

The *Suśrutasamhitā* on the Plastic Surgery of the Ears and Nose: The Nepalese Recension

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2 The Transmission of the Work

The Nepalese Version

In the present study and the other publications of our research group, we focus on the study of what we call the ‘Nepalese version’ of the *Suśrutasamhitā*. The primary rationale behind using this designation was outlined by Klebanov,¹ but we consider it necessary to reflect upon its meaning here, given the conceptual significance that this term occupies in our research. It is possible that in the course of our research, we will refine our understanding of this designation and, consequently, review and modify our current interpretation.

Put plainly, the ‘Nepalese version’ refers to a hypothetical text-critical reconstruction of the wording of the *Suśrutasamhitā* that is based primarily on the evidence of three ancient Nepalese manuscripts that we have briefly introduced above and that we will describe in more detail in a later section. We call these MSS “Nepalese” not just because they were preserved and discovered by modern scholarship in the Kathmandu Valley but also because we believe that they were produced in the same area. We conclude this because all three MSS are written in a specific variety of Indic script which was not used outside of the region.

Furthermore, we speak of a single “version” because these manuscripts attest to a specific line of transmission of the text. That is to say, in terms of stemmatic analysis they share a common ancestor or hyparchetype, while at the same time, they bear no signs of significant contamination. This hypothesis was first postulated by Klebanov (2010) and later reiterated by him (2021b) as the result of a systematic analysis of two complete chapters, SS 1.3 and SS 1.15, and several shorter excerpts from the *Suśrutasamhitā* transmitted in the Nepalese manuscripts. On the one hand, these studies highlighted that all three MSS preserve a highly uniform text with very few

¹ Klebanov 2021a: 2–3.

variations, virtually all of which can be explained as standard scribal errors or corrections. On the other hand, Klebanov (2010; 2021b) systematically compared the relevant textual excerpts with four printed editions, alternative readings reported by several commentators, parallel passages in other texts, and with a number of additional manuscripts of the *Suśrutasamhitā*. This analysis demonstrated that the text of the *Suśrutasamhitā* supported by the Nepalese MSS of our study differs evidentially from all these other sources. But the mere fact of Nepalese provenance does not guarantee that a manuscript transmits the Nepalese version of the *Suśrutasamhitā*. For example, Klebanov also established that in spite of its Nepalese provenance, MS Kathmandu NAK 1-1146,² does not support the “Nepalese version” and need not be taken into consideration when reconstructing the readings of the latter’s hyparchetype. Thus, we do not feel that it is justified to use the technical term “Nepalese recension,” since at least two recensions of the work are preserved in manuscripts from Nepal. Nevertheless, we wish to indicate the provenance of the oldest witnesses. However, more than two hundred manuscripts of the *Suśrutasamhitā* are preserved in different libraries across South Asia and until they have been studied and placed into a stemmatic relationship with our present witnesses, any hard assumption about the regional character of the transmission line remains premature.³ What can be said with certainty is that the Nepalese version preserves many archaic features of an early version of the *Suśrutasamhitā* and that some of these features have already been identified in other manuscripts of this work have been studied briefly.

Our research group builds upon the above hypothesis about the existence of a distinct Nepalese version of the *Suśrutasamhitā* and concentrates primarily on the study of this text in its own right and, additionally, frequently compares it with the version of the *Suśrutasamhitā* promulgated by the late medieval commentator Ḏalhaṇa and recorded in the widely-used Su 1938. The present study of SS 1.16 also considers the readings found in Su 1939, that reflects Cakrapāṇidatta’s readings, and incorporates various observations made by both medieval commentators, Cakrapāṇidatta and Ḏalhaṇa, into the notes of the edition and some annotations of the translation.

² Rimal and Wujastyk 2022.

³ For a list of known manuscript copies of the *Suśrutasamhitā*, see the sources mentioned in footnote 10 below.

