representation of the written transmission of the text passage under investigation.³⁰ First of all, the strictly bifurcated structure of the computer-generated tree, in which each available manuscript is linked to one inferred witness by exactly one line only, does not do justice to the fact that contamination demonstrably played an important role within the transmission of the CS (cf. below). Moreover, this bifurcated structure cannot do justice to the fact that several exemplars will have been copied more than once, and that more than one copy actually survived to the present time.³¹ Finally, in the computer-generated tree, every available manuscript is depicted as a copy of one inferred witness. In reality, however, this is not true. As will be shown below, eleven witnesses out of the fifty-two available manuscripts are in fact copies of other available manuscripts.

this is the case, PAUP* offers two alternatives to the complete analysis of data. The first definitely finds the most parsimonious tree (but which can still only handle a limited number of witnesses). The second one – the heuristic search – produces good results without guaranteeing that the absolutely best tree can be found. The reliability of a heuristic search is increased if the series of witnesses used to build a tree is randomly chosen and if a large number of replicates are carried out. In the present case, all of the 1,000 repeated calculations resulted in the same identical most parsimonious tree.

 $^{^{30}\,}$ On some limitations of cladistic analyses of variant readings cf. O'Hara – Robinson 1993: 59-64.

³¹ On this problem in stemmatics, cf. the contribution to this volume by Phillips-Rodriguez et al. on p. 29-43.

2.1 Among the ten manuscripts that go back to hyparchetype K – i.e. A^d , $C6^d$, Ch^d , $J1^d$, $J2^d$, $J3^d$, $Jp1^d$, $P1^s$, $P2^d$ and U^d – the three witnesses $C6^d$, U^d and $J2^d$ are direct copies of A^d , $Jp1^d$ and $P1^s$, respectively. This can be inferred from the fact that all three pairs of exemplars and copies share a very high number of secondary readings as against the rest of the transmission. Moreover, the number of peculiar readings in the exemplars is much lower than the number of peculiar readings in the copies, simply because most of the peculiar variants of the exemplars were copied. Finally, all variants peculiar to the exemplars fall into one of three categories: They are (1) either secondary readings which the copyist corrected by emendation, or (2) scribal corrections in the exemplars that were not included into the data matrix (see above, p. 73), or (3) readings of secondary origin that were the basis of further corruption or wrong emendation in the copy.

To prove the point that $C6^d$, U^d and $J2^d$ are indeed copies of A^d , $Jp1^d$ and $P1^s$, it may be sufficient to provide just the number of unambiguous decisive variants together with a few textual examples in the footnotes.

 A^d and $C6^d$ share 202 unambiguous readings exclusively as against the rest of the transmission.³² $C6^d$ contains 149 peculiar errors, the vast majority of which can be put down to simple writing errors.³³ In a number of instances $C6^d$ preserves readings that were lost in A^d when "corrections" with a yellow correction fluid were applied sometime after $C6^d$ was copied. These illegible *akṣaras* in A^d make up quite a few of the forty-one peculiar errors of A^d as against $C6^d$. The remaining peculiar variants in A^d fall into three categories: (1) scribal corrections in $C6^d$,³⁴ or (2) corrections in A^d that were copied into $C6^d$ but were not recorded in the data matrix (cf. again above, p. 73), or (3) further corruptions in $C6^d$ of errors that already occurred in A^d . In consequence, the value of variants from $C6^d$ for the reconstruction of any inferable witness is limited to those few cases in which $C6^d$ preserves readings that became il-

³² For example, pūrvakām vs. pūrvakam [3], daśavidhyam vs. daśavidham / daśavidham tu [20], ilpa vs. alpa [50], khadirachadira vs. khadirakadira [124], etc.

³³ Like, for example, *āhulam* vs. *ākulam* [1], *praty* vs. *pravītty* [4] and *bhāva* vs. *bhā-vah* [8].

³⁴ Cases of corrected readings in C6^d as against A^d include, for example, pūrveņaivopāya vs. pūrveņaivopārya [22], nihitam vs. nihitam evamnihitam [35], auşadhair vs. auşadhaur [46], hy vs. gh [59], sārāņām vs. sarāņām [61], šikhara vs. šisvara [70], skandau vs. skamdai [73], vidhīyate vs. şidhīyate [97], mūtrair vs. mūtraihr [106], tathetarāņi vs. tathetarāņņi [109], parņī vs. pārņī [110], kāša vs. lāša [111], chedayitvā vs. cedayitvā [125], tumburu vs. tumkuru [135] and lodhra vs. loghra [136].

legible in A^d . When the variants of $C6^d$ are removed from the data matrix, the number of peculiar errors in A^d increases to 302.

The second pair of exemplar and copy within group K, i.e. $Jp1^d$ and U^d , shares 110 unambiguous connective errors.³⁵ The copy U^d contains 217 peculiar variants, all of which are simple scribal mistakes,³⁶ whereas the exemplar $Jp1^d$ has seventy-seven unambiguous peculiar variants only. These peculiar variants again are (1) either corrections in $Jp1^d$ that were copied into U^d but were not recorded in the data matrix,³⁷ or (2) correct emendations in U^d ,³⁸ or (3) – for the most part – errors in U^d that occurred when errors in the exemplar $Jp1^d$ were badly copied³⁹ or wrongly emended.⁴⁰ Readings from U^d are, accordingly, of no value for the reconstruction of inferable witnesses.

The third pair of exemplar and copy within group K, i.e. $P1^s$ and $J2^d$, shares 140 unambiguous peculiar variants.⁴¹ $P1^s$ has twenty-seven unambiguous peculiar variants as against the rest of the transmission. This number of readings can be explained either (1) by the fact that the scribe of $J2^d$ correctly emended the text of $P1^{s,42}$ or (2) by the fact that corrections in $P1^s$, which were not recorded in the data matrix, were faith-

³⁵ For example, the passage ca parīksā syāt ... vadhabandha [19] is transposed in $Jp1^d$ and U^d to right after iyam [43]. The transposition results from a mistake in $Jp1^d$ where the scribe inverted the sequence of folios no. 314 and no. 315 before he applied page numbers. The scribe of U^d failed to realize the wrong sequence of text and copied the exemplar as he found it. The transposed text starts in $Jp1^d$ on folio no. 315r, right after folio no. 313v. — Further examples of connective errors in $Jp1^d$ and U^d are sū yah vs. yah [24], latāta vs. lalāta [64], the omission of the passage kleśasahāh ... balavantah [67], casur- vs. catur- [72], etc.

³⁶ Cf., for example, *hetutuh* vs. *hetuh* [6], *vividha-* vs. *vidhi-* [15], *itam* vs. *idam* [42], *prasakta-* vs. *prasanna-* [51], etc.

³⁷ Cf., for example, *aṣṭādaśāngulotsedham pṛṣṭham* (117,16), which was added in $Jp1^d$ as a correction and then copied into U^d .

³⁸ Cf., for example, *bheṣaja-* vs. *bhoṣaja-* [12], *vyapāśrayam* vs. *vyapāśraṣam* [30], *uttarottara-* vs. *uttarottarottara-* [44], the correction of the repetition *śītam* ... *vikāriņe* in $Jp1^{d}$ [129], etc.

³⁹ Cf., for example, anubamdhāt in $Jp1^d$ (wrong for anubandhaħ) vs. anubamdhā U^d under [7], and pariņāħmaħ in $Jp1^d$ (wrong for pariņāmaħ) vs. pariņāma in U^d [9].

⁴⁰ Cf., for example, *soda* in $Jp1^d$ (wrong for *sodhā*), which was "emended" to *sodaśa* in U^d [93], or *gu* in $Jp1^d$ (wrong for *guru-*) with the "emendation" *guna-* in U^d [98].

⁴¹ Cf., for example, aham a in $J2^d$ and $P1^s$ vs. aham asya [27], caṣṭaphalā vs. ca dṛṣṭaphalāḥ [31], irup vs. idam [42], avikramair vs. avibhramair under [45], the omission of tatra under [57], and of bhedyāni ... pānīyenābhyāsicya sādhayi under [126 and 128], etc.

⁴² Cf., for example, the correction of $P1^s$ kela to keśa [66].

fully copied by the scribe of $J2^{d}$,⁴³ or (3) by the fact that a scribal mistake occurred when the already corrupt text version of $P1^{s}$ was copied into $J2^{d}$.⁴⁴ $J2^{d}$ contains 154 peculiar readings. All of them are simple scribal mistakes; $J2^{d}$ was copied from $P1^{s}$ without contamination with further sources.⁴⁵ Just like $C6^{d}$ and U^{d} , $J2^{d}$ is almost of no use for the reconstruction of inferable witnesses and is accordingly to be excluded from all further considerations.

Six witnesses from group E can also be excluded because they are copies of available exemplars. $C3^b$ is presumably a plain copy of $C2^{b}$,⁴⁶ as are $V5a^d$ of $V5b^{d}$,⁴⁷ and $L3^d$ of $B4^d$.⁴⁸ The case is slightly different with $C1^b$, which is a copy of $V1^b$ contaminated with an ancestor of $V5b^d$, and for $Jn1^d$ and $Jn2^d$, which both were copied from $B5^d$.⁴⁹

2.2 The cladistic analysis of the complete set of 4,112 variant readings not only ascribed wrong positions to copies of available manuscripts within group K and elsewhere, it also calculated wrong genealogical positions for the three manuscripts $J1^d$, $J3^d$ and $P2^d$, all of which are strongly contaminated with readings from witnesses in group E. The reason for the failure of the computer program to establish the true

⁴⁶ $C2^b$ and $C3^b$ share 125 unambiguous connective errors as against the rest of the transmission, all of which are clearly of secondary origin, like, for example, the reading *'bhyahrtasya* instead of *'bhyavahrtasya* [37f.]. $C2^b$ has forty-three peculiar variants, the large majority of which are writing errors that may have been corrected in $C3^b$. There is, however, a handful of peculiar variants in $C2^b$ that may be taken to indicate contamination in $C3^b$ from a closely related manuscript belonging to group Q. For example, in 97,4 a list of bodily characteristics of bilious patients ends with *kṣutpipāsāvantaś ca* "and they are hungry and thirsty" in $C2^b$. The completely acceptable conjunction *ca*, which is peculiar to $C2^b$, was not copied into $C3^b$ [52]; similar cases occur under [107] and [133].

⁴⁷ $V5a^d$ and $V5b^d$ share the high number of 597 connective readings as against the rest of the transmission, including a large number of long omissions. $V5a^d$ contains 140 peculiar variants, whereas $V5b^d$ has twenty-seven. This number can be explained by the fact that in numerous instances the text of $V5b^d$ was illegible due to damage to the manuscript and illegible text recorded in the data matrix; $V5a^d$ was copied before the damage had occurred. Moreover, small writing mistakes in $V5b^d$ were emended in $V5a^d$.

⁴⁸ $B4^d$ and $L3^d$ share 228 variants as against the rest of the transmission. $B4^d$ has only twenty-three peculiar readings, which are either errors that were corrected in $L3^d$ or are to be explained by the fact that corrections not recorded in the data matrix were copied into $L3^d$.

⁴⁹ Due to restrictions of time and space, the discussion of the latter two cases has to be reserved for a later occasion. For the genealogical relationship of $Jn1^d$, $Jn2^d$ and $B5^d$ see Cristina Pecchia's contribution to this volume, p. 139-148.

⁴³ For example, the words *-yonikārya-* (68,4), which were missing in $P1^s$ before its correction, were copied in $J2^d$.

⁴⁴ For example, the corrupt *tejavatī* in $P1^s$ was copied into $J2^d$ as *tejavamtī* [119].

⁴⁵ Cf., for example, *katamane* vs. *katamena* [13], *bhoksobhana* vs. *ksobhana* [33], etc.

genealogical positions of these witnesses is that the number of variants caused by contamination in $J1^d$, $J3^d$ and $P2^d$ is higher than the number of true genealogical variants. Since the program takes these contaminational variants of $J1^d$, $J3^d$ and $P2^d$ to exist in both hyparchetypes, it judges these variants as having derived from the common archetype. It is, however, possible to establish a better position for the three witnesses $J1^d$, $J3^d$ and $P2^d$ within group K even without taking recourse to the quality of variant readings, namely, by a cladistic analysis of a reduced data matrix that is exclusively based on the variants transmitted in group K. This way, manuscripts contaminated from outside group K are separated from their source of contamination. Accordingly, the cladistic analysis cannot take textual changes caused by contamination to be ancestral, but has to treat them as variants peculiar to the respective lines of transmission within group K.⁵⁰



Figure 5: Rooted cladogram for group K⁵¹

An exhaustive search on 364 informative variants in the seven manuscripts A^d , Ch^d , $J1^d$, $J3^d$, $Jp1^d$, $P1^s$ and $P2^d$ results in one single most parsimonious unrooted tree with a tree length of 655 steps and a CI of

⁵⁰ The only exception are cases in which the scribes of $P2^d$ and K^{31} decided to adopt the same reading from their respective source of contamination. Since these cases are comparatively rare, they only reduce the consistency of the tree, but do not affect its overall structure.

⁵¹ Excluding apographs and calculated from 364 variants; CI 0.81.

0.81. This tree is more parsimonious than its alternative tree, i.e. the configuration of manuscripts derived from the initial cladistic analysis of all variants, which has a tree length of 668 steps and a CI of 0.79.

The new tree was rooted⁵² (see fig. 5) by adding the data of manuscript $B1^d$ – which belongs to group E and is not suspected to be strongly contaminated by a witness from group K – to the data of A^d , Ch^d , $Jp1^d$ and $P1^s$, i.e. to all K-manuscripts which are apparently not contaminated from outside group K. The data set was analysed for the most parsimonious tree, and the resulting tree was rooted at the intersection of K and $B1^d$.

The philological judgement of variant readings agrees mostly with the results of the cladistic analysis. $J1^d$ (with 232 peculiar variants) and $J3^d$ (with 160 peculiar variants) are clearly copies of the same exemplar K³¹, which has 184 peculiar variants.⁵³ These variants fall into one of four categories. (1) Twenty-eight variants occurred when the exemplar of K³¹ (which can be identified to be $P1^s$, cf. below, p. 86) was copied.⁵⁴ (2) 136 readings derive from contamination with a secondary exemplar that belongs to group Q.⁵⁵ (3) Nine variants occurred when the secondary ex-

⁵⁵ In these cases K^{31} reads together with E as against K. It is impossible to identify the source of contamination in K^{31} among the extant E-manuscripts. Four readings that K^{31} shares exclusively with the inferred witness Q^{21} seem to indicate, however, a rather close genealogical relationship between this inferred witness and the source of contamination in K^{31} . Out of the numerous possible examples for contamination in K^{31} , the discussion of a single example may be sufficient. Thus, in 86,3f. we find the advice that a physician should inspect himself: sa ca sarvadhātusāmyam cikīrṣann ātmānam evāditaḥ parīkṣeta guṇiṣu{read guṇeṣu} ... "And he who wants to establish a suitable ratio of bodily constituents [in the patient] should at first inspect himself with regard to his [own] qualities ...". A scribe who did not realize that guṇeṣu serves as an adverbial constituent to the verbal phrase and is put after the verb – a by no means unusual position for adverbs in the CS – inserted the phrase tad yathā right after parīkṣeta [26] at some point of the transmission within the E-group. From this line of transmission it was subsequently

⁵² The procedure is analogous to what is called "out-group comparison" in systematics; cf. Watrous – Wheeler 1981.

⁵³ A few peculiar variants of both manuscripts $J1^d$ and $J3^d$ indicate that both scribes contaminated the text of their exemplar K^{31} with additional sources. For example, under [14] we find a passage transmitted in $J1^d$ which is missing in the hyparchetype K, and under [48] K reads *-grahanavisesa-* as against *-visesagrahana-* in the rest of the transmission including $J3^d$.

⁵⁴ In these cases K^{31} has peculiar readings as against the rest of the transmission. For example, 82,1 runs sa yady uttaram brūyāt ... "If he were to give an answer ...". Here K^{31} reads samyaty instead of sa yady [16]. The passage 117,18 runs caturvimśatyangulaparināham ānanam "The face has a circumference of twenty-four fingers", whereas K^{31} transmits -parimānam [76]. Moreover, passage 122,13 states that varṣaśatam khalv āyuṣaḥ pramāṇam asmin kāle "A hundred years is the measure of the [human] life span in the present age". K^{31} reads avasthitam tasmin instead of asmin [90].

emplar was unfaithfully copied.⁵⁶ And finally, (4) nine mixed readings derive from a combination of version K with version $Q.^{57}$

The sister manuscript of K^{31} in the above cladogram is $P1^s$. This witness has 147 peculiar variants, of which thirty-four are convergent with readings from other manuscripts, when the variants of $J2^d$ are excluded from the data matrix. The convergent peculiar readings of $P1^s$ do not indicate contamination.

 $P1^s$ seems to share a common exemplar with K^{31} (not labelled in figure 5 above), but external evidence suggests that K^{31} was directly copied from $P1^s$. Outside the passage under investigation, namely in CS Vi 8.1-66, there are a number of second hand "corrections" in $P1^s$ that agree with peculiar readings in K^{31} . These readings were probably inserted into $P1^s$ when the scribe of K^{31} copied $P1^s$ as his main exemplar, something that probably happened in Jammu.⁵⁸ Accordingly, $P1^s$ and K^{31} agree mostly in instances where a meaningful, but clearly secondary, text version was copied from $P1^s$ into $K^{31.59}$

⁵⁷ For example, in a list of plants possessing hot taste, the item *kutheraka* is recorded for almost all witnesses as against *arjaka* in Q^{21} [120]. Only K³¹ has both versions combined into *arjakakutheraka*.

⁵⁸ That $P1^s$, which nowadays is kept at the Bhandarkar Oriental Research Institute in Pune, was once kept in Jammu may be concluded from the fact that $J2^d$, a direct and uncontaminated copy of $P1^s$, is still preserved there.

⁵⁹ An example of such a text version occurs in 79,2ff. Caraka advises the physician to inspect ten topological points – briefly referred to as the object of inspection (*parīkṣya*) – before he starts medical treatment: *tasmād bhiṣak kāryam cikīrṣuḥ prāk kārya* {Trikamji's ed. reads *kārma*- as against all manuscripts}*samārambhāt parīkṣayā kevalam parīkṣyam parīkṣyātha* {vl *parīkṣya*} *karma samārabheta kartum* "Therefore a physician who wants to accomplish what has to be accomplished [by him] should start treatment only after having inspected the entire object of inspection by means of inspection before he starts treatment". The scribe of K³¹ did presumably not realize that *parīkṣya* is a substantive here, but took it to be an adjective, which lacks, however, a referent. Accordingly, he added the word *phalam* immediately after *kevalam* [11]. — A clear mistake of *P1^s* is, however, to be detected in a passage that deals with patients having blood as the supreme component (*sāra*) of their body (104,4). One of the attributes of these patients is – ac-

added to the text of K^{31} . For an omitted passage in K that was re-inserted into K^{31} with recourse to an E-reading see above (p. 79) with reference to [94].

⁵⁶ For example, the passage 83,1 reads $dvividh\bar{a} par\bar{k}s\bar{a} j\tilde{n}\bar{a}navat\bar{a}m$ "Twofold is examination to those who possess knowledge" in version K. The passage was enlarged by the addition of tu khalu right after $dvividh\bar{a}$ at some point of the transmission below hyparchetype E [18]. The addition was inserted into K³¹ and expanded to $dvividh\bar{a}$ tukhalu punah. A second example can be found in a list of plants possessing sour taste (140,5f.) that is slightly shorter in K than in the rest of the transmission. According to version K, Caraka does not make explicit which two varieties of kolaka he has in mind, whereas in Q¹¹ he calls them $\bar{a}masuska$ "unripe/raw and dried". This reading was miscopied into K³¹ as $sy\bar{a}masuska$ "dark and dried" [113f.].

The sister manuscript of $P1^s$ is Ch^d , which contains 200 peculiar variant readings, fifty-two of which are convergent with readings of other manuscripts. Among these readings there are more than thirty cases of substantial variants that Ch^d shares with manuscripts going back to hyparchetype E. Ch^d preserves quite a number of the severe corruptions that are characteristic for hyparchetype K.⁶⁰ This indicates that Ch^d was not the recipient of contaminational readings. Therefore the agreement between Ch^d and E-manuscripts has to be explained by contamination of the text of manuscripts that go back to E with that of Ch^d (or one of its immediate predecessors).

 $P1^s$ and Ch^d share the common exemplar K¹¹, which in turn is a direct descendant of the hyparchetype K. K¹¹ can be inferred from the small amount of ten more-or-less substantial variants, all of which are clearly of secondary origin.⁶¹

The reconstruction of the second main branch of family K starts with $Jp1^d$ and $P2^d$. $Jp1^d$ contains 220 unambiguous peculiar variants, of which forty are convergent with inferred or available witnesses. These cases of convergence do not, however, indicate that the scribe of $Jp1^d$ used a secondary exemplar to produce his text. Similar to the case of Ch^d , it seems that an earlier witness of family K^{12} was used as a secondary source within group E.

The opposite is true for $P2^d$, which has 227 unambiguous peculiar variants, eighty-seven of which converge with readings of other witnesses. The convergent variants agree in fifty-eight cases with readings that are exclusively transmitted in witnesses belonging to group E. The source of contamination in $P2^d$ is difficult to determine, since no clear pattern of secondary influence is discernable. The largest number of secondary readings in $P2^d$ (ca. thirty-five) are corrections of scribal errors of the K-exemplar that do not allow for an inference about the source of con-

cording to version K – *akleśasahiṣṇutvam* "the state of being unable to endure hardship". This reading was miscopied into PI^s , and from there into K^{31} , as *akleśam asahiṣṇutvam* [62f.].

 $^{^{60}\,}$ Cf., for example, the discussion of [94] on p. 79, above.

⁶¹ Three examples may prove the point. In 86,2f. the physician is described as having correct knowledge of the life span of the patient: ... yasya cāyuḥ sarvathā viditaṃ yathāvat "... and [a physician is somebody] who knows the life span of the patient properly in every respect". Instead of yasya, Ch^d and $P1^s$ share the connective error yathā [25]. Moreover, under [91f.] the double occurrence of the word vikrti- caused the eye of the scribe of K¹¹ to skip about twenty-five akṣaras. And finally, in two lists of plant names under [103] and [118] K¹¹ has śrigavīra vs. śrigavera as transmitted in all other witnesses. The remaining decisive variants for the reconstruction of K¹¹ are recorded at [75], [104], [112], [116], [123] and [130].

tamination.⁶² The relatively large number of sixteen secondary agreements of $P2^d$ with (parts of) group R and (parts of) group S apparently indicates, however, that $P2^d$ was contaminated from at least two different branches of the transmission.⁶³

 $Jp1^d$ and $P2^d$ seem to share the inferred witness K^{22} as their common exemplar. Most of its twenty-five unambiguous peculiar variants are simple scribal mistakes, like, for example *tatrā* for *tatra* [60], *tu ye tu* for *tu ye te* [81] and *manyetat* for *manyeta tat* [131]. The very low number of connective errors in K^{22} could be explained by contamination in $P2^d$ from outside group K.⁶⁴

A different explanation for the low number of peculiar variants in K^{22} could be that $P2^d$ was directly copied from $Jp1^d$, but up to now no external evidence in support of this assumption could be detected.

A single case of contamination in K^{22} (or $Jp1^d$) seems to occur in 94,18, within a medical check-list that provides headings for topics to be discussed in subsequent passages. K^{22} is the only witness of group K that transmits the heading $vy\bar{a}y\bar{a}ma\hat{s}aktita\hat{s}$ ca "and according to his ability for physical exercise", which was apparently already missing in hyparchetype K [47]. It is, however, not completely inconceivable that this passage was inserted into K^{22} as a scribal emendation.

The sister manuscript of K^{22} (or JpI^d) is A^d . This witness contains 302 unambiguous peculiar variants, of which seventy-four are convergent with readings in other witnesses. In spite of this comparatively high number, clear cases of contamination in A^d cannot be recognized.⁶⁵

 K^{22} (or JpI^d) and A^d share the common exemplar K^{12} , which is inferrable from five substantial variants only.⁶⁶ The low number of genealogically

⁶⁴ The scribe of $P2^d$ would then have changed quite a number of readings peculiar to K^{22} in accordance with his secondary exemplar, so that these readings survived only as peculiar readings in $Jp1^d$; cf. the case of K^{31} , discussed above, p. 86.

⁶⁵ A remarkable case of an apparently parallel textual change is to be observed in 98,7. The passage deals with patients who have wind $(v\bar{a}ta)$ as their basic constitution (prakrti). Since wind has the generic property of being quick, patients with a windy constitution are said to be characterized by rapid and terrifying acting, excitement and diseases $(\hat{sighratv\bar{a}c} ch\bar{i}ghrabh\bar{i}m\bar{a}rambhaksobhavik\bar{a}r\bar{a}h)$. Instead of $-bh\bar{i}m\bar{a}rambha$ -, like A^d quite a number of manuscripts related to the subgroup Q²¹ read $-sam\bar{a}rambha$ -[54].

⁶⁶ In 87,15, K^{12} contains the short secondary repetition *evaminihitam evaminihitam* as against *evaminihitam* (or *evaminihitam*) in the rest of the transmission [35]. A further con-

⁶² Cf. [94], discussed above on p. 79.

⁶³ For example, in 93,6 group Q (together with K^{31}) reads etavac ca balam "and his strength is of such a degree", whereas group K (without K^{31} and $P2^d$) has etad balam "this is his strength". $P2^d$ transmits the reading etavad balam [41] together with R, S, $B3^d$ and $L2^d$.

informative variants in the upper part of the Kashmir branch, i.e. in K^{11} and in K^{12} , is presumably to be explained by contamination within group K that occurred at an early stage of transmission. Nevertheless, all the witnesses going back to hyparchetype K form a solid genealogical group. It is therefore possible to reconstruct hyparchetype K in almost all cases of substantial variation.

2.3 A new cladistic analysis of the complete set of variants from which the data of copies of extant manuscripts as well as the data of the strongly contaminated manuscripts $J1^d$, $J3^d$ and $P2^d$ are excluded leads again to one single most parsimonious tree with a CI of ca. 0.73:



Figure 6: Most parsimonious cladogram⁶⁷

 $^{67}\,$ Calculated from 2,372 genealogically informative variants of forty manuscripts; CI 0.73.

nective error of K^{12} occurs towards the end of section 117, in a passage dealing with the ideal measures of the human body. Here Caraka says (according to the draft critical edition): tad $\bar{a}y\bar{a}mavist\bar{a}rasamam$ samam ucyate "This [body], inasmuch as it has a suitable length and breadth, is called a suitable [body]". K^{12} (together with K^{31}) reads -phalasamam "having a suitable arithmetical sum" [77]. The word phala presumably originates from a gloss on the preceding sentence, which states that the whole body has a size of eighty-four finger joints (anguliparvan). Moreover, in 150,4f. Caraka stresses the relative importance of oil in the anuvāsana-therapy of the sthāvara type: tailam eva krtvopadiśyate sarvam tailaprādhānyāt "Once the oily type has been dealt with, everything is explained because the oily type is the most important". K^{12} reads tam sarvas (or tasarvas, the reconstruction is uncertain) instead of sarvam, presumably because the final te in upadiśyate was duplicated as tam or ta [134]. An additional but less substantial connective error of K^{12} is recorded under [28].

The structure of this tree differs from the result of the initial calculation shown in figure 4 in three respects. (1) $C5^b$ and M^k no longer appear to form one clade,⁶⁸ i.e. a group of manuscripts that shares exclusively one common ancestor as against all other manuscripts; they derive from two different exemplars now. The exemplar of $C5^b$ would be hyparchetype E, and the exemplar of M^k appears to be a direct copy of this ancient witness. Moreover, (2) the clade consisting of $B3^d$ and $L2^d$ changed its position; it appears to go back to a copy of the exemplar of M^k . Finally, (3) the group $C2^b$, $C4^b$ and $V1^b-3^b$ forms a single clade with $Ap1^d$, $Ap2^d$, $P3^d$ and $V5b^d$ that derives from the inferred witness Q; $Jp2^d$, $Jp3^d$ and $T3^d$ seem to derive from an immediate ancestor of Q. The structure of the remaining branches remains unchanged.

The question of whether or not $C5^b$ and M^k exclusively share a single common exemplar as against the rest of the transmission cannot be answered with absolute certainty. The tree that depicts a separate descent of both manuscripts is one step shorter than the alternative tree with $C5^{b}$ and M^{k} building a common clade. The problem is complicated by the fact that $C5^b$ contains only ca. 24% of the text under investigation, and within this short passage two folios are missing in M^k . In the passage transmitted by both witnesses – less than 20% of the whole amount of text under investigation -, C5^b shares slightly more variants with the archetype than M^k . This could be taken to suggest a separate descent of both manuscripts from distinct exemplars, as shown in figure 6. The existence of three substantial variants that $C5^{b}$ and M^{k} share as against the rest of the transmission indicates, ⁶⁹ however, that both manuscripts go back to a single common exemplar. The seemingly rather close relationship of $C5^{b}$ to the archetype, accordingly, would have to be explained as the result of contamination in $C5^{b}$ originating from some source belonging to group K.⁷⁰

A closer look at the peculiar variants of M^k reveals that the position of the clade $C5^b$ and M^k as descending from hyparchetype E (as shown in figure 4) is certainly wrong. According to the tree depicted in figure 6,

⁶⁸ Also called a "monophyletic group" in systematics.

⁶⁹ Thus, under [2] $C5^{b}$ and M^{b} exclusively share the reading $br\bar{u}mah$ as against $upadeksy\bar{u}mah$. Moreover, under [34] both manuscripts read ca instead of *ceti* (or instead of no text at all). The last instance of a common reading peculiar to $C5^{b}$ and M^{k} is found under [40], where both manuscripts share the wrong reading $\bar{u}turasya$ as against $\bar{u}tura$.

⁷⁰ The source of contamination from the K-group cannot be determined with certainty. The only case of substantial convergence of a peculiar reading in $C5^b$ with a Kreading occurs in 68,6, where $C5^b$ and Ch^d read *iṣtaphalānubandhakaṃ kāryam* as against *iṣtaphalānubandham kāryam* [5].

among the 177 variants that are peculiar to M^k as against the rest of the transmission, fifty-one variants converge with other witnesses. Among these, M^k shares thirty variants either with the inferred witness Q or with one of its descendants.⁷¹ Since all the variants that M^k shares with $V2^b$ and $V3^b$ are clearly of secondary origin, these variants are to be judged as connective errors. The true genealogical relationship between $C5^b$ and M^k on the one hand and $V2^b$ and $V3^b$ on the other, is, accordingly, different from the cladistic calculations: $C5^b$ and M^k do not go back to the hyparchetype E but build a single clade with $V2^b$ and $V3^b$. This clade is firmly integrated in the Q-group.

The result of the preceding considerations gets support from a cladistic analysis of variants for those manuscripts belonging to group Q that are neither direct copies of available witnesses (i.e. $C1^b$, $C3^b$, $V5a^d$) nor strongly contaminated from outside group Q (i.e. $Ap2^d$, $P3^d$, $V1^b$, $V5b^d$). The analysis leads to a single most parsimonious tree with a CI of 0.84, which is about 0.03 points higher than the consistency in the initial configuration of manuscripts that showed $C5^b$ and M^k to derive directly from hyparchetype E:

⁷¹ In 87,18 the archetype reads anyad api caivamvidham bhesajam abhūt "There was also a different medicinal substance of this kind" with the peculiar variant bhavet in $Ap1^d$ Ap2^d C1^b C2^b C3^b C4^b Jp2^d Jp3^d P3^d T3^d V1^b V2^b V3^b V5a^d V5b^d and M^k as against abhūt elsewhere [36]. Next, in a passage dealing with patients having bile (*pitta*) as their basic constitution (prakrti), we read at 97.8f.: visratvāt pratatapūtivaksahkaksāsyaśirahśarīragandhāh "Since [bile] stinks, [patients with a bilious constitution] diffuse a stinking smell from their breast, armpits, mouth, head and trunk". Here Ap1^d Bo^d C1^b C2^b C3^b C4^b V1^b $V2^{b}$ $V3^{b}$ and M^{k} read *prabhūta* "much" vs. *pratata*- "permanently" [53]. The genealogical relationship of these variants is clear; pratata- is the primary reading since it is more difficult. Moreover, the genesis of the secondary reading -prabhūtapūti- can easily be explained from the similarity of bh and t in Bengali script (cf. Dimitrov 2002: 67, no. 5.20). Moreover, a long \bar{u} -vowel occurs in the word $-p\bar{u}ti$ - so that the reading $-prabh\bar{u}ta$ presumably results from an emended -pratūtapūti-. — With reference to patients who have phlegm as their basic constitution, Caraka says in 96.8: gurutvāt sārādhisthitāvasthitagatayah "Since [phlegm] is heavy, [patients with a phlegm constitution] have an excellent, controlled and firm way of walking (gati)". B1^d C1^b C2^b C3^b C4^b V1^b V2^b V3^b and M^k transmit sārādhisthitagatayah as against sārādhisthitāvasthitagatayah [49]. The omission of avasthita (or, more precisely, of *āvasthit*) was caused by a skip of the scribe's eve from $t\bar{a}$ to ta. The primary reading is not only attested by all manuscripts (with the exception of B1^d), but also by Cakrapānidatta's commentary (on CS Vi 8.96, p. 277b,4 in Trikamji 1941). Finally, in 122,2 Caraka describes "age" as being threefold: tad vayo yathāsthūlabhedena trividham "This age is, according to a rough division, threefold". V2^b, $V3^{b}$, and M^{k} share the secondary variant yathāvasthāna- exclusively as against yathāsthūla in the rest of the transmission [86].