The current study and several earlier publications furnish a catalogue of uniform features that are characteristic of the Nepalese version and set it apart from the vulgate version.⁴ These features of the Nepalese version include orthographic variants, peculiarities in the structure and structuring elements, as well as the actual wording of the text. As argued elsewhere in this article, many of these variants appear to represent an archaic version of the *Suśrutasamhitā*. This is partly because they preserve a version of the text that appears to be less edited, that is, more rudimentary in content and original in expression, that in turn suggests that it precedes later editorial intervention. We also assign a high historical value to many Nepalese readings because they constitute an internally more consistent and coherent text that is at times further supported by external testimonia.

Additionally, we want to make it clear that we do not think that the Nepalese version provides a so-called original text of the *Suśrutasamhitā*. Rather, the Nepalese version is a witness to a hyparchetype, not the archetype, of the *Suśrutasamhitā*. The Nepalese version provide us with an intermediary node in the history of this work between the oldest reconstructable text and the vulgate version that was known to Dalhana in the twelfth century and that is reproduced in most printed editions of the *Suśrutasamhitā*. The oldest reconstructable text will only come into focus when all surviving witnesses for the work have been studied. Having said that, our belief is that the Nepalese version is certain to be closer to the oldest reconstructable text than are contemporary printed versions of the work. One of the reasons for this belief is simply that the Nepalese MSS give us physical evidence for the state of the work in the ninth century, which cannot be many centuries later than the original assembly of the work in the form we are familiar with, i.e., a work of five topical sections with a large added sixth section, the Uttaratantra, that has a somewhat independent character.

To summarize: the evidence arising from our studies to this point leads us to think that the Nepalese MSS of this study provide access to single line of textual transmission that goes back to a hyparchetype that predates the composition of all major commentaries on the *Suśrutasamhitā* and that, due to its regional character, has suffered relatively little contamination. We term this hyparchetype the “Nepalese version.”

⁴ Earlier publications include Harimoto 2011; Wujastyk 2013b; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021; Birch, Wujastyk, Klebanov, Rimal, et al. 2021.

The Versions of Cakrapāṇidatta and Ḏalhaṇa

The commentaries of Cakrapāṇidatta and Ḏalhaṇa, titled *Bhānumatī* and *Nibandhasaṅgraha* respectively, are based on similar but not identical versions of the *Suśrutasaṃhitā*. Both versions differ significantly from the Nepalese version.⁵ Ḏalhaṇa was aware of Cakrapāṇidatta’s work and reiterated many of his predecessor’s remarks, so the interpretation of the root text by these two commentators is, broadly speaking, consistent.⁶ Ḏalhaṇa also had several manuscripts of the *Suśrutasaṃhitā* available to him, as we know because he frequently mentioned their variant readings.⁷

In addition to the fine-grained issues raised by the relationship between these commentators, there are added issues introduced by the way the editors of the printed versions of these commentaries handled the texts. The most obvious difficulty is that Y. T. Ācārya and N. Śarman’s text of the *Sūtrasthāna* as commented on by Cakrapāṇidatta ([Su 1939](#)) simply duplicated the main text of that section from Y. T. Ācārya and N. R. Ācārya’s edition of Ḏalhaṇa’s commentary ([Su 1938](#)).⁸ This duplication of the root text in the two books creates the entirely misleading impression that both commentators had the same *Suśrutasaṃhitā* text before them.⁹ However, there is much evidence, including in the chapter treated in the present study, that this was not the case.

To give a concrete example, Ḏalhaṇa commented on four verses, SS

⁵ See [HIML: IA](#) 374–379 on these authors. Meulenbeld already noted that “the text of the *Suśrutasaṃhitā* in the [1939] edition of the *Bhānumatī* differs at many places from the text of the [vulgate edition of 1938]” and gave examples from the *sūtrasthāna* ([HIML: IB](#), 496, note 76).

⁶ [HIML: IB](#), 499, n. 162.

⁷ See [HIML: IA](#), 377. Meulenbeld drew attention to Ḏalhaṇa’s commentary on 5.8.24cd–25ab ([Su 1938: 587](#)) as a particularly striking example of such awareness ([HIML: IB](#), 497, n. 112). In this passage, Ḏalhaṇa noted that certain readings known to the earlier commentators Jejjīṭa and Gayadāsa were, “not to be found in current manuscripts” (स च वर्तमानपुस्तकेषु न दृश्यते).