Figure 7: Rooted cladogram for group Q⁷²

The next candidate for being a direct descendant of hyparchetype E is – according to figure 6 above – the common ancestor of $B3^d$ and $L2^d$. The existence of this witness can be inferred, at least hypothetically, from sixteen peculiar variants of secondary origin which $B3^d$ and $L2^d$ share exclusively as against the rest of the transmission.⁷³ Besides these connective variants $B3^d$ and $L2^d$ share twenty-seven readings that converge with readings of other available or inferred witnesses, nine of which are insignificant, so that eighteen cases of substantial variation remain to be analyzed. In eleven out of these eighteen cases the common ancestor of $B3^d$ and $L2^d$ shares secondary readings either with $Ap1^d$ and/ or $P3^d$ (or with one of their common ancestors from group Q) that are

⁷² With heavily contaminated manuscripts and direct copies of extant manuscripts excluded; calculated from 358 variants; CI ca. 0.84.

⁷³ In Caraka's explanation of the term *bhesaja*, we read in 87: *bhesajam nāma tad* yad upakaraņāyopakalpate bhisajo dhātusāmyābhinirvrttau prayatamānasya "What is appropriate to be a means for a physician when he makes effort to accomplish a suitable ratio of bodily elements, is called a medicinal substance". $B3^d$ and $L2^d$ omit the words *bhisajo dhātu*., presumably because a scribe's eye jumped from the t(e) of *-kalpate* to the t(u) of -dhātu- [29]. Moreover, within the description of patients who have marrow (majjan) as the supreme component of their body, Caraka describes one of the characteristics of these patients: sthūladīrghavrttasandhayaś ca "and they have large, long and rounded bodily joints". $B3^d$ and $L2^d$ read -vrttadīrgha- instead of -dīrghavrtta- as against the rest of the transmission [68f.]. And finally, in the concluding section on the six divisions (varga) of enema $(\bar{a}sth\bar{a}pana)$, which are arranged according to the six tastes of the medicinal substances that may be employed. Caraka advises the physician not to employ drugs exclusively with regard to the aforementioned division, but to use whatever substance he regards as useful. He concludes (149,3f.): vargam api (variant: api ca) vargenopasamsrjed ekam ekenānekena vā yuktim pramānīkrtya "He may also mix one division [of medicinal substances] with [another] division - one with another or with several - making reasoning his source of knowledge". Instead of $vargam B3^d$ and $L2^d$ share the meaningless reading *bahum* exclusively [132], which probably has to be explained by the scribe having had difficulties reading the Bengali script of his exemplar.

not suspected of being caused by contamination.⁷⁴ This agreement cannot be accidental. It reveals the genealogical relationship of the group $B3^d$ and $L2^d$ to be a descendant of Q^{12} (cf. fig. 1 on p. 65).

This result is supported by an analysis of the peculiar readings of $B3^d$ which converge with readings of other witnesses. Out of 121 more or less substantial variants, $B3^d$ shares sixty-one readings again with $Ap1^d$ and/ or $P3^d$ or with one of their common ancestors Q or Q^{12} .⁷⁵

In contrast to the peculiar variants of $B3^d$, the fifty-one substantial peculiar variants of $L2^d$ that converge with variants of other witnesses do not reveal a particularly close genealogical relationship of $L2^d$ to Q^{12} , but indicate that $L2^d$ was contaminated with an unknown witness that goes back to $Q^{11,76}$ Moreover, the four readings that $L2^d$ shares exclusively with Ch^d could suggest that this Kashmiri witness, or one of its immediate exemplars, was used as a source of contamination in $L2^{d,77}$

⁷⁴ In 98.9f. Caraka describes patients having wind ($v\bar{a}ta$) as their basic constitution: pārusyāt parusakeśaśmaśrunakhadaśanavadanapānipādāngāh "Since [wind] is stiff, [patients with a windy constitution] have stiff hair of the head, hair of the beard, nails, teeth, [a stiff] face, [stiff] hands, feet and [a stiff] body (or: stiff limbs)". $B3^d$ and $L2^d$ share the clearly wrong reading parusasphutita (vs. parusa) "stiff/rough and cracked" with ApI^d , $V5a^d$, $V5b^d$ and $P3^d$ as well as with $Jp3^d$ [56]. Next, in 117,14 the measure of the two forearms (*prabāhu*) is said to be sixteen fingers (sodaśāngulau). $Ap1^d$ and $P3^d$ share with $B3^d$ and $L2^d$ the reading sodasakau "having [the length of] sixteen [fingers]" as against the rest of the transmission [74]. Moreover, towards the end of section 119, Caraka states that patients with a weak mind (sattva) show severe reactions on the sight of blood and flesh: paśupurusamāmsaśonitāni cāveksya visādavaivarnyamūrcchonmādabhramaprapatanānām anyatamam avāpnuvantų athavā maranam iti "And when [patients with a weak mind] see flesh or blood of animals or men, they attain either dejection, loss of colour, fainting, insanity, confusion or falling to the ground, or even death". B^{2d} , L^{2d} , $Ap1^{d}$ and $P3^{d}$ exclusively read a version of the sentence in which the position of the verb (av)āpnuvanti is shifted to the final position, obviously in order to bring the syntax of the sentence into harmony with standard Sanskrit [84].

⁷⁵ In the aforementioned description of patients with wind as their basic constitution, the word $\hat{sighratrasaragaviragah}$ "quickly get frightened, passionate and dispassionate" (98,7f.) is exclusively missing in $B3^d$, $Ap1^d$ and $P3^d$ [55]. Moreover, within Caraka's explanation of the term pravrs "early rainy season" in 125,7, all witnesses have prathamah(or prathama) pravrslah (or pravrsla, pravrslah, pravrdhah, vrslah or vrslah) kālah, whereas $B3^d$, $Ap1^d$ and $Ap2^d$ read pradesa(pra)vrslah kālah [96]. Finally, in a passage referring to enemas as being six-fold in 138,1 (sadvidham asthāpanam acaksate bhisajah), $B3^d$ and $Ap1^d$ exclusively share the reading $\bar{isadvidham}$ as against sadvidham [108].

⁷⁶ For example, in 118,1 $L2^d$ shares with $C2^b$ the peculiar reading *tam ut* vs. *tad yat* [79f.], and in 153,1 $L2^d$ shares with Q¹¹ the reading *sad* vs. the metrically required *sadbhir* [137].

⁷⁷ $L2^d$ and Ch^d share exclusively the following peculiar readings: *ca* vs. *caiva* [32], *balavantaś ca* vs. *balavantaķ* [71], the omission of *vidhijño* (together with Bo^d) [117] and *mustā* vs. *musta* [121].

In view of the high degree of contamination which characterises $C5^b$, M^k , $B3^d$ and $L2^d$ it is quite obvious that these manuscripts – just like $J1^d$, $J3^d$ and $P2^d$ – are to be excluded from all further stemmatical considerations.

Moreover, the revised stemmatic positions for $C5^b$, M^k , $B3^d$ and $L2^d$ have consequences for the reconstruction of the two hyparchetypes E and K, and consequently, for the reconstruction of archetype A. In contradistinction to what the two initial cladograms suggest, readings that K shares exclusively with one or several of these contaminated witnesses as against the rest of the transmission are not to be regarded as archetypal readings. They are, in fact, readings stemming from hyparchetype K that made their way into branch E by means of contamination. Whether these readings were of archetypal origin cannot be determined by lower textual criticism.

In consequence, the two hyparchetypes K and E are separated by 462 possible variants and not, as stated above (p. 76) on the basis of the initial cladistic analysis, by roughly 340 variants only.

2.4 The stemmatic relation between the remaining witnesses belonging to group E is difficult to determine, since multiple processes of contamination blur the picture considerably. It is possible, however, to follow the method outlined above and to identify and exclude strongly contaminated available (and even inferred) witnesses from subsequent consideration.⁷⁸ The method is comparatively easy and not too timeconsuming. When it is possible to detect agreements in substantial readings of a branch under investigation with variants from another branch in such a number that pure chance cannot explain convergence, this agreement must be caused by contamination. Since clear writing errors are unlikely to be transmitted by contamination in a regular pattern, it is easy to decide which agreements reflect true genealogical relationships and which do not. Witnesses containing contaminational variants have to be excluded from all further stemmatical considerations, since their testimony is not reliable. In the process of excluding contaminated manuscripts one by one, the consistency of subsequently calculated cladograms increases considerably.

In the case of the present transmission of CS Vi 8, ten manuscripts can be identified that were apparently not strongly contaminated. The most parsimonious cladogram of the 1,032 genealogically informative variants contained in these witnesses has a CI of ca. 0.89:

⁷⁸ Due to limitations of time and space, I cannot go into details here.



Figure 8: Most parsimonious cladogram of ten witnesses⁷⁹

This quite high consistency increases to a CI of ca. 0.99 when all 244 non-substantial convergent variants, which probably occurred independently in different branches of the tree, are excluded.⁸⁰ There remain only sixteen (out of 788) variants that are in conflict with the tree depicted in figure 8, which could either be the result of peculiar parallel textual changes in individual available manuscripts or of early contamination.⁸¹ I take this very high degree of consistency as justifying the hypothesis

⁷⁹ CI ca. 0.89 for all 1,032 genealogically informative variants and ca. 0.99 when 244 unsubstantial conflicting variants are excluded, with 788 variants remaining.

⁸⁰ These variants concern mostly missing (or, less frequently, additional) anusvāras and visargas, variants of long and short vowels, missing r-hooks in consonant clusters, missing non-initial u-signs, variants of non-initial e, o, ai and au, variants of non-initial r and u or \bar{u} , variants of $k\bar{s}$ and $k\bar{s}y$, variants of n, t and v, y and p, as well as bh and m in Devanāgarī script, haplographies and other omissions of text constituents between identical or similar $ak\bar{s}aras$, the use of the suffix ka in plant names, and scribal corrections.

⁸¹ Under [122] the plant name $dh\bar{a}tuk\bar{\imath}$ occurs in $P1^s$ parallel to R as against $dh\bar{a}tak\bar{\imath}$ in the rest of the transmission. Under [78] $P4^d$ reads $tatr\bar{a}yur$ together with K, R and $Ap1^d$ as against $tatra\ c\bar{a}yur$ in S. In the remaining cases it is impossible to determine exactly which variants occurred at which point of the transmission. Under [39] the conjunction ca (in $Ba1^d$) and under [127] the absolutive $praks\bar{a}lya$ (in $B1^d$) were either inserted, or both words were omitted in S and R. The remaining twelve conflicting variants fall into two groups of equal size: in six cases ([17], [23], [65], [82], [95], and [101]) K reads together with $Ap1^d$ as against S and R, and in another six cases ([58], [85], [102], [105], [115], and [119]) K and R read jointly as against $Ap1^d$ and S.

that this cladogram mirrors the history of the transmission of the text passage under investigation as faithfully as possible.⁸²

3. From a methodological point of view, the integration of cladistic analyses of variant readings and philological discussions of selected variants proves to be particularly useful, since each method compensates for shortcomings of the other. A cladistic analysis of variant readings alone results in a diagram that due to methodological constraints can only roughly reflect the hypothetical transmission history: direct copies of extant manuscripts are not identified, the diagram is strictly bifurcated, and contamination is not indicated. Even more seriously, phylogenetic software – like the human mind – can easily be led astray by contamination (cf. Maas 2008b: 238). The fact that a phylogenetic analysis of variant readings results in a diagram of the transmission which resembles a "manually" created stemma therefore does not "prove" (and, in fact, not even indicate) that this stemma is the best possible representation of the transmission history. In the case of a contaminated transmission it is not too difficult to "manually" identify peculiar variant readings for each specific branch of the transmission according to one stemmatical hypothesis, but it is impossible to discuss alternative models if a large data set has to be analyzed. Here stemmatic software provides help. It enables the editor to keep the logical structure of different trees in view and lets him decide in favour of one or the other tree on the basis of her or his interpretation of the data. Computer aided stemmatics may thus lead the editor some steps closer to Michael Coulson's "tablets of heaven", among which the true genealogy of contaminated works is said to be inscribed.⁸³

⁸² Sober (1988) argues convincingly that any inferrence to past events drawn exclusively on the basis of a parsimony analysis may be flawed. Parsimony can only help to explain what has happened in the past if it is supplemented by a "background theory" (cf. Sober 1988: 64). In the present context, I take Sanskrit textual criticism as providing a background theory for cladistics.

⁸³ Cf. Coulson 1989: xviii: "A family tree, illustrating the inter-relationship and descent from an archetypal copy or copies of all our mss [of the Mālatīmādhava], although it must be inscribed somewhere among the tablets of heaven, I suspect to be beyond our reach. It is indeed not difficult to shape one part or another of the evidence into such a pattern, but only by ignoring other sets of correspondences too numerous to be due to coincidence." I am indebted to Professor Jürgen Hanneder for drawing my attention to Coulson's considerations.

Appendix: Variant Readings

The Appendix lists the variant readings discussed in the present paper. The entries, which are citations of apparatus notes in the collation, are consecutively numbered according to the sequence of text in Trikamji's edition of CS Vi 8. Section and line numbers in brackets at the beginning of each entry refer to this edition. After this, the lemma is cited from Trikamji's edition; the citation ends with a square bracket, and a list of all manuscripts sharing this reading follows. The list is terminated by a semicolon, after which the first variant is recorded, followed again by a list of witnesses, etc. For additional signs, symbols and group sigla, cf. p. 114f.

- 1. (67,5) ākulam] K $J1^{d} J2^{d} P2^{d} U^{d}$ R S $Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jp2^{d} Jp3^{d} K^{d} L3^{d} M^{k} P3^{d} T2^{d} T3^{d} V1^{b} V2^{b} V4^{d} V5a^{d} V5b^{d}$; ākulamm $L1^{d}$; ākul $Ap1^{d} C5^{b}$; āhulam $C6^{d}$; ārgaņam $L2^{d}$; akulam $Ib3^{d} T1^{d}$; om. $B3^{d} V3^{b}$; † $J3^{d} Jn3^{d}$
- (68,2) upadekṣyāmaḥ] K (-A^d) J1^d J2^d J3^d P2^d S Ab^d Ap2^d B2^d B3^d B4^d B5^d B6^d Ba2^d Bo^d C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d L1^d L2^d L3^d T1^d T2^d T3^d V2^b V3^b V4^d V5a^d; upade[{śyā}]<kṣyā>maḥ A^d; upadekṣāmaḥ C1^b V1^b; upadeśyāmaḥ C6^d; upadeśyomaḥ B1^d; upādekṣyāmaḥ P3^d; adekṣyāmaḥ U^d; kapadekṣyāmaḥ K^d; brūmaḥ C5^b M^k; † Ap1^d V5b^d
- 3. (68,2) -pūrvakam] K (- A^d) $JI^d J2^d J3^d P2^d U^d$ R S (- $P4^d$) $Ab^d Ap2^d B2^d B3^d B3^d B4^d B6^d B0^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d$; pūrvakām $A^d C6^d$; pūrpaka $P4^d$; sarvakam $Ba2^d$; † $Ap1^d V5b^d$
- 4. (68,5) -pravrtty-] K $J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ab^{d} B2^{d} Ba1^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} C5^{b} Ib1^{d} Ib3^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L2^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V5a^{d} V5b^{d}$; pravrtti9 $Ap2^{d}$; pravrtti $B5^{d} Jn1^{d} L1^{d}$; pravrty $B6^{d} Ib2^{d}$; pravrtti $B1^{d} Jn2^{d}$; pravrtph $V4^{d}$; prakrty S (-Ba1^{d}) B3^{d}; praty $C6^{d}$; vrddhy $B4^{d} L3^{d}$; $\dagger Ap1^{d} M^{k}$
- 5. (68,6) phalānubandham] K (- Ch^d) $C6^d J1^d J2^d P2^d U^d$ S (- Km^d) $Ab^d B2^d B5^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d L1^d L2^d P3^d T1^d T2^d V1^b V2^b V3^b V4^d$; phalānu
shāndam>² Ap2^d; phalā[.u]<nu>vamdham B3^d; phalānuvadha V5a^d V5b^d; phalānubamdha B4^d Ib3^d Km^d L3^d T3^d; phalānubamdhakam Ch^d C5^b; kālānuvamdham Jp3^d; nubandham J3^d; phalānugamdham B1^d; phalānubam(dh.)+ K^d; + + + + M^k; † Ap1^d
- 6. (69,1) hetuh] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ S $Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B5^{d} B6^{d} Ba2^{d} Bo^{d} C2^{b} C3^{b} C4^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d}$

 $L1^d L2^d L3^d M^k P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; hetu' $B1^d$; hetu $C1^b$; hetutu
h U^d ; † $Ap1^d T3^d$

- 7. (74,1) anubandhaḥ] K ($Jp1^{d}$) $C6^{d}$ $J1^{d}$ $J2^{d}$ $J3^{d}$ $P2^{d}$ R S ($-Km^{d}$) Ab^{d} $Ap2^{d}$ $B2^{d}$ $B4^{d}$ $B6^{d}$ $Ba2^{d}$ $B0^{d}$ $C1^{b}$ $C2^{b}$ $C3^{b}$ $C4^{b}$ $Ib1^{d}$ $Ib2^{d}$ $Ib3^{d}$ $Jn1^{d}$ $Jn2^{d}$ $Jn3^{d}$ $Jp2^{d}$ K^{d} $L1^{d}$ $L2^{d}$ $L3^{d}$ M^{k} $P3^{d}$ $T1^{d}$ $T2^{d}$ $T3^{d}$ $V1^{b}$ $V2^{b}$ $V3^{b}$ $V4^{d}$; anubamdhāt $Jp1^{d}$; anubamdhā U^{d} ; anuvamdhās $Jp3^{d}$; anuban.s $C5^{b}$; anuvadhas Km^{d} ; arghavaccas $B3^{d}$; † $Ap1^{d}$ $V5a^{d}$ $V5b^{d}$
- 8. (74,3) bhāvaḥ] K $J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R S $Ab^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V2^{b} V3^{b} V4^{d}$; bhāva<h>> $B2^{d}$; bhā[vā]<vah>
vah>
[bhāvaḥ] V1^{b}; bhāvaḥ6 $Ap2^{d}$; bhāva $C6^{d}$; ..vaḥ $C5^{b}$; † $Ap1^{d} V5a^{d} V5b^{d}$
- 9. (76,1) pariņāmaḥ] K (- $Jp1^{d}$) $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} Ab^{d} B2^{d} B3^{d} B4^{d} B5^{d} B6^{d} Ba1^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d}$; pariņāmaļ $Ap2^{d}$; pariņāma U^{d} ; pariņāmaļ $Jp1^{d}$; pariņāmaļ $Jn3^{d}$; pariņāma S (- $Ba1^{d}$); paribhņāmaļ $B1^{d}$; parirmāņāmaļ $C4^{b}$; † $Ap1^{d} M^{k} V5a^{d} V5b^{d}$
- 10. (78,3f.) nopāyārtho] K $C6^d J1^d J2^d J3^d P2^d U^d C1^b C2^b C3^b C4^b Jp3^d L2^d P3^d V1^b V2^b V3^b$; nopāyārthā $L1^d$; nopāyārthe $B5^d Jn1^d Jn2^d$; nopāyārth $B1^d$; nopāyā B3^d; nopārtho $C5^b$; nābhyupayārtho $Ib3^d T1^d$; bhyupāyo rtho S $Ab^d B4^d Ib1^d Ib2^d L3^d T2^d$; bhyupāyo[sti] rtho $Ba2^d$; bhyupāyārtho $Ap2^d B2^d B0^d Jn3^d V4^d$; bhyupāyārthā $B6^d$; bhyupārtho K^d ; nyupāyārtho $T3^d$; nopāy $Jp2^d$; † $Ap1^d M^k V5a^d V5b^d$
- 11. (79,3) kevalam] K (-P1^s) C6^d P2^d U^d R S Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5b^d; kevale Bo^d V5a^d; kevalam T3^d; kevalam phalam J1^d J2^d J3^d P1^s; † Ap1^d M^k
- 12. (80,8) bheṣaja-] K (- $Jp1^d$) $C6^d J1^d J2^d J3^d P2^d U^d$ R S $Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d K^d L1^d L2^d L3^d P3^d T1^d T2^d V1^b V2^b V3^b V4^d$; bhoṣaja $Jp1^d$; meṣaja $V5a^d V5b^d$; jeṣaja $Jn3^d$; teṣata $T3^d$; † $Ap1^d M^k$
- 13. (81,2f.) katamena] K (- A^d) $J1^d J3^d P2^d U^d$ R S $Ab^d Ap2^d B2^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Jn1^d Jp2^d Jp3^d K^d L1^d L2^d L3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; katamena katamena $Jn2^d$; katamane $J2^d$; ka[{la}]<ta>tamena A^d ; katāmana $Jn3^d$; kātamena $Ib3^d$; kālamena $C6^d$; † $Ap1^d B3^d M^k P3^d$
- 14. (81,3f.) bhinnayā...-antareņa] $J1^d \to SAb^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d B0^d Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d P3^d T1^d$

 $T2^{d}\ T3^{d}\ V4^{d}\ V5a^{d}\ V5b^{d};\ om.\ {\rm K}\ C6^{d}\ J2^{d}\ J3^{d}\ P2^{d}\ U^{d}\ C1^{b}\ C2^{b}\ C3^{b}\ C4^{b}\ V1^{b}\ V2^{b}\ V3^{b};\ \dagger\ Ap1^{d}\ C5^{b}\ M^{k}$

- 15. (81,9) vidhi-] K (-*Ch*^d) *C*6^d *J*1^d *J*3^d R S *Ab*^d *Ap*2^d *B*2^d *B*3^d *B*4^d *B*6^d *Ba*2^d *Bo*^d *C*1^b *C*2^b *C*3^b *C*4^b *Ib*1^d *Ib*2^d *Ib*3^d *Jn*1^d *Jn*2^d *Jn*3^d *Jp*3^d *L*1^d *L*2^d *L*3^d *P*3^d *T*1^d *T*2^d *V*1^b *V*2^b *V*3^b *V*5*a*^d *V*5*b*^d; vi[..]<dhi> *Ch*^d; vidhī *Jp*2^d; vividhi *V*4^d; vividha *U*^d; dhi *J*2^d; $\dagger P2^d Ap1^d C5^b K^d M^k T3^d$
- 16. (82,1) sa yad] $P2^{d} M^{k} V2^{b} V3^{b}$; sa yady K $J2^{d} U^{d}$ S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B5^{d} B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib3^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} L1^{d} L2^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V5a^{d} V5b^{d}$; sa yahy $B3^{d}$; samyaty $J1^{d} J3^{d}$; sad yady $L3^{d}$; sady $K^{d} V4^{d}$; say $Jn1^{d}$; sayak Bo^{d} ; samyak* hy $Ib2^{d}$; pra yady $C6^{d}$; na yady $C5^{b}$; † $B1^{d}$
- 17. (82,2) avekşya] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ap1^{d} Ap2^{d} B3^{d} C1^{b} C2^{b} C4^{b} C5^{b} L2^{d} M^{k} P3^{d} V1^{b} V2^{b} V3^{b}$; avyekşya $C3^{b}$; apekşya R S $Ab^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} B0^{d} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L3^{d} T1^{d} T2^{d} T3^{d} V4^{d}$; āpekşya $Ib3^{d}$; apekşā $V5a^{d}$; ... $V5b^{d}$
- 18. (83,1) tu khalu] R S $Ap1^{d} Ab^{d} Ap2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b}$ $Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} P3^{d} T2^{d} T3^{d} V1^{b} V2^{b}$ $V3^{b} V5a^{d} V5b^{d}$; tu [..] khalu $V4^{d}$; tum khalu $Ib3^{d} T1^{d}$; tu khalu punah $J1^{d} J3^{d}$; tu $B2^{d}$; khalu Bo^{d} ; om. K $C6^{d} J2^{d} P2^{d} U^{d} C5^{b} M^{k}$
- 19. (83,2-87,11) ca...-bandha-] K $(-Jp1^d) C6^d J1^d J2^d J3^d P2^d$ R S $Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; tp. Jp1^d Ud
- 20. (84,1) daśavidham tu] S (- Km^d) $Ap1^d Ab^d Ap2^d B1^d B2^d B6^d Ba2^d Bo^d C1^b C2^b C3^b Ib1^d Ib2^d Ib3^d Jn3^d Jp3^d K^d L1^d L2^d M^k P3^d T2^d V1^b V2^b V3^b V4^d$; daśa vidham [ru] tu $B3^d$; tudaśavidha tu $B5^d Jn1^d Jn2^d$; daśavidha ta $Jp2^d$; darśavidham tu $T1^d$; daśavidhām tu $C4^b$; daśavitum Km^d ; daśavidham K (- A^d) $J1^d J2^d J3^d P2^d U^d C5^b$; daśavidhyam $A^d C6^d$; daśabuddhi $T3^d$; daśa vit...daśavidham tu $B4^d L3^d$; om. $V5a^d V5b^d$
- 21. (84,3) kārya-] $J1^d J3^d P2^d$ R S $Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V2^b V3^b V4^d V5a^d V5b^d$; kāryam $Ib2^d$; kāryā $V1^b$; kāyar $Jn3^d$; kā K $C6^d J2^d U^d$
- 22. (84,8f.) pūrveņaivopāya-] K (- A^d) $C6^d J1^d J2^d J3^d P2^d U^d$ S (- Km^d) $Ap1^d Ap2^d B4^d B5^d B6^d Ba2^d Bo^d C1^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d$; pūrve[dyau]<ņai>vopāya Ab^d ; pūrveņaivopārya $A^d B1^d$; pūrveņaivor-

parāya $B3^d$; pūrveņovopāya $C2^b$ $C3^b$; pūrveņopāya $V5a^d$ $V5b^d$; pūrvoņaivopāya Km^d ; † $B2^d$

- 23. (85,2) vyā-] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ap1^{d} Ap2^{d} B2^{d} C1^{b} C2^{b} C3^{b} C4^{b} C5^{b} Jp2^{d} Jp3^{d} M^{k} P3^{d} T3^{d} V1^{b} V2^{b} V3^{b} V5a^{d} V5b^{d}$; nuvyā R S (-Km^d) Ab^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn3^{d} L1^{d} L2^{d} L3^{d} T1^{d} T2^{d} V4^{d}; tuvyā $Jn2^{d}$; + K^d; † Km^d
- 24. (86,2) yaḥ] $A^d C6^d Ch^d J1^d J2^d J3^d P2^d R S Ap1^d Ab^d Ap2^d B2^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; yaḥ / P1^s; ya B3^d; sū yaḥ Jp1^d U^d; va Ib3^d; ca T1^d
- 25. (86,2) yasya] K¹² C6^d J1^d J3^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d L1^d L2^d L3^d P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d; yathā K¹¹ J2^d; ya + K^d M^k; yyasya V5a^d V5b^d
- 26. (86,4) parīkṣeta] K $C6^{d} J2^{d} P2^{d} U^{d} C5^{b} M^{k}$; parīkṣyeta $B3^{d} L2^{d}$; parīkṣeta tad yathā $J1^{d} J3^{d} Ap2^{d} C1^{b} C3^{b} C4^{b} Ib3^{d} Jp2^{d} T1^{d} V1^{b} V2^{b} V3^{b} V5a^{d} V5b^{d}$; parīkṣeta tad yatha $B1^{d}$; parīkṣate tad yathā $P3^{d}$; parīkṣyeta tad yathā $B5^{d} C2^{b} Jn1^{d} Jn2^{d} L1^{d}$; parīkṣyeta tataḥ parīkṣyet tad yathā $B2^{d}$; parīkṣetaṃ tad yathā $Ap1^{d}$; parīkṣet tad yathā S $Ab^{d} B4^{d} Ba2^{d} Ib2^{d} Jp3^{d} L3^{d} T2^{d} T3^{d}$; parīkṣet tad yathā $Ib1^{d}$; parīkṣyet tad yathā $B6^{d} Bo^{d} Jn3^{d} K^{d} V4^{d}$
- 27. (86,5) asya] K (-P1^s) C6^d J1^d J3^d P2^d U^d R S Ap1^d Ap2^d B2^d B3^d B4^d B6^d B0^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d; amya L1^d L2^d; a J2^d P1^s; † Ab^d Ba2^d
- 28. (86,8) paryavadāta-] K¹¹ J2^d J3^d R S (-P4^d) Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b; paryavadātta A^d C6^d; paryavadātu Jp1^d P2^d U^d; paryavadāta Bo^d; paryavādāta Ib3^d; paryavadāta V5^d; † J1^d
- 29. (87,2) bhiṣajo dhātu-] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; bhiṣajo dhātu $C4^{b}$; niṣajo dhātu $T3^{d}$; om. $B3^{d} L2^{d}$
- 30. (87,4) -vyapāśrayam²] K (- $Jp1^d$) $C6^d J1^d J2^d J3^d P2^d U^d S Ap1^d Ab^d Ap2^d B1^d B2^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn3^d Jp2^d K^d L1^d L2^d L3^d P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; vyapāśraṣam $Jp1^d$;

vyapāśraya
ś $B3^d$; vyapīśrayañ $C5^b$; vyavāśraya
m $Jp3^d$; vyāpāśrayam $Ib3^d$; nyapāśryam
 $B5^d$ $Jn1^d$; tyapāśryam $Jn2^d$; †
 M^k

- 31. (87,7f.) ca dṛṣṭaphalāḥ] K (-P1^s) C6^d J1^d J3^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d; ca daṣṭaphalā Ib3^d; caṣṭaphalā J2^d P1^s; ce dṛṣṭaphalāḥ T3^d
- 32. (87,8) caiva] K (-*Ch^d*) *C6^d* J1^d J2^d J3^d P2^d U^d S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B5^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d; ca *Ch^d* L2^d; etra B1^d
- 33. (87,11) -kṣobhaṇa-] K $C6^{d} J1^{d} J3^{d} P2^{d} U^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} B0^{d} C1^{b} C2^{b} C3^{b} C4^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} L1^{d} M^{k} P3^{d} T1^{d} T2^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; kṣobhaṇā $L3^{d}$; kṣobhana $K^{d} L2^{d}$; kṣopana $B3^{d}$; kṣaubhaṇa $T3^{d}$; bhokṣobhaṇa $J2^{d}$
- 34. (87,12f.) copāyābhiplutā iti] ceti $J1^d J3^d \to Ap1^d Ap2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d L1^d P3^d T1^d T2^d T3^d V1^b V2^b V3^b V5a^d V5b^d$; ca $C5^b M^k$; om. K $C6^d J2^d P2^d U^d \oplus Ab^d B2^d B3^d B4^d B6^d Ba2^d Ib2^d Jn3^d K^d L2^d L3^d V4^d$
- 35. (87,15) -nihitam] K¹¹ C6^d J1^d J2^d J3^d P2^d Ap2^d B1^d B2^d B6^d Bo^d C2^b C3^b C5^b Ib3^d Jn3^d Jp3^d K^d L2^d M^k T1^d T3^d V2^b V3^b V4^d V5a^d V5b^d; nihitam evamnihitam K¹² U^d; nihatam Jp2^d; vihitam S Ap1^d Ab^d B3^d B4^d Ba2^d C1^b C4^b Ib1^d Ib2^d L1^d L3^d P3^d T2^d V1^b; † B5^d Jn1^d Jn2^d
- 36. (87,18) bhavet] $Ap1^d Ap2^d C1^b C2^b C3^b C4^b Jp2^d Jp3^d M^k P3^d T3^d V1^b V2^b V3^b V5a^d V5b^d$; abhūt K $C6^d J1^d J2^d J3^d P2^d U^d$ R S (-Ba1^d) $Ab^d B4^d B6^d Ba2^d C5^b Ib2^d Jn1^d Jn2^d Jn3^d K^d L1^d L2^d L3^d T1^d$; abhū Ba1^d Bo^d Ib1^d Ib3^d T2^d V4^d; om. $B3^d$; † $B2^d$
- 37. (89,4) abhyava-] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} R S Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C4^{b} C5^{b} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; a[...]bhyava $L2^{d}$; bhya $C2^{b} C3^{b}$; 'py ava $Ib3^{d}$; cāsvava $B3^{d}$
- 38. (89,4) -hṛtasya] K (- A^d) $JI^d J2^d P2^d U^d$ S $Ab^d Ap2^d B1^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn3^d Jp2^d Jp3^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; hṛtatasya $B5^d Jn2^d L1^d$; hṛtasyar $B3^d$; (hṛ)m̄tatasya $Jn1^d$; hyatasya $J3^d$; hatasyā $A^d C6^d B2^d Bo^d K^d$; hṛtasya $Ap1^d$
- **39.** (89,5) ca] $J1^d J3^d \ge Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba1^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp3^d K^d L1^d L3^d P3^d T1^d T2^d$