⁸ There are a few exceptions where Cakrapāṇidatta glossed a word or compound that is different to the one glossed by Ḏalhaṇa. For example, in SS 1.16.18, Cakrapāṇidatta glossed राजसर्षप whereas Ḏalhaṇa glossed गौरसर्षप. The editors reflected this in the root texts of the *Bhānumatī* ([Su 1939: 130](#)) and *Nibandhasaṅgraha* ([Su 1938: 79](#)) respectively.

⁹ A similar situation exists with the edition of the *Yogasūtravivaraṇa* by Rama Sastri and Krishnamurthi Sastri ([1952](#)) that is printed with the base text of the *Pātañjalayogaśāstra* taken the edition of Āgāśe and Āpate ([1904](#)) which is significantly different from that on which Śaṅkara was commenting (Maas [2013: 77–78](#)).

1.16.11–14, as part of his root text, that Cakrapāṇidatta cited separately only in his commentary.¹⁰ Cakrapāṇidatta had introduced each verse with “some people say” (केचित्पठन्ति). This clearly indicated that these verses were not in the version of the *Suśrutasaṃhitā* upon which he was commenting. But a century or so later they had become part of the main text that was read by Dalhaṇa. In spite of this, the editors Y. T. Ācārya and N. Šarman included these verses in their 1939 edition of the *Suśrutasaṃhitā* with Cakrapāṇidatta’s commentary as if they had been part of the main text of the *Suśrutasaṃhitā* that Cakrapāṇidatta read. Such cases make it hard for the reader to clearly see that these two important commentators were responding to different versions of the *Suśrutasaṃhitā*.

Furthermore, the duplication of the root text is questionable in instances where Cakrapāṇidatta did not acknowledge or comment on some verses that appear in what we might call “Dalhaṇa’s version” of the *Suśrutasaṃhitā*. In some cases, this is an *argumentum ex silentio* because it is possible that Cakrapāṇidatta may not have remarked on a verse when its meaning was obvious. However, in other cases, the commentarial convention of citing the first words of a new verse or passage suggests leads us to suspect the absence of a verse in the root text of the *Suśrutasaṃhitā*.

For example, there is a prose passage at SS 1.16.18 that Cakrapāṇidatta commented on in his *Bhānumatī* (Fig. 2.1, left).¹¹ It is followed by several verses also in the main text of the *Suśrutasaṃhitā* that elaborate on the content of the prose passage.¹² Dalhaṇa commented on these explanatory verses (Fig. 2.1, right), citing keywords that show they all formed part of the main text of the *Suśrutasaṃhitā* that was before him.¹³ However, Cakrapāṇidatta’s older commentary showed no awareness of the first few verses in this group, SS 1.16.19–21ab.¹⁴ Apparently, they were *not* part of the text of the *Suśrutasaṃhitā* as he knew it. In spite of that, the editors printed these verses in their edition of Cakrapāṇidatta’s work as if they were indeed part of the *Suśrutasaṃhitā* known to him. Incidentally, the editors remarked in a footnote that verses 20–21a were not in the Nepalese manuscript that they consulted. This shows that the version of the *Suśrutasaṃhitā*

¹⁰ Su 1938: 78 and Su 1939: 128–129 respectively.

¹¹ Su 1939: 130, i.e., अथाप्रदुष्टस्याभिवर्धनार्थम् ... निदध्यात्। It is numbered Su.1.16.19 in Dalhaṇa’s *Nibandhasaṅgraha* (Su 1938: 79).

¹² SS 1.16.19–23 in Su 1939, i.e., स्वेदितो ..., यवाश्व ..., तैलं ..., तेषाम् ..., वद्ध

¹³ 1.16.19–23 (Su 1938: 79–80).

¹⁴ Su 1939: 130–131.