 $V1^b~V2^b~V3^b~V4^d~V5a^d~V5b^d;~om.$ K $C6^d~J2^d~P2^d~U^d$ S (-Ba1^d) $C5^b~Jp2^d~L2^d~M^k~T3^d$

- 40. (93,1) ātura-] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ S $Ap1^{d} Ab^{d} Ap2^{d} B1^{d} B2^{d} B3^{d} B4^{d}$ $B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d}$ $L1^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d};$ ātu[pa]<ra> $B5^{d};$ āturam $Bo^{d};$ āturasya $C5^{b} M^{k};$ ātu $V5a^{d} V5b^{d};$ āyura U^{d}
- 41. (93,6) etāvac ca] $J1^{d} J3^{d} Ap1^{d} Ap2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Jp2^{d} V1^{b} V2^{b} V3^{b}$; etāvad ya $Jp3^{d}$; etāvad $P2^{d}$ R S $Ab^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} K^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} V4^{d} V5a^{d} V5b^{d}$; etād $Ib1^{d}$; evātad $L1^{d}$; etad K $C6^{d} J2^{d} U^{d} C5^{b} M^{k}$; † $T3^{d}$
- 42. (93,8) idam¹] K (-P1^s) $C6^{d} J1^{d} J3^{d} P2^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; itam U^{d} ; irup $J2^{d} P1^{s}$
- 43. (94,3) iyam] K (- $Jp1^d$) $C6^d J1^d J2^d J3^d P2^d$ R S $Ap1^d Ab^d Ap2^d B2^d B3^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp3^d L1^d L2^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b$; iyā.. $C5^b$; eyam $B4^d L3^d$; iyam ś ca... bamdha $Jp1^d U^d$; † $Bo^d Jp2^d K^d V4^d V5a^d V5b^d$
- 44. (94,11) uttarottara-] K (JpI^{d}) $C6^{d}$ $J1^{d}$ $J2^{d}$ $J3^{d}$ $P2^{d}$ U^{d} S ($P4^{d}$) $Ap1^{d}$ Ab^{d} $Ap2^{d}$ $B1^{d}$ $B2^{d}$ $B3^{d}$ $B4^{d}$ $B6^{d}$ $Ba2^{d}$ Bo^{d} $C1^{b}$ $C2^{b}$ $C3^{b}$ $C4^{b}$ $C5^{b}$ $Ib1^{d}$ $Ib2^{d}$ $Ib3^{d}$ $Jn3^{d}$ $Jp3^{d}$ K^{d} $L1^{d}$ $L2^{d}$ $L3^{d}$ M^{k} $P3^{d}$ $T1^{d}$ $T2^{d}$ $V1^{b}$ $V2^{b}$ $V3^{b}$ $V4^{d}$; uttarottarā $B5^{d}$ $Jn1^{d}$ $Jn2^{d}$; uttarottarottara $Jp1^{d}$; utarautara $V5a^{d}$ $V5b^{d}$; tarottara $P4^{d}$; † $Jp2^{d}$ $T3^{d}$
- 45. (94,11) avibhramair] K (-P1^s) C6^d J1^d J3^d P2^d U^d S Ap1^d Ab^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn2^d Jn3^d Jp3^d K^d L2^d L3^d M^k P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d; avibhramer Jn1^d; avibhrāmer B1^d; avikramair J2^d P1^s; aviśramair L1^d; vimbhramaiḥr B3^d; † Jp2^d T3^d
- 46. (94,11f.) auşadhaih] K¹¹ C6^d J1^d J2^d J3^d P2^d U^d S Ap1^d Ab^d Ap2^d B2^d B3^d B3^d B5^d B6^d Ba2^d Bo^d C1^b C4^b C5^b Ib1^d Ib2^d Ib3^d Jn1^d Jn3^d Jp3^d K^d L1^d L2^d L3^d M^k T1^d T2^d V1^b V2^b V3^b V4^d; auşa[s]dhaih Jp1^d; auşadhaur A^d; auşadhadhaih C2^b C3^b; auşadhi Jn2^d; oşadhai B1^d P3^d; † Jp2^d T3^d V5a^d V5b^d
- 47. (94,18) vyāyāmaśaktitaś ca] $JI^{d} JpI^{d} P2^{d} U^{d} R S ApI^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} C5^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}; om. K (-Jp1^{d}) C6^{d} J2^{d} J3^{d} Ab^{d} Ba2^{d}; \dagger Jp2^{d}$
- 48. (94,19) -viśesagrahana-] J3^d R S (-Ba1^d) Ap1^d Ab^d Ap2^d B2^d B3^d B6^d

Bo^d C1^b C2^b C3^b C4^b C5^b Ib2^d Ib3^d Jn1^d Jn2^d Jp3^d K^d L1^d L2^d M^k T1^d T3^d V1^b V2^b V3^b V4^d; viśeşagrahaṇam Ba1^d Ba2^d Ib1^d T2^d; viśeṣagrahaṇa B4^d L3^d; viśeṣagrahaṇa Jn3^d; viśeṣāgrahaṇa P3^d; vaśeṣagnahaṇa V5a^d V5b^d; grahaṇaviśeṣa K C6^d J1^d J2^d P2^d U^d; † Jp2^d

- 49. (96,8) sārādhisthitāvasthita-] K $C6^d J2^d P2^d U^d$ S $Ap1^d Ab^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d L2^d L3^d T2^d V5a^d V5b^d$; sārādhisthitāvasthitā $P3^d$; sārādhisthitāvasthiti $B3^d$; sārādhistitāvasthitā $V4^d$; sārādhistitāvasphita $T3^d$; sārādhistitāvastha $Ib3^d T1^d$; sāsadhistitāvasthita $J1^d J3^d$; sādhistitāvasthita $L1^d$; sādhurādhisthitāvasthita $B1^d C1^b C2^b C3^b C4^b M^k V1^b V2^b V3^b$; † $C5^b Jp3^d$
- 50. (96,9) alpa-] K (- A^d) $J1^d J2^d J3^d P2^d U^d$ S $Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Jn3^d Jp2^d K^d L2^d L3^d M^k P3^d T2^d T3^d V1^b V2^b V3^b V4^d$; ala $V5a^d V5b^d$; ilpa $A^d C6^d$; cālpa $B1^d Bo^d Ib3^d T1^d$; cātya $Jn1^d$; cātya $Jn2^d$; cātpa $B5^d$; trālu $L1^d$; a $Ib2^d$; † $C5^b Jp3^d$
- 51. (96,11) prasanna-] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d}$; prasannāt $P3^{d}$; prasakta U^{d} ; pratyanna $V5a^{d} V5b^{d}$; trisanna Bo^{d} ; $om. Jp2^{d}$; $\dagger C5^{b} Jp3^{d}$
- 52. (97,4) -pipāsāvantah] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d}$ $B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} C1^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d}$ $L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T2^{d} V1^{b} V2^{b} V3^{b}$; pipāsāvantaś ca $C2^{b}$; pipāsāmvamta $T3^{d}$; pipāsāvatah Bo^{d} ; pipāsāvam ūlah $V4^{d}$; pipāsādivamtah $Ib3^{d} T1^{d}$; + pāsāvamtah K^{d} ; † $C5^{b} V5a^{d} V5b^{d}$
- 53. (97,8) prabhūta-] $Ap1^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} M^{k} V1^{b} V2^{b} V3^{b}$; prabhūta [śukra-... .u.i(ṣṭa)] $P3^{d}$; pratata K $C6^{d} J1^{d} J2^{d} U^{d}$ S $Ab^{d} B3^{d} B4^{d} B5^{d}$ $B6^{d} Ba2^{d} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} T1^{d} T2^{d}$ $T3^{d} V4^{d}$; pratati $J3^{d}$; prata $B1^{d} B2^{d}$; pracatata $Jp2^{d}$; prabhūtapratata $Ap2^{d}$; om. $P2^{d} V5a^{d} V5b^{d}$; † $C5^{b}$
- 54. (98,7) -samārambha-] $A^d \ C6^d \ J1^d \ J3^d \ C2^b \ C3^b \ Ib3^d \ M^k \ T1^d \ V2^b \ V3^b$; bhīmārambha K (- A^d) $J2^d \ P2^d \ U^d$ S $Ap1^d \ Ab^d \ Ap2^d \ B4^d \ B6^d \ Ba2^d \ C4^b \ Ib1^d \ Ib2^d \ Jn3^d \ Jp3^d \ L2^d \ L3^d \ P3^d \ T2^d$; bhīmārambhā K^d ; bhīmāramla $B3^d$; bhimārambha $V4^d$; bhāmārambha $B2^d$; bhāvārambha $Jp2^d$; mārambha $C1^b \ L1^d \ T3^d \ V1^b \ V5a^d \ V5b^d$; mārambhā R $Jn1^d \ Jn2^d$; ārabha Bo^d ; † $C5^b$
- 55. (98,7f.) sīghra-...-virāgāh] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R S $Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; om. Ap1^{d} B3^{d} P3^{d}; † C5^b

- 56. (98,10) paruṣa-] K $C6^d J1^d J2^d J3^d U^d$ S $Ab^d Ap2^d B2^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Ib3^d Jn3^d Jp2^d K^d L1^d L3^d M^k T1^d T2^d T3^d V1^b V2^b V3^b V4^d$; paruṣya $Ib2^d$; pāruṣa $B5^d Jn1^d Jn2^d$; pāruṣā $B1^d$; puruṣa $P2^d$; paruṣasphuțita $Ap1^d B3^d Jp3^d L2^d P3^d$; paraṣasphuțita $V5a^d V5b^d$; paruṣye sphuțita Bo^d ; † $C5^b$
- 57. (101,1) tatra] K (-P1^s) C6^d J3^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d; bhavanti J1^d; om. J2^d P1^s; † B4^d C5^b L3^d V5a^d V5b^d
- 58. (101,2) -doşadūşya-] S (-P4^d) Ap1^d Ab^d B3^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Jp3^d K^d L2^d M^k P3^d T2^d V1^b V2^b V3^b V4^d; doşavūşya Jn3^d; doşādūşya Ib2^d; doşe dūşya B2^d; dauşapradūşya Ap2^d; dūşyadoşa K (-A^d) J1^d J3^d P2^d U^d R Bo^d Jn1^d Jn2^d Jp2^d L1^d T3^d; dūşyadoşā J2^d; dūşyadoşya A^d; dūşyadoşva C6^d; rūkşyadoşa Ib3^d T1^d; dūşya† P4^d; † B4^d C5^b L3^d V5a^d V5b^d
- 59. (101,3) hy] K¹¹ C6^d J1^d J2^d J3^d P2^d S Ap1^d Ab^d Ap2^d B1^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d; gh A^d; yaty L1^d; om. Jp3^d; dy B5^d; † Jp1^d U^d C5^b
- 60. (103,1) tatra] K $(-Jp1^d) C6^d J1^d J2^d J3^d$ S $Ap1^d Ab^d Ap2^d B1^d B2^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; tatrā $Jp1^d P2^d U^d T3^d$; matra $B5^d Jn1^d Jn2^d$; † $C5^b$
- 61. (103,2) -sārāņām] $C6^{d} Ch^{d} J1^{d} J3^{d} Jp1^{d} P2^{d} Ab^{d} Ap2^{d} B1^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C2^{b} C3^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d}$; sārāņām^a Jp3^{d}; sārāņo Ba1^d; sāmrāņām B5^d; sarāņām A^d; sasārāņām C1^b C4^b; lārāņām Km^d; yārāņām U^d; alāņyaņa P4^d; jñārāņām* V5a^{d} V5b^{d}; om. J2^d P1^s; † Ap1^d C5^b
- 62. (104,4) akleśasahiṣṇutvam] akleśa K (-P1^s) $C6^{d} P2^{d} U^{d}$ S (-Ba1^d) $Ab^{d} Ap2^{d} B2^{d} B3^{d} B5^{d} Ba2^{d} Bo^{d} Ib3^{d} Jn2^{d} Jp2^{d} Jp3^{d} L1^{d} L2^{d} M^{k} P3^{d} T1^{d} V5b^{d}$; akleśam $J1^{d} J2^{d} J3^{d} P1^{s}$; akreśa $Ba1^{d} Ib1^{d} T2^{d}$; akeśa $V5a^{d}$; [a]<uṣṇā>kleśa[...] $V2^{b}$; kleśa $B1^{d}$; a 139; om. $Ap1^{d} C1^{b} C2^{b} C3^{b} C4^{b} V1^{b} V3^{b}$; † $B4^{d} B6^{d} C5^{b} Jn1^{d} Jn3^{d} K^{d} L3^{d} T3^{d} V4^{d}$
- 63. (104,4) uṣṇāsahiṣṇutvaṃ] uṣṇāsahiṣṇutāṃ $C1^b C2^b C3^b V1^b V3^b$; aṣṇośasahiṣṇutāṃ $Ap1^d$; sahiṣṇutvaṃ K (- $P1^s$) $P2^d U^d M^k$; sahiṣṇavatvaṃ $C6^d$; sahiṣṇutāṃ S $Ab^d Ap2^d B1^d B2^d Ba2^d Bo^d Ib1^d Ib2^d Ib3^d Jp3^d L1^d L2^d T1^d T2^d V2^b$; sahiṣṇutā $B3^d B5^d Jn2^d Jp2^d P3^d$; sahiśrutā $V5a^d V5b^d$; śahiṣṇutāṃ $C4^b$; asahiṣṇutvaṃ $J1^d J2^d P1^s$; a<uṣṇāsa>sahiṣṇutvaṃ $J3^d$; † $B4^d B6^d C5^b Jn1^d Jn3^d K^d L3^d T3^d V4^d$