सेदितोन्मदितं कर्णं खेहैनेतेन योजयेत् ॥
 अथानुपद्रवः सम्यग्बलचांश्च विवर्धते ॥ १९ ॥
 (यथाश्वगन्धायष्ट्राहैस्तिलैश्चोद्धरतेन हितम् ॥
 शतावर्यश्वगन्धाभ्यां पयसैरण्डजीवनैः ॥ २० ॥
 तैलं विपक्षं सक्षीरमभ्यङ्गात् पालिवर्धनम् ॥)

 कर्णवर्धनार्थं सम्मर्दनयोगिलहमाह—तथया गोवेदादि । प्रहुदा लहादयोऽजपान-
 वक्ष्याः, विकिरा लावादयः, आनुपा गहियादयः । राजसर्पः वेतसर्पः, तस्म-
 रैलम्, एवं हि लेहोऽथम् । पयश्चात्र पाकार्थं इवान्तरात्मकेवर्तुण्डमेव । ये हु पयसाने
 सार्पः पठन्ते, तन्मते जलास्योऽयम्; अन्ये हु चतुःस्फेहेनेव पयःस्त्राघं पठन्ते ।
 अलक्षः अर्कमेव, जलश्चो जलतृणासको भवति ‘जलदृणा’ हस्ति प्रसिद्धः । प्रतीवापः
 कल्कः । ये लत्र सधुरागं पठन्ति पयसां च, तन्मते पयसा सीरविदारी । तैलं वेति
 तैलमेव वा ॥ १९-२० ॥

सेदितोन्मदितं कर्णं खेहैनेतेन योजयेत् ॥
 अथानुपद्रवः सम्यग्बलचांश्च विवर्धते ॥ २० ॥
 अथ तैलसाव चारणमाह,—सेदितोन्मदितमिल्यादि ॥ २० ॥
 यथाश्वगन्धायष्ट्राहैस्तिलैश्चोद्धरतेन हितम् ॥
 अभ्यक्षसोद्धरतेनमाह,—यवेदादि ॥—

 शतावर्यश्वगन्धाभ्यां पयसैरण्डजीवनैः ॥ २१ ॥
 तैलं विपक्षं सक्षीरमभ्यङ्गात् पालिवर्धनम् ॥
 कर्णपालिविद्यर्थमपरं तैलमाह,—शतावर्यश्वगन्धाभ्यामि-
 ल्यादि । शतावर्यादिककेन लेहचतुर्थांशेन केवलक्षीरेण चतुर्थ-
 गेन तैलमत्र पचनीयम् । पयसा अर्कपुण्डी । जीवनैः काको-
 ल्यादिदन्वयैः ॥ २१ ॥—

Figure 2.1: The text as it appears in Cakrapāṇi (left) and Ḍalhaṇa (right) (Su 1939: 130, Su 1938: 79).

(नाडीयोगं विनौष्ठस्य नासासन्धानविधिम् ॥
 य एवमेव जानीयात् स राज्ञः कर्तुमर्हति ॥ ३१ ॥)

 इति सौश्रुते शत्यतन्त्रे सूत्रस्थाने कर्णव्यधवन्धविधिर्नाम
 पोडशोऽध्यायः ॥ १६ ॥

Figure 2.2: *Suśrutasamhitā* 1.16.31 in the 1939 printed edition.

that Cakrapāṇidatta knew is similar to the Nepalese version, at least in this particular case.¹⁵

A similar instance occurs in the edition of the *Bhānumatī* at SS 1.16.31, where the editors of the 1939 printed edition included a verse in parenthesis that was commented on by Ḍalhaṇa but not by Cakrapāṇidatta (see Fig. 2.2).¹⁶ This verse was almost certainly not in the text of the *Suśrutasamhitā* known to Cakrapāṇidatta. The manuscript on which the editors' edition of Cakrapāṇidatta's *Bhānumatī* commentary was mainly based, MS London BL H. T. Colebrooke 908, does not include the root text of the *Suśrutasamhitā*.¹⁷ Therefore, it requires a careful reading of the commentary

¹⁵ Su 1939: 130, n. 2.

¹⁶ The verse begins नाडीयोगं विनौष्ठस्य. It is printed in the vulgate as 1.16.32 (Su 1938: 81), with Ḍalhaṇa's commentary. It is printed in parentheses as 1.16.31 in the edition of the *Bhānumatī* (Su 1939: 133).

¹⁷ This observation is based on an examination of the opening passage MS London BL

itself to reverse-engineer, as it were, what its author, Cakrapāṇidatta, was seeing in the manuscripts of the *Suśrutasaṃhitā* that he had before him in the eleventh century. But there is no evidence that they included the verses SS 1.16.19—21ab and 31 that are printed in the [Su 1939](#) edition as if they were present to Cakrapāṇidatta.

Cakrapāṇidatta and the Nepalese version

We have already seen one case where Cakrapāṇidatta's version of the *Suśrutasaṃhitā* was more similar to the older Nepalese version than to the later version of Ḏalhaṇā. There is more evidence for this. For example, SS 1.16.5 of the Nepalese version begins with the compound दोषसमुद्यात्; Cakrapāṇidatta began his comment on this passage by glossing this very expression. By contrast, Ḏalhaṇā's version inserted two compounds, क्षिप्तजिह्वाप्रशस्तसूचीव्यधात् and गाढतरवर्तित्वात्, before this.¹⁸ It appears that Cakrapāṇidatta was not aware of the compounds that Ḏalhaṇā saw in his later version, but was indeed reading a text similar to the Nepalese version.¹⁹

If one looks beyond SS 1.16, there are further instances where the Nepalese version and the root text as read by Cakrapāṇidatta have the same reading, but Ḏalhaṇā mentioned it as an alternative that is, “read by others.” For example, the Nepalese version of SS 1.1.22 begins त्रास्मिज्ञास्ते..., which is also the reading commented on by Cakrapāṇidatta.²⁰ However, Ḏalhaṇā commented on अस्मिज्ञास्ते and stated that “others read त्रास्मिज्ञास्ते”.²¹

Another example is the reading of षष्ठा विधानैः in Ḏalhaṇā's commentary on SS 1.1.8.1 that is not in his main text but that he ascribes to “some others”.²² This reading is likely to be derived from the expression षष्ठाभिधानैः

H. T. Colebrooke 908. The MS is described in IOLR: v. 1.5, 928, #2647. The section “The 1939 Edition,” on p. [31](#) below, describes the sources that the editors used for that edition.

¹⁸ 1.16.6 ([Su 1938: 77](#)).

¹⁹ 1.16.5 ([Su 1939: 126–127](#)).

²⁰ 1.1.20 (*sic*) ([Su 1939: 17](#)).

²¹ 1.1.22 ([Su 1938: 5](#)).

²² 1.1.8.1 ([Su 1938: 3](#)).

in the main text of the Nepalese version, and to have been rewritten before Dalhaṇa's time because it was hard to understand.²³

Differences between the Nepalese and later versions of SS 1.16

Several differences between the text of the *Suśrutasamhitā* as reconstructed on the basis of the Nepalese MSS and as found in its multiple contemporary printed editions have already been pointed out in previous publications. For example, Klebanov listed differences in the chapter sequences as they affect the overall organization and structuring of themes and elements of the text.²⁴ Others have explored variations in the frame story of the work as a whole.²⁵ Klebanov discussed the interchangeable use of two titles for the first book of the text, namely “Ślokasthāna” and “Sūtrasthāna.” He also discussed another feature of the Nepalese version, namely the additional colophons found at the end of each book and also at the end of each decade of chapters of the work.²⁶

The greater internal coherence of the Nepalese version

In an exemplary investigation of textual variants in the Nepalese version, Harimoto studied the classification of snakes in SS 5.4 and revealed that the Nepalese version preserves a text that is internally more consistent and coherent than the versions of the *Suśrutasamhitā* found in different printed sources.²⁷

Klebanov contributed some further general remarks and examples of substantive differences between the Nepalese and vulgate versions, and provided two more case studies.²⁸ The first dealt with the list of skin lesions associated with urinary disease.²⁹ Their signs and pathogenesis are

²³ See the discussion by Birch, Wujastyk, Klebanov, Rimal, et al. (2021: 4–5).