- 64. (105,1) -lalāța-] K (- $Jp1^{d}$) $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ R S $Ap1^{d} Ab^{d} B3^{d} Ba2^{d}$ Bo^d $C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn2^{d} Jp2^{d} Jp3^{d} L1^{d} L2^{d} M^{k} T1^{d} T2^{d} T3^{d}$ $V2^{b} V3^{b} V5a^{d} V5b^{d}$; <la>lāța $B2^{d}$; lalāțam $Ap2^{d} C1^{b} V1^{b}$; lalāla $P3^{d}$; latāța $Jp1^{d} U^{d}$; † $B4^{d} B6^{d} C5^{b} Jn1^{d} Jn3^{d} K^{d} L3^{d} V4^{d}$
- 65. (105,2) -guruśubha-] $M^k V2^b V3^b$; guru R $Ab^d Ap2^d B2^d B4^d B6^d Ba1^d Ba2^d Bo^d C1^b Ib1^d Ib2^d Ib3^d Jn2^d Jn3^d K^d L2^d L3^d T1^d T2^d V4^d$; (gu)ru $Jp2^d$; gurū $L1^d$; muru $T3^d$; śubha K $C6^d J1^d J2^d J3^d P2^d U^d Ap1^d B3^d C2^b C3^b C4^b P3^d V1^b$; subha $Jp3^d$; damta $V5a^d V5b^d$; † S (-Ba1^d) C5^b Jn1^d
- 66. (106,1) -keśa-] K (-P1^s) $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba1^{d} Ba2^{d} B0^{d} C1^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; kela $P1^{s}$; † S (-Ba1^{d}) $C2^{b} C3^{b} C5^{b}$
- 67. (107,3-108,2) kleśasahāh...balavantah] $A^{d} C6^{d} Ch^{d} J1^{d} J3^{d} P2^{d} \mathcal{R} Ap1^{d}$ $Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} Ba1^{d} Ba2^{d} Bo^{d} C1^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d}$ $Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d}$ $V5a^{d} V5b^{d}$; om. $Jp1^{d} U^{d}$; $\dagger J2^{d} P1^{s} \mathcal{S}$ (-Ba1^{d}) B6^{d} C2^{b} C3^{b} C5^{b}
- 68. (108,1) -dīrgha-] $A^{d} C6^{d} Ch^{d} J1^{d} J3^{d} P2^{d} \mathbb{R} Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba1^{d} Ba2^{d} Bo^{d} C1^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} L1^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V5a^{d} V5b^{d}$; vrtta $B3^{d} L2^{d}$; † $J2^{d} Jp1^{d} P1^{s} U^{d} \mathbb{S}$ (-Ba1^{d}) $C2^{b} C3^{b} C5^{b} K^{d} V4^{d}$
- $\begin{array}{l} 69. \ (108,2) \ \text{-vrtta-]} \ A^d \ C6^d \ Ch^d \ J1^d \ J3^d \ P2^d \ Ap1^d \ Ab^d \ Ap2^d \ B2^d \ B4^d \ B5^d \ B6^d \\ Bo^d \ C1^b \ C4^b \ Ib1^d \ Ib2^d \ Ib3^d \ Jn2^d \ Jn3^d \ Jp2^d \ Jp3^d \ L1^d \ L3^d \ M^k \ P3^d \ T1^d \ T2^d \\ T3^d \ V1^b \ V3^b \ V5a^d \ V5b^d; \ \text{vrtta} \ V2^b; \ \text{vrttam} \ Ba1^d \ Ba2^d; \ \text{vrta} \ B1^d \ Jn1^d; \\ d\bar{1}rgha \ B3^d \ L2^d; \ \dagger \ J2^d \ Jp1^d \ P1^s \ U^d \ \mathrm{S} \ (-Ba1^d) \ C2^b \ C3^b \ C5^b \ K^d \ V4^d \end{array}$
- 70. (109,2) -śikhara-] K (- A^d) $C6^d J1^d J2^d J3^d P2^d U^d$ S $Ap1^d Ab^d B3^d B5^d Ba2^d Bo^d C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d K^d L1^d L2^d M^k T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; śikhadana $Jp3^d$; śisvara A^d ; śirasvara $P3^d$; śisara $Ap2^d Jp2^d$; sikhara $B1^d B2^d B4^d C1^b Jn3^d L3^d$; vikhara $B6^d$; † $C2^b C3^b C5^b T3^d$
- 71. (109,4) balavantah] K (-*Ch*^d) *C*6^d *J*2^d *J*3^d *P*2^d *U*^d R S (-*Ba1*^d) *Ap1*^d *Ab*^d *Ap2*^d *B2*^d *B3*^d *B4*^d *B*6^d *Ba2*^d *C1*^b *C4*^b *Ib1*^d *Ib2*^d *Ib3*^d *Jn1*^d *Jn2*^d *Jn3*^d *Jp2*^d *Jp3*^d *K*^d *L1*^d *L3*^d *P3*^d *T1*^d *T2*^d *T3*^d *V1*^b *V2*^b *V3*^b *V4*^d *V5a*^d *V5b*^d; balavantaś ca *Ch*^d *L2*^d; balavaṃtah // *M*^k; balavatah *J1*^d *Ba1*^d *Bo*^d; † *C2*^b *C3*^b *C5*^b
- 72. (117,5) catur-] K (- $Jp1^{d}$) C6^d J2^d J3^d P2^d R S $Ap1^{d}$ Ab^d Ap2^d B3^d B4^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d; casur Jp1^d U^d; † J1^d B2^d B6^d C5^b

- 73. (117,13) skandhau] $J3^d P2^d R Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn3^d Jp2^d K^d L1^d L2^d L3^d M^k P3^d P4^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; skandau K (- A^d) C6^d J1^d J2^d U^d; skam(d)ai A^d ; skadhau Jn2^d Km^d; kamdhau Ba1^d; † C5^b Jp3^d
- 74. (117,14) şodaśāngulau] K (-P1^s) C6^d J1^d J3^d U^d S Ab^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d B0^d C1^b C2^b C3^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d L1^d L3^d M^k T2^d T3^d V2^b V3^b V4^d; şodaśangulau C4^b V1^b; şodaśomgulau T1^d; şodašamgulau B1^d; şodaśagulau K^d; şodaśakau Ap1^d B3^d L2^d P3^d V5a^d V5b^d; şādaśāngulau P2^d; şadaśāngulau J2^d P1^s; † C5^b Jp3^d
- 75. (117,16) aşţādaśāngulot-] $J3^d P2^d U^d$ S $Ap1^d Ab^d B2^d B3^d B5^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn1^d Jn2^d L1^d L2^d M^k P3^d T1^d V1^b V2^b V3^b$; aşţādaśāmgulaut C6^d Ib3^d V5a^d V5b^d; aşţādadašāmgulot T3^d; aşţāmdaśāmgulot A^d ; aşţāmdaśāmgulot T2^d; a[sţau]<sţā>vaśāgulot J1^d; aṣţāngulot K¹¹ J2^d; daśāmgulenot $Jp3^d$; $\dagger Jp1^d Ap2^d B1^d B4^d B6^d C5^b Jn3^d Jp2^d K^d L3^d V4^d$
- 76. (117,18) -pariņāham] K $C6^{d} J2^{d} P2^{d} U^{d}$ S (- $P4^{d}$) $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B5^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} V1^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; pariņāhamm $Jn2^{d}$; pariņāhām $C3^{b}$; pariņāmam $T3^{d}$; parimāņam $J1^{d} J3^{d}$; parīņāham $P4^{d}$; vistārapariņāham $V2^{b}$; $\dagger J2^{d} Jp1^{d} P1^{s} U^{d} B1^{d} C5^{b} T3^{d}$
- 77. (117,23) -samam] $Ch^d Ib2^d Ib3^d K^d M^k P3^d V2^b V3^b V4^d V5a^d V5b^d$; samam samam $J2^d P1^s$ S $Ap2^d B1^d B2^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Jn2^d Jp2^d Jp3^d L1^d L2^d L3^d T1^d T2^d$; samam sama[...]m Ab^d ; samam samamam $B3^d$; samam samam samam $B5^d Jn1^d$; samasamam $Ap1^d Jn3^d$; samasamam $V1^b$; sampusamam $T3^d$; phalasamam samam $J1^d J3^d$; $\dagger C5^b$
- 78. (117,23) tatrāyur] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ap1^{d} Ap2^{d} B1^{d} B3^{d} B0^{d}$ $C1^{b} C2^{b} C3^{b} C4^{b} Ib3^{d} Jp3^{d} L1^{d} L2^{d} M^{k} P3^{d} P4^{d} T1^{d} T3^{d} V1^{b} V2^{b} V3^{b} V5a^{d}$ $V5b^{d}$; tatrāyu $Jn2^{d}$; tatrāryur $Jp2^{d}$; tatra cāyur S (-P4^{d}) B6^{d} Ba2^{d} Ib1^{d} $Ib2^{d} Jn3^{d} K^{d} T2^{d}$; tatra vāyur $B2^{d} V4^{d}$; tatra cāturya Ab^{d} ; tatrā cāyur $B4^{d}$; tatram cāyur $L3^{d}$; kṛtrāyur $B5^{d} Jn1^{d}$; † $C5^{b}$
- 79. (118,1) tad] K $C6^{d} J1^{d} J2^{d} J3^{d} U^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} B0^{d} C1^{b} C4^{b} Ib1^{d} Ib3^{d} Jn1^{d} Jn2^{d} L1^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} V1^{b} V2^{b} V3^{b} V4^{d}$; ta $Jp2^{d} T3^{d}$; tata $Jn3^{d} K^{d}$; tam $C2^{b} C3^{b} L2^{d}$; tād $P2^{d}$; yat $B2^{d} Ib2^{d}$; vad $V5a^{d} V5b^{d}$; om. $Jp3^{d}$; † $C5^{b}$
- 80. (118,1) yat] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ S $Ap1^{d} Ab^{d} Ap2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C4^{b} Ib1^{d} Ib3^{d} Jp2^{d} Jp3^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V4^{d} V5a^{d} V5b^{d};$

yad yat $B3^d$; yata $Jn3^d K^d$; tat $B2^d Ib2^d$; vat $U^d C1^b$; ut* $C2^b C3^b L2^d$; om. R $Jn1^d Jn2^d L1^d V3^b$; † $C5^b$

- 81. (118,6 f.) tu ye te] K ($-Jp1^{d}$) $C6^{d} J1^{d} J2^{d} J3^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} B0^{d} C1^{b}$ $C2^{b} C3^{b} C4^{b} Jn3^{d} Jp2^{d} Jp3^{d} L1^{d} L3^{d} M^{k} T3^{d} V1^{b}$; tu ye tu $Jp1^{d} P2^{d} U^{d}$; tu ye $Ap1^{d} P3^{d}$; tu ete $V5a^{d} V5b^{d}$; tava $L2^{d}$; ca ye te $Ba1^{d} Ba2^{d} Ib1^{d}$ $Ib2^{d} Ib3^{d} K^{d} T1^{d} T2^{d} V2^{b} V4^{d}$; ca ya te $P4^{d}$; ca (ta) ye te $V3^{b}$; caryate Km^{d} ; ca te Ab^{d} ; ca $B3^{d}$; $\dagger \mathbb{R} C5^{b} Jn1^{d} Jn2^{d}$
- 82. (119,7) upanidhāya] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ap1^{d} Ap2^{d} Bo^{d} Jp2^{d} Jp3^{d} L2^{d} M^{k} P3^{d} V5a^{d} V5b^{d}$; upanidhāyo $C1^{b} C2^{b} C3^{b} C4^{b} V1^{b} V3^{b}$; upadhinidhāya $B3^{d}$; upadhāya R S (-Ba1^{d}) B2^{d} B4^{d} B6^{d} Jn1^{d} Jn2^{d} Jn3^{d} L1^{d} L3^{d}; upadāya $Ab^{d} Ba2^{d} Ib1^{d} Ib2^{d} T2^{d}$; upadāyam $Ba1^{d}$; upasamdhāya $Ib3^{d} T1^{d}$; apanidhāya $V2^{b}$; apadhāya $K^{d} V4^{d}$; u⁻⁻⁻ $T3^{d}$; † $C5^{b}$
- 83. (119,10) hy api] $Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B5^{d} B6^{d} Ba1^{d} Ba2^{d} Bo^{d} C1^{b} Ib1^{d}$ $Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d}$ $V1^{b} V2^{b} V3^{b} V4^{d}$; hy api hi $C2^{b} C3^{b}$; hy api ha $C4^{b}$; hāpi $B1^{d}$; sapi S (-Ba1^{d}); api hi $Ap1^{d}$; api K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$; † $C5^{b} V5a^{d} V5b^{d}$
- 84. (119,14f.) āpnuvanty] M^k ; avāpnuvanty K (- A^d) $J1^d J3^d P2^d U^d$ R S $Ab^d Ap2^d B2^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn1^d Jn2^d$ $Jn3^d Jp2^d Jp3^d K^d L1^d L3^d T1^d T2^d V1^b V2^b V3^b V4^d$; avāpluvamty $Ib3^d$; avāpumvamti $T3^d$; avāyuvanti $A^d C6^d$; avāmuvanty $J2^d$; $tp. Ap1^d B3^d$ $L2^d P3^d$; $\dagger C5^b V5a^d V5b^d$
- 85. (120,1) abhyavaharaṇa-] K (-A^d) J1^d J2^d J3^d P2^d U^d R Jn1^d Jn2^d Jp3^d L2^d M^k V2^b; abhyavaharaṇahāryya C1^b V1^b; abhyavaharaṇā A^d C6^d; abhyavahara Jp2^d; abhyavahāraṇa Ib3^d T1^d; abhyavahāra L1^d T3^d V3^b; abhyavahārya S Ap1^d Ab^d Ap2^d B4^d B6^d Ba2^d Bo^d C2^b C3^b C4^b Ib1^d Ib2^d Jn3^d L3^d P3^d T2^d V5a^d V5b^d; abhyavahār[yā]<ya> B2^d; avahārya K^d V4^d; svavahārya B3^d; † C5^b
- 86. (122,2) yathāsthūla-] K $C6^d J1^d J2^d J3^d P2^d U^d$ S $Ap1^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d B0^d C1^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d P3^d T1^d T2^d V1^b V4^d$; yathāsthūlam $B1^d$; yathā (a)sthūla Ab^d ; yathāsthalam $B3^d$; yathāstvana $C2^b C3^b$; yathāvasthāna $M^k V2^b V3^b$; yasāka $T3^d$; $\dagger C5^b V5a^d V5b^d$
- 87. (122,3) bālam] $JI^d J3^d P2^d \mathbb{R} \mathbb{S} ApI^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; bāla[m]<m> Ch^d ; bāla K¹² U^d; balam J2^d P1^s; bālu C6^d; † C5^b Jp3^d
- 88. (122,3f.) aparipakva-] $J1^d J3^d$ S $Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d$

 $V1^b V2^b V4^d V5a^d V5b^d$; aparipaka $B1^d$; aparipaka $Jn3^d$; aparikr $Jp2^d$; aparikvām $B5^d$; apariphā $Jn2^d$; apari $Jn1^d$; apakva $P2^d$; aripakṣa $V3^b$; pakva K (- A^d) $J2^d U^d$; padhva $A^d C6^d$; † $C5^b Jp3^d$

- 89. (122,4) -dhātum] S (-P4^d) $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B5^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} K^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; dhātv K (-Ch^d) C6^d J1^{d} J2^{d} J3^{d} P2^{d} U^{d}; dhātu Ch^d; dhātuguņam M^k; dhātum adhātuņm P4^d; dhātununamam L1^d; dhānum B1^d; vārum Ib3^d; † C5^b Jp3^d
- 90. (122,14) asmin] K $C6^{d} J2^{d} P2^{d} U^{d}$ R $Ap2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib3^{d} Jn1^{d} Jn2^{d} Jp2^{d} Jp3^{d} L1^{d} L2^{d} M^{k} P3^{d} T1^{d} T3^{d} V3^{b}$; asmin^a $B3^{d}$; asmin^a $V1^{b}$; smin $Ba1^{d}$; yasmin $Ab^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Ib1^{d} Ib2^{d} Jn3^{d} K^{d} L3^{d} P4^{d} T2^{d} V4^{d}$; yasmit Km^{d} ; cāsmin $Bo^{d} V5a^{d} V5b^{d}$; avasthitam tasmin $J1^{d} J3^{d}$; asthit $Ap1^{d}$; om. $V2^{b}$; $\dagger C5^{b}$
- 91. (123,1f.) evam...vibhajet] $K^{12} C6^d J1^d J3^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; om. $K^{11} J2^d$; † C5^b
- 92. (123,1) evam prakrtyādīnām] $J1^d J3^d$ S $Ap1^d Ab^d Ap2^d B1^d B2^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d V1^b V2^b V4^d V5a^d V5b^d$; evam prakrtyādīnā $T2^d$; evam prakrtyādānām $B5^d Jn1^d$; evam prakrtyādīnām $Ib3^d T1^d$; evam pratyādīnām $V3^b$; evam prantatyādīnām $T3^d$; eva prakrtyādīnām $B3^d$; om. K¹² C6^d P2^d U^d; † K¹¹ J2^d C5^b
- 93. (125,2) șoḍhā] K (- $Jp1^d$) $C6^d J1^d J2^d P2^d$ S $Ap1^d Ab^d B2^d B3^d B4^d B6^d Ba2^d C2^b C3^b C4^b Ib2^d Ib3^d Jn3^d Jp2^d Jp3^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d$; [dā]șoḍhā Bo^d ; șoḍhī L1^d; șoḍā $Ap2^d Ib1^d K^d$; șoḍa $Jp1^d V5a^d V5b^d$; șodvā $J3^d$; șoḍaśa U^d ; śo[..]<..> $C1^b$; † R $C5^b Jn1^d Jn2^d$
- 94. (125,6f.) bhavanti...;tavah] $J1^d J3^d P2^d \mathbb{R} \mathbb{S} Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d M^k P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; om. K C6^d J2^d U^d; † C5^b
- 95. (125,7) prāvņd] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} Ap1^{d} Ap2^{d} B3^{d} C1^{b} C2^{b} C3^{b} C4^{b} Jp3^{d} M^{k} P3^{d} V1^{b} V2^{b} V3^{b}$; tatra prāvņd R S $Ab^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} B0^{d} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} L1^{d} L3^{d} T1^{d} T2^{d} V4^{d}$; tatra prāvņh $T3^{d}$; tatra prāvņd $L2^{d}$; tatra prāvad $V5a^{d} V5b^{d}$; tatra pr. + + K^{d} ; † $C5^{b} Jp2^{d}$
- 96. (125,7) prathamah] K $C6^d J1^d J2^d J3^d P2^d U^d R B2^d C2^b Ib3^d Jn1^d Jn2^d$

 $L1^{d} L2^{d} M^{k} T1^{d} V1^{b} V2^{b} V4^{d} V5a^{d} V5b^{d}$; prathamam $Ib2^{d}$; prathama S $Ab^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C4^{b} Ib1^{d} Jn3^{d} Jp3^{d} L3^{d} P3^{d} T2^{d} V3^{b}$; [pta]<pra>thamā $T3^{d}$; pradeśa $Ap1^{d} Ap2^{d} B3^{d}$; prapathamaḥ $C3^{b}$; + thamaḥ K^{d} ; † $C5^{b} Jp2^{d}$

- 97. (126,2) vidhīyate nivŗttir] K (- A^d) $C6^d J1^d J2^d J3^d P2^d U^d Ab^d Ap2^d B3^d B5^d B6^d Ba1^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d K^d L1^d L2^d M^k P3^d T1^d T2^d V1^b V2^b V3^b V4^d$; vidhīyate nivŗtt $L3^d$; vidhīyate nivŗttr $B4^d$; vidhīyate nivŗttir $Ap1^d$; bibidhīyate nivŗttir $B1^d$; sidhīyate nivŗttir A^d ; abhidhīyate nivŗttir $Jp3^d T3^d$; vir Km^d ; om. $B2^d P4^d$; † $C5^b Jp2^d V5a^d V5b^d$
- 98. (127,16) guru-] K ($Jp1^{d}$) $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} M^{k} P3^{d} T1^{d} T2^{d} T3^{d} V2^{b} V3^{b} V4^{d}$; gura $Jp2^{d}$; guna U^{d} ; gu $Jp1^{d}$; garu $V1^{b}$; $\dagger C5^{b} V5a^{d} V5b^{d}$
- 99. (127,17) varṣānteṣv] M^k ; varṣābhāgānteṣv S $Ab^d Ap2^d B2^d B3^d B4^d B5^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Jn1^d Jn3^d K^d L1^d L2^d L3^d P3^d T1^d T2^d V1^b V2^b V3^b V4^d V5b^d$; varṣābhāgāntesu $Ib2^d$; varṣābhāgāntes $Ib3^d V5a^d$; varṣābhāgāmtebhya $J3^d Jp1^d P2^d$; varṣābhāgāmtebhya[śa] U^d ; barṣābhāgāmtebu $B1^d$; varṣābhāgāntedh $Jn2^d$; varṣābhāgāt tebhya K $(-Jp1^d) C6^d J1^d J2^d$; varṣābhāgāmtekṣu $Jp3^d$; varṣābhāgā(ī)ta $Jp2^d$; varṣānānaṇa[m] $^-T3^d$; vadhībhāgāmte(ṣv) $Ap1^d$; $\dagger C5^b$
- 100. (127,17) rtuşu] S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} Ib1^{d} Ib2^{d} Ib3^{d}$ $Jn3^{d} K^{d} L2^{d} M^{k} P3^{d} T1^{d} T2^{d} V2^{b} V3^{b} V4^{d} V5b^{d}; [(tsa)] < r > tuşu B3^{d}; rtu$ $C1^{b} C4^{b} V1^{b}; dhrtu Jp2^{d}; rtuşta B5^{d} Jn2^{d}; atuşu V5a^{d}; dhātupye B1^{d};$ trşu $Jp3^{d};$ tuşta $Jn1^{d};$ ruşu $L3^{d};$ daţutuşu $T3^{d};$ rtubhyo K $(-A^{d}) J1^{d}$ $J2^{d} J3^{d} P2^{d} U^{d};$ atubhyo rpu $L1^{d};$ tu $C2^{b} C3^{b};$ om. $A^{d} C6^{d};$ † $C5^{b}$
- 101. (127,20f.) pramāņa-] $JI^d J3^d$ S $Ab^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L3^d M^k T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; pravaņa $P2^d$; praņā $L1^d$; prāņa K (- $Jp1^d$) $C6^d J2^d Ap1^d B3^d Jp3^d L2^d$; prāņā $P3^d$; mā[ņa]ņa Bo^d ; thāsyāmaprāņa $Jp1^d U^d$; ---- ņa $B1^d$; † $C5^b$
- 102. (129,2) -auṣadhātura-] S (- $P4^d$) $Ap1^d Ap2^d B2^d B3^d B4^d B6^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn3^d K^d L2^d L3^d P3^d T2^d V1^b V2^b V3^b$; auṣadhāturasya $P4^d$; auṣadhātu T3^d; audhāṣatura $V5a^d V5b^d$; audhātura $V4^d$; āturauṣadha K (- Ch^d) $C6^d J3^d P2^d U^d B5^d B0^d Jn1^d Jn2^d Jp3^d L1^d M^k T1^d$; āturoṣadha Ch^d ; ātura Ab^d ; ānuroṣadha $Ib3^d$; aturauṣadha J1^d; dhātura $Ba2^d$; † $J2^d B1^d C5^b Jp2^d$
- 103. (135,16) -śr
ńgavera-] K¹² C6^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d

 $L1^d$ $L2^d$ $L3^d$
 $T1^d$ $T2^d$ $T3^d$ $V1^b$
 $V2^b$ $V3^b$ $V4^d;$ śr
ingaveram $Ib1^d;$ śringavīra K
11 $J1^d$ $J2^d$ $J3^d;$ śringa
cera $M^k;$ śringamvera $V5a^d$ $V5b^d;$ bhram
gavega $P3^d;$ † $C5^b$

- 104. (136,5) -klītaka-] K¹² C6^d J1^d J3^d P2^d U^d R S Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn2^d Jn3^d K^d L1^d L3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d; klītakikā L2^d; klītanaka Jp2^d; klīka Ib3^d; kletaka K¹¹ J2^d; ktītaka Ap1^d; ktīta Jn1^d; ktāta Jp3^d; kvītakam P3^d; † C5^b M^k V5a^d V5b^d
- 105. (136,10) -madhūlaka-] $Ap1^d Ab^d Ba1^d Ba2^d C1^b C2^b C3^b Ib1^d Ib2^d L2^d P3^d T2^d V1^b V2^b V3^b V5b^d$; madhulaka $C4^b V5a^d$; madhūkela $B3^d$; laka S (-Ba1^d); dhugdha B2^d; om. K C6^d J1^d J2^d J3^d P2^d U^d R Ap2^d B4^d Bo^d Ib3^d Jn1^d Jn2^d Jn3^d Jp3^d K^d L1^d L3^d T1^d T3^d V4^d; † B6^d C5^b Jp2^d M^k
- 106. (136,12) -mūtrair] K (- A^d) $C6^d$ $J1^d$ $J2^d$ $J3^d$ $P2^d$ U^d R S (- $Ba1^d$) $Ap1^d$ Ab^d $Ap2^d$ $B2^d$ $B3^d$ $B4^d$ $Ba2^d$ Bo^d $C1^b$ $C2^b$ $C3^b$ $Jn1^d$ $Jn2^d$ $Jn3^d$ $Jp3^d$ K^d $L1^d$ $L2^d$ $L3^d$ $P3^d$ $T1^d$ $T3^d$ $V1^b$ $V2^b$ $V3^b$; mūtraiḥr A^d ; mūtrai $Ba1^d$ $C4^b$ $Ib1^d$ $Ib2^d$ $T2^d$ $V4^d$; mūtrer $Ib3^d$; -- $B6^d$; + $C5^b$ $Jp2^d$ M^k $V5a^d$ $V5b^d$
- 107. (136,16) yathārham] K (-P1^s) $C6^{d} J1^{d} J3^{d} P2^{d}$ S (-Km^d) $Ap1^{d} Ab^{d} Ap2^{d} B3^{d} Ba2^{d} C1^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jp3^{d} L2^{d} P3^{d} T2^{d} V1^{b} V3^{b}$; yarthārha $V5a^{d}$; yathāham $U^{d} Km^{d}$; yathāngam $J2^{d} P1^{s}$; yarthārham $V2^{b} V5b^{d}$; māmsavamayūşa yathārham $C2^{b}$; † R $B2^{d} B4^{d} B6^{d} Bo^{d} C5^{b} Ib3^{d} Jn1^{d} Jn2^{d} Jn2^{d} Jp2^{d} K^{d} L1^{d} L3^{d} M^{k} T1^{d} T3^{d} V4^{d}$
- 108. (138,1) şadvidham] K $(-Jp1^d) C6^d J1^d J2^d J3^d$ S $Ab^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d L2^d P3^d T2^d V1^b V2^b V3^b$; şadavidham U^d ; şyadvidham $P2^d$; şādvidham $Jp1^d$; īşadvidham $Ap1^d B3^d$; [şa]tatşadvidham $B4^d$; tatşadvidham R $Ap2^d Jn1^d Jn3^d Jp3^d K^d L1^d L3^d V4^d V5a^d V5b^d$; tatşadavidham $Jn2^d$; tatpadvidham $B2^d$; tat*<pra>d*vidham $T1^d$; tatpadvidham $Jp2^d$; $\uparrow C5^b M^k T3^d$
- 109. (138,5) tathetarāņi] K (- A^d) $C6^d$ $J1^d$ $J2^d$ $J3^d$ U^d S (- Km^d) $Ap1^d$ Ab^d $Ap2^d$ $B4^d$ $B6^d$ $Ba2^d$ $C1^b$ $C2^b$ $C3^b$ $C4^b$ $Ib1^d$ $Ib2^d$ $Ib3^d$ $Jn2^d$ $Jn3^d$ $Jp2^d$ K^d $L1^d$ $L2^d$ $L3^d$ $P3^d$ $T1^d$ $T2^d$ $T3^d$ $V1^b$ $V2^b$ $V3^b$ $V4^d$; tathetarāņi A^d ; tathotarāņi $P2^d$ $Jp3^d$; tathaitarāņi R $Jn1^d$; tarthatarāņi Km^d ; yathetarāņi $B2^d$; athaitarāņi Bo^d ; tathaiva <madhu>rāņi $B3^d$; † $C5^b$ M^k $V5a^d$ $V5b^d$
- 110. (139,2) -parņī¹] K (- A^d) $C6^d J1^d J2^d J3^d P2^d U^d B1^d B2^d B3^d Ib2^d Jp2^d Jp3^d L2^d P3^d V2^b V3^b$; paņī $V5a^d V5b^d$; pārņī A^d ; parņī pīluparņī S $Ab^d Ap2^d B6^d Ba2^d Bo^d Ib1^d Ib3^d Jn3^d K^d T2^d T3^d V4^d$; paņīpīluparņī $T1^d$; paņīpīluparņi $L1^d$; parņi pīluparņi $B4^d L3^d$; † $Ap1^d B5^d C1^b C2^b C3^b C4^b C5^b Jn1^d Jn2^d M^k V1^b$

- 111. (139,13) kāśah] kāśa K (- A^d) $C6^d J1^d J2^d P2^d U^d$ S $Ap1^d Ab^d Ap2^d B1^d B3^d B4^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn3^d K^d L2^d L3^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; kāśi J3^d; kāsa B5^d Ib3^d Jn1^d Jn2^d L1^d T1^d; kaśa T3^d; lāśa A^d ; om. Jp2^d Jp3^d P3^d; † B2^d C5^b M^k
- 112. (139,23) cānupadagdhe] $J1^d J3^d U^d$ S $Ap1^d Ab^d Ap2^d B1^d B2^d B3^d B4^d Ba2^d Ib1^d Ib2^d Jn3^d Jp2^d Jp3^d K^d L1^d L3^d P3^d T2^d T3^d V4^d$; cānupadagdheşu Bo^d ; cānupadagre $L2^d$; cānupadigdhe K¹¹ J2^d; cānupanagne $C1^b$; cānupagdhe K¹² $C6^d P2^d V1^b V2^b$; cānupagre $C2^b C3^b$; cānupa V3^b; cāvāpyānudagdhe $C4^b$; cārupadadye $Ib3^d T1^d$; cānupada + $B6^d$; †dagdhe $B5^d Jn1^d$; †digdhe $Jn2^d$; † $C5^b M^k V5a^d V5b^d$
- 113. (140,5) cāma-] $C1^{b} C2^{b} C3^{b} V1^{b} V2^{b} V3^{b} V5a^{d} V5b^{d}$; cāmla $L1^{d}$; śyāma $J1^{d} J3^{d}$; tāmra $Ap1^{d} B2^{d} B3^{d} B4^{d} B6^{d} Bo^{d} Ib3^{d} Jn3^{d} Jp2^{d} K^{d} L2^{d} L3^{d} T1^{d} T3^{d} V4^{d}$; tāmla $B5^{d}$; tāmmla $Jn1^{d} Jn2^{d}$; ta $^{-}B1^{d}$; āma S $Ab^{d} Ba2^{d} Ib1^{d} Ib2^{d} T2^{d}$; āmra $P3^{d}$; om. K $C6^{d} J2^{d} P2^{d} U^{d} Ap2^{d} C4^{b}$; † $C5^{b} Jp3^{d} M^{k}$
- 114. (140,5f.) -śuşkayor] S (- Km^d) $Ap1^d Ab^d Ba2^d C1^b C2^b Ib1^d Ib2^d T2^d V1^b V2^b V3^b V5a^d V5b^d$; śuşkayo $J1^d J3^d C3^b$; śuşkaryār Km^d ; śuklayor $B3^d B6^d Bo^d T1^d T3^d$; śuklayo $B2^d B4^d Ib3^d Jn3^d K^d L2^d L3^d$; śuktayor $P3^d$; śuktayo $V4^d$; śukayor $Jp2^d$; suktasaur R $Jn2^d$; suktasau $Jn1^d$; muktasau $L1^d$; om. K $C6^d J2^d P2^d U^d Ap2^d C4^b$; † $C5^b Jp3^d M^k$
- 115. (140,9) anyeṣām] cānyeṣām S $Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jn3^{d} K^{d} L2^{d} L3^{d} P3^{d} T2^{d} V1^{b} V2^{b} V3^{b} V4^{d}$; vānyeṣām $V5a^{d} V5b^{d}$; om. K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d} R Bo^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jp2^{d} Jp3^{d} L1^{d} T1^{d} T3^{d}$; † $C5^{b} M^{k}$
- 116. (140,14) vidhijño] $A^{d} C6^{d} J3^{d} R S Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}; om. K^{11} J1^{d} J2^{d} P2^{d} B3^{d} Jn1^{d};$ $\dagger Jp1^{d} U^{d} C5^{b} L1^{d} M^{k} T3^{d}$
- 117. (141,5) vidhijño] $J1^{d} J3^{d} Jp1^{d} P2^{d} U^{d} \otimes Ap1^{d} Ab^{d} Ap2^{d} B1^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L3^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d}$; vidhijñai $J2^{d} P1^{s}$; vidhijño vidhijño $B5^{d}$; om. $Ch^{d} Bo^{d} L2^{d}$; $\dagger A^{d} C6^{d} C5^{b} M^{k}$
- 118. (142,1f.) -śrňgavera-] K¹² C6^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d P3^d T2^d V1^b V2^b V3^b V4^d; śrňgaverava C4^b; śrňgavīra K¹¹ J1^d J2^d J3^d; śrṃgākha Ib3^d T1^d; śrgavera V5a^d V5b^d; bhṛṃgavera T3^d; † C5^b M^k
- 119. (142,2f.) -tejovaty-] K (-P1^s) C6^d J3^d P2^d U^d B5^d Bo^d Jn1^d Jn2^d Jp2^d

 $L2^d T3^d$; tejovala $T1^d$; tejovalā $Ib3^d$; [le]<te>jovaly $Jp3^d$; tejevaty $B1^d$; tejavavy $B2^d$; tejavatī $P1^s$; tejavamtī $J2^d$; tejavaty $Jn3^d K^d V4^d$; tejavavy $B4^d L3^d$; tojovatī $J1^d$; lejovaty $L1^d$; tejasviny S (-P4^d) Ap1^d Ap2^d C1^b C2^b C3^b P3^d V1^b V2^b V3^b V5a^d V5b^d; tejasvin $B3^d$; tejasminy $C4^b$; tejasthiny $Ab^d Ba2^d Ib1^d$; tejasthisviny $T2^d$; tejasiny $Ib2^d$; tetasviny $P4^d$; + + $B6^d$; † $C5^b M^k$