²⁴ Klebanov 2021a: 27 f.

²⁵ Wujastyk 2013b; Klebanov 2021a: 28–32; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021; Birch, Wujastyk, Klebanov, Rimal, et al. 2021: 2–4.

²⁶ Klebanov 2021a: 32–44.

²⁷ Harimoto 2011: 101–104.

²⁸ Klebanov 2021a: 44–55.

²⁹ प्रमेहपिटका in the Nepalese spelling.

described in the *Nidānasthāna* and their treatment in the *Cikitsāsthāna*.³⁰ This list of skin lesions exemplifies a case where the Nepalese version of the *Suśrutasamhitā* is internally more coherent than that commented on by Ḏalhaṇa. The incoherence of Ḏalhaṇa's version was already identified by an earlier commentator, Gayadāsa (fl. ca. 1000), who proposed a textual conjecture that corresponds to the reading of the Nepalese version.³¹

The second case study by Klebanov focussed on the variation in the list of bodily winds (प्राण) in SS 3.4.³² This discussion too relied upon Gayadāsa's learned remarks. He commented on a version of the *Suśrutasamhitā* corresponding to the Nepalese version and reported an alternative reading and its interpretation preferred by another ancient commentator, Jejjaṭa (fl. ca. 650 – c. 750). It is Jejjaṭa's reading that is known to modern readers of the *Suśrutasamhitā* from the vulgate version of the text.

As the present study demonstrates, many features pertaining to the actual content of the Nepalese version continue to come to light as we proceed with our study of the manuscripts. On the whole, these observations indicate that many features of the Nepalese version of the *Suśrutasamhitā* are likely to go back to an early state of the work that was common to other versions of the compendium. However, there are also textual features, such as the text-structuring colophons concluding every tenth chapter, are likely to have occurred within a local Nepalese transmission of the text and it is unlikely that they will be attested in MSS from other regions, when a study of those is done. When evaluating the Nepalese readings historically, it is necessary to keep in mind that there is plentiful evidence that Ḏalhaṇa's version of the text also included extremely early readings and variants, suggesting that some of the readings accepted by Ḏalhaṇa were ancient, if not original. Each case has to be weighed, and we are not yet in a position to make definitive judgments about the early divergence of textual recensions.

The detailed comparison that follows of 1.16 of the Nepalese version with Ḏalhaṇa's *Nibandhasaṅgraha* unfolded as the chapter was edited. The differences appear to emanate largely from attempts in Ḏalhaṇa's version to standardise, simplify or clarify the language that appears

³⁰ *Suśrutasamhitā* 2.6 ([Su 1938](#): 289–294) and 4.12 ([Su 1938](#): 454–455) respectively.

³¹ MS Kathmandu KL 699 was copied a century or more before Gayadāsa's time, so its version cannot have been influenced by Gayadāsa's innovations or suggestions. The reverse is more likely, although we are still uncertain of whether Gayadāsa was aware of the Nepalese version. Being from Bengal, it is not unlikely that he knew it.

³² Klebanov [2021a](#).

in the Nepalese version, to add and redact information, and introduce changes to recipes and therapies. Examples from 1.16 have been provided to demonstrate these general observations which, we expect, will be supported by a larger survey of the text.

Transpositions

Figure 2.3 reveals the extent to which 1.16 of the Nepalese version was redacted to create the one known by Ḏalhaṇa. In this particular case, twenty-seven verses have been added in the vulgate. Eight of these verses (11–14, 21–22ab, 23cd–24, 32) are well integrated with the existing material in so far as they reiterate and elaborate on the content of passages in the Nepalese version. A block of nineteen verses (26.1–19) at the end of this chapter in Ācārya's edition of the *Nibandhasaṅgraha* (Su 1938: 80) was known by Ḏalhaṇa. These verses cover additional diseases of the ear lobes, with their treatment and complications. Although Ḏalhaṇa conceded that some predecessors read them in this chapter, he concludes that they were not composed by sages and, therefore, should not be read. Ācārya probably included these verses because they were in his manuscripts, but Ḏalhaṇa's comments prompted him to place them in parentheses.³³ Be this as it may, this large block of verses is not present in the Nepalese version.