- 120. (142,5) -kutherakārjaka-] kutheraka K C6^d J2^d P2^d S Ab^d Ap2^d B2^d B4^d B5^d Ba2^d Ib1^d Ib2^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d V4^d; + teraka B6^d; kutheraP3^d; kuthiraka T2^d; kumteraka Jn1^d; kumderaka B1^d; kuveraka U^d Ib3^d T1^d T3^d V5a^d V5b^d; kuteraka Bo^d; rgrāraka Ap1^d; rjakakutheraka J1^d J3^d; rjaka V1^b V2^b V3^b; rgāraka B3^d; ka C2^b C3^b C4^b; .(ūku)[(th.)]terakārjaka C1^b; † C5^b M^k
- 121. (143,2) -musta-] K (-*Ch^d*) *C6^d J1^d J2^d J3^d P2^d U^d* R S *Ab^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L3^d P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d*; mu[..]<sta> *Ap2^d*; mustaṃ *Ap1^d*; mustar *C4^b*; mustā *Ch^d L2^d*; † *C5^b M^k*
- 122. (144,2) -dhātakī-] K (-P1^s) C6^d J1^d J3^d P2^d U^d S (-Ba1^d) Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d; dhātākī P3^d; dhātukī J2^d P1^s R Bo^d Ib3^d Jn1^d Jn2^d T1^d; dhākī Ba1^d; dhyātakī T3^d; † C5^b M^k
- 123. (144,3) -umbarāśvattha-] $J3^d Jp1^d U^d$ S (- $P4^d$) $Ap1^d Ab^d Ap2^d B2^d B4^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn2^d Jn3^d L1^d L2^d L3^d P3^d T1^d V1^b V2^b V3^b V4^d$; umbarāśvattham $K^d T2^d$; umbarāśvatthā $B5^d$; umvarāśvattha $Jn1^d$; umvarāsvattha $P3^d$; umbarāsvattha $B1^d$; umvarāsvattha $P4^d$; umbarāśvattha $P6^d$; umvarāsvattha $P2^d$; ambarāśvattha $K^{11} J1^d J2^d$; rumvarāścattha $Jp2^d$; $+ C5^b M^k$
- 124. (144,4) -khadira-] $J1^d J3^d B3^d Ib2^d$; khadirakadara S $Ab^d Ap2^d B4^d B5^d B6^d Ba2^d Bo^d Ib1^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L2^d L3^d T1^d T2^d V4^d$; khadirakadarakhadira $B1^d$; khadirakadirakadira $J2^d P1^s P2^d U^d$; khadirakadira $T3^d$; khadirakadira $D1^d$; khadirakadira $A^d C6^d$; khadirakadara $Ap1^d C1^b C2^b C3^b C4^b P3^d V1^b V2^b V3^b V5a^d V5b^d$; † $C5^b M^k$
- 125. (144,11) chedayitvā] $C6^{d} Ch^{d} J1^{d} J3^{d} Jp1^{d} P2^{d} U^{d} \mathbb{R} \mathbb{S} Ap1^{d} Ab^{d} Ap2^{d} B2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C2^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Ib3^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} L2^{d} L3^{d} P3^{d} T1^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5a^{d} V5b^{d};$ chedayitvāni $L1^{d}$; chedayi† $J2^{d} P1^{s}$; cedayitvā A^{d} ; kedayitvā K^{d} ; † $C5^{b} M^{k}$
- 126. (144,11f.) bhedyāni...pānīyenābhyāsicya] K (-P1^s) C6^d J1^d J3^d P2^d

 $\begin{array}{c} U^{d} \ \mathrm{R} \ \mathrm{S} \ Ap1^{d} \ Ab^{d} \ Ap2^{d} \ B2^{d} \ B3^{d} \ B4^{d} \ B6^{d} \ Ba2^{d} \ Bo^{d} \ C1^{b} \ C2^{b} \ C3^{b} \ C4^{b} \ Ib1^{d} \\ Ib2^{d} \ Ib3^{d} \ Jn1^{d} \ Jn2^{d} \ Jn3^{d} \ Jp2^{d} \ Jp3^{d} \ K^{d} \ L1^{d} \ L2^{d} \ L3^{d} \ P3^{d} \ T1^{d} \ T2^{d} \ T3^{d} \\ V1^{b} \ V2^{b} \ V3^{b} \ V4^{d} \ V5a^{d} \ V5b^{d}; \ om. \ J2^{d} \ P1^{s}; \ \dagger \ C5^{b} \ M^{k} \end{array}$

- 127. (144,12) prakṣālya] J3^d Ap1^d Ap2^d B3^d B5^d C1^b C2^b C3^b C4^b Jn1^d Jn2^d L1^d L2^d P3^d V1^b V2^b V3^b; prakṣyālya J1^d; prakalya V5a^d V5b^d; om.
 K (-P1^s) C6^d P2^d U^d S Ab^d B1^d B2^d B4^d B6^d Ba2^d Bo^d Ib1^d Ib2^d Ib3^d Jn3^d Jp2^d Jp3^d K^d L3^d T1^d T2^d T3^d V4^d; † J2^d P1^s C5^b M^k
- 128. (144,13) sādhayitvopa-] $Ch^d J3^d Jp1^d P2^d U^d$ S $Ap1^d Ab^d Ap2^d B2^d B4^d B5^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d Jp3^d K^d L1^d L3^d T1^d T2^d V1^b V2^b V4^d V5a^d V5b^d$; sādhayitvo V3^b; sādhayitvepa A^d ; sādhayitvāpa $T3^d$; sādhayitvā $B3^d$; sāṣayitvama $C6^d$; sāyitvopa $J1^d$; sadhayitvopa $B1^d$; pācayitvopa $L2^d$; dhayitvopa $P3^d$; †tvopa $J2^d P1^s$; † $C5^b M^k$
- 129. (144,15f.) śītam...-vikāriņe] K (-Jp1^d) C6^d J1^d J2^d J3^d P2^d U^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L1^d L2^d L3^d P3^d T1^d T2^d T3^d V1^b V2^b V3^b V4^d V5a^d V5b^d; rp. Jp1^d; † C5^b Jp3^d M^k
- 130. (145,3) sārvayaugikān] $Ap1^d B2^d B3^d B5^d B6^d C1^b C2^b C3^b C4^b Ib1^d$ $Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d L2^d T1^d T2^d V1^b$; sārvayauginām $Jn3^d$; sārvayaumikāt $B1^d$; sārvayogikān S $Ab^d B4^d Ba2^d Bo^d Ib2^d L1^d L3^d$ $T3^d V2^b V5a^d V5b^d$; sārvayogikā $P3^d$; sārvarogikān K¹² C6^d P2^d; sādhuyogikān $K^d V4^d$; sarvayaugikān $Ap2^d$; sarvayogikān $V3^b$; sārvaraugikān $J3^d$; sarvarogikān K¹¹ $J1^d J2^d U^d$; † $C5^b M^k$
- 131. (149,2) manyeta] K $(-Jp1^d) C6^d J1^d J2^d J3^d$ S $Ap1^d Ab^d B2^d B3^d B4^d B5^d B6^d Ba2^d B0^d C1^b C2^b C3^b C4^b Ib1^d Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d K^d L1^d L2^d L3^d T1^d T2^d V1^b V2^b V3^b V4^d V5a^d V5b^d$; manye $Jp1^d P2^d U^d Jn3^d T3^d$; manyet $Ap2^d B1^d Ib2^d$; manyeta $P3^d$; † $C5^b M^k$
- 132. (149,3) vargam] K (-*Ch^d*) *C6^d J1^d J2^d J3^d P2^d U^d* S *Ab^d Ap2^d B2^d B2^d B3^d B5^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jp2^d Jp3^d L1^d L3^d P3^d T1^d T2^d V1^b V2^b V3^b*; vargām *Ap1^d*; varga.a *Ch^d*; vargān *V5a^d V5b^d*; vargram *Jn3^d K^d V4^d*; vargrām *B1^d*; varyam *T3^d*; bahum *B3^d L2^d*; +m *B6^d*; † *C5^b M^k*
- 133. (150,3) ca] K $C6^{d} J1^{d} J2^{d} J3^{d} P2^{d} U^{d}$ R S $Ap1^{d} Ab^{d} Ap2^{d} B3^{d} B4^{d} B6^{d} Ba2^{d} Bo^{d} C1^{b} C3^{b} C4^{b} Ib1^{d} Ib2^{d} Jn1^{d} Jn2^{d} Jn3^{d} Jp2^{d} Jp3^{d} K^{d} L1^{d} L2^{d} L3^{d} P3^{d} T2^{d} T3^{d} V1^{b} V2^{b} V3^{b} V4^{d} V5b^{d}$; om. $C2^{b}$; † $B2^{d} C5^{b} Ib3^{d} M^{k} T1^{d} V5a^{d}$
- 134. (150,4f.) sarvatas] sarva K¹¹ $J1^d J2^d J3^d$ R S $Ab^d Ap2^d B2^d B4^d B6^d Ba2^d Bo^d C1^b C2^b C3^b C4^b Ib1^d Ib2^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L1^d L2^d$

 $L3^d~T2^d~T3^d~V4^d;$ sarva
m $Ap1^d~B3^d~Jp3^d~P3^d~V2^b~V3^b~V5b^d;$ tam sarvas $A^d~C6^d;$ ta
 sarvas $Jp1^d;$ tat sarvas $U^d;$ ta sarva
 $P2^d;$ † $C5^b~Ib3^d~M^k~T1^d~V1^b~V5a^d$

- 135. (151,2) -tumburu-] K (- A^d) C6^d J1^d J2^d J3^d P2^d U^d Ap1^d Ab^d Ap2^d Ba1^d Ba2^d Ib1^d Ib2^d Jp2^d Jp3^d L2^d P3^d T2^d; tumbaru R S (- $Ba1^d$) B2^d B4^d Bo^d Ib3^d Jn1^d Jn3^d L1^d L3^d T1^d V4^d V5b^d; tumvarū B3^d; tumkuru A^d; tuvaru Jn2^d; kustumburu C1^b C2^b C3^b C4^b V1^b V2^b V3^b; kumbaru K^d; tumva+ B6^d; † C5^b M^k T3^d V5a^d
- 136. (151,9) lodhra-] $C6^d J1^d J2^d J3^d Jp1^d P1^s P2^d U^d$ S $Ab^d B2^d B4^d B6^d Ba2^d Ib1^d Ib2^d Jn3^d Jp2^d L2^d L3^d T2^d V4^d$; lodhru K^d ; loghra A^d ; rodhra $Ch^d Ap1^d Ap2^d B3^d Bo^d C1^b C2^b C3^b C4^b Ib3^d Jn1^d Jp3^d L1^d P3^d T1^d V1^b V2^b V5b^d$; rodhrā $V3^b$; rodra $B1^d$; romra $B5^d Jn2^d$; † $C5^b M^k T3^d V5a^d$
- 137. (153,1) şadbhir] K (-Ch^d) C6^d J1^d J2^d J3^d P2^d R S Ap1^d Ab^d Ap2^d B2^d B3^d B4^d B6^d Ba2^d Bo^d Ib1^d Ib2^d Ib3^d Jn1^d Jn2^d Jn3^d Jp2^d K^d L1^d L3^d P3^d T1^d T2^d V4^d V5b^d; şad^abhir U^d; şadvimśar Jp3^d; şad C1^b C2^b C3^b L2^d V1^b V2^b V3^b; şa[.] C4^b; † Ch^d C5^b M^k T3^d V5a^d

Signs, Group Sigla and Abbreviations Used in the Appendix

- .. illegible akṣara
- . illegible part of an *akṣara*
- missing *akṣara* indicated by the scribe
- \diamond blank space in a line of text with the breadth of ca. one *akṣara*
- * halantacihna (virāma)
- / daņļa
- [†] Witness does not transmit the variant under discussion due to a lacuna.

[xy] Text in square brackets was deleted in the manuscript.

- <xy> Text in pointed brackets was added in the margin of the manuscript or elsewhere.
- $\langle xy \rangle^2$ text added by a second hand
- $\{xy\}$ illegible text in A^d , reconstructed on the basis of the reading preserved in $C6^d$
- om. omitted
- rp. Repetition. Text was mistakenly copied a second time.
- tp. Transposed. Text is omitted here, but occurs at a different position.
- E all manuscripts sharing hyparchetype E as their common direct ancestor
- $\mathbf{K} \qquad A^d, \, Ch^d, \, Jp1^d, \, P1^s$

K^{11}	$Ch^d, P1^s$
K^{12}	A^d , $Jp1^d$
R	$B1^d, B5^d$
\mathbf{S}	Ba1 ^d , Km ^d , P4 ^d
S^{12}	$Km^d, P4^d$

Sigla of Manuscripts

Scripts: ^b Bengali ^d Devanāgarī ^k Kannada ^s Śāradā

- A^d Alwar, Rajasthan Oriental Research Institute 2498
- Ab^d Ahmedabad, B.J. Institute of Learning and Research 758
- $Ap1^d$ Alipur, Bhogilal Leherchand Institute of Indology 5283
- $Ap2^d$ Alipur, Bhogilal Leherchand Institute of Indology 5527
- $B1^d$ Bikaner, Rajasthan Oriental Research Institute 1566
- B2^d Bikaner, Anup Sanskrit Library 3985
- *B3*^d Bikaner, Anup Sanskrit Library 3986
- B4^d Bikaner, Anup Sanskrit Library 3995
- *B5^d* Bikaner, Anup Sanskrit Library 3996
- B6^d Bikaner, Anup Sanskrit Library 3997
- Ba1^d Baroda, Oriental Institute 12489
- Ba2^d Baroda, Oriental Institute 25034
- *Bo^d* Bombay, Asiatic Society 172
- C1^b Calcutta, National Library RDS 101
- $C2^b$ Calcutta, Library of Calcutta Sanskrit College 23
- C3^b Calcutta, Library of Calcutta Sanskrit College 24
- C4^b Calcutta, Asiatic Society G 4474/3
- $C5^{b}$ Calcutta, Asiatic Society G 2503/1
- C6^d Calcutta, Asiatic Society G 4391
- Ch^d Chandigarh, Lal Chand Research Library 2315
- $Ib1^d$ Allahabad, Ganganath Jha Kendriya Sanskrit Vidyapeetha 25398
- Ib2^d Allahabad, Ganganath Jha Kendriya Sanskrit Vidyapeetha 8783/87
- Ib3^d Allahabad, Ganganath Jha Kendriya Sanskrit Vidyapeetha 37089
- J1^d Jammu, Raghunath Temple Library 3266
- J2^d Jammu, Raghunath Temple Library 3209
- $J3^d$ Jammu, Raghunath Temple Library 3330
- $Jn1^d$ Jamnagar, Gujarat Ayurved University Library GAS 103
- $Jn2^d$ Jamnagar, Gujarat Ayurved University Library GAS 118

- $Jn3^d$ Jamnagar, Gujarat Ayurved University Library GAS 96/2
- Jp1^d Jaipur, Maharaja Sawai Man Singh II Museum 2068
- Jp2^d Jaipur, Maharaja Sawai Man Singh Museum 2069
- Jp3^d Jaipur, Maharaja Sawai Man Singh Museum 2561
- *K*^d Kota, Rajasthan Oriental Research Institute 1563
- Km^d Kathmandu, Nepal–German Manuscript Preservation Project E-40553
- L1^d London, India Office Library Skt. ms. 335
- L2^d London, India Office Library Skt. ms. 881
- $L3^d$ London, India Office Library Skt. ms. 1445b
- M^k Mysore, Oriental Research Institute 902
- P1^s Pune, Bhandarkar Oriental Research Institute 555 of 1875-76
- $P2^d$ Pune, Bhandarkar Oriental Research Institute 534 of 1892[sic?]-95
- $P3^d$ Pune, Bhandarkar Oriental Research Institute 925 of 1891-95
- $P4^d$ Pune, Anandashram 1546
- T1^d Tübingen, Universitätsbibliothek I.458
- T2^d Tübingen, Universitätsbibliothek I.459
- *T3^d* Tübingen, Universitätsbibliothek I.460 + I.474
- U^d Udaipur, Rajasthan Oriental Research Institute 1474
- V1^b Varanasi, Sarasvati Bhavan 44842
- $V2^b$ Varanasi, Sarasvati Bhavan 108824
- V3^b Varanasi, Sarasvati Bhavan 108685
- V4^d Varanasi, Benares Hindu University C3688
- $V5a^d$ Varanasi, Sarasvati Bhavan 44870
- $V5b^d$ Varanasi, Sarasvati Bhavan 44870

Bibliography and Abbreviations

ac	ante correctionem
Barbi 1921	Michele Barbi, <i>Le opere di Dante</i> . Testo Critico della Società Dantesca Italiana a cura di M. Barbi (et al.). Firenze: Bempo- rad, 1921.
CI	Consistency Index
Coulson 1989	Michael Coulson, A Critical Edition of the Mālatīmādhava. Re- vised by Roderick Sinclair. Delhi etc.: Oxford University Press, 1989.
CS	Carakasamhitā; see Trikamji 1941.
Darwin 1872	Charles Darwin, The Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life. Sixth edition (¹ 1859), with additions and corrections. London: Murray, 1872.

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