One can also see in Figure 2.3 that verses 17 and 18 of the Nepalese version were transposed in the redaction of Ḏalhaṇa's version, where they are numbered 26 and 25 respectively. Although this only occurs once in 1.16, such transposing of verses and even their hemistiches is common in the redaction of other chapters of the *Suśrutasaṃhitā*.

Apart from the addition of verses, the redacting of the version known to Ḏalhaṇa involved many small, yet sometimes significant, changes that are described below.³⁴

³³ Ācārya (Su 1938: 80) did not state that these verses were absent in some or all of his manuscripts, which he usually did in a footnote if this was the case. A broader survey of manuscripts would be helpful for establishing whether these verses were part of the transmission of the *Suśrutasaṃhitā* in other parts of India. For example, they are present in MS Hyderabad Osmania 137-3(b).

³⁴ The present study focusses on the commentary of Ḏalhaṇa, but many of the same investigations could be made with regard to the surviving parts of the other early commentaries. See the discussion below, p. 33.

Nepalese version Ḏalhaṇa's version

1	1
–	2
2–9	3–10
–	11–14
10–15	15–20
–	21–22ab
16	22cd–23ab
–	23cd–24
–	25
17	26
–	26.1–19
18	–
19–23	27–31
–	32

Figure 2.3: A Comparison of verses in 1.16 of the Nepalese and Ḏalhaṇa's versions.

Changing Spelling, Sandhi and Syntax

Later commentators like Ḏalhaṇa often made efforts to standardise, simplify or improve the language of the Nepalese version. Such changes include the standardising of spelling,³⁵ sandhi,³⁶ and verbal forms,³⁷ as well as interventions to simplify and clarify syntax.³⁸ These efforts often in-

35 For example, पत्ताङ्ग (SS 1.16.21) → पतङ्ग (1.16.29, Su 1938: 81). For more information on this, see footnote 36 to the translation.

36 For example, ०हस्तेन ऋजु (SS 1.16.2) → ०हस्तेन र्जु (1.16.3, Su 1938: 76).

37 For example, उन्नामयित्वा (SS 1.16.21) → प्रान्नम्य (1.16.29, Su 1938: 81); अवचूर्णयीत (SS 1.16.21) → उपहरेत् (1.16.29, Su 1938: 81).

38 For example, शोणितबहुत्वनिवेदनायां चान्यदेशविद्धमिति जानीयात् । निरुपद्रवता तदेशविद्धलिङ्गम् । (SS 1.16.3) → शोणितबहुत्वेन वेदनया चान्यदेशविद्धमिति जानीयात् । निरुपद्रवतया तदेशविद्धम् इति । (1.16.4, Su 1938: 76); आमतैलपरिषेकोपचरेत् (SS 1.16.6) → आमतैलेन परिषेचयेत् (1.16.7, Su 1938: 77); सुपरिगृहीतं (SS 1.16.10) → सुपरिगृहीतं च कृत्वा (1.16.15, Su 1938: 78); अनेन (SS 1.16.15) → स्वहे-नैतेन (1.16.20, Su 1938: 79).

volved splitting compounds.³⁹ In some instances, these changes improved the grammar,⁴⁰ or altered the meaning.⁴¹ However, some prefixes of verbal forms,⁴² case endings,⁴³ and indeclinables were changed for less apparent reasons.⁴⁴ There is also a tendency to replace uncommon words with generic ones,⁴⁵ add indeclinables,⁴⁶ omit the verb “to be” at the end of sentences,⁴⁷ and introduce verses after a prose passage with the phrase भवति चात्र.⁴⁸

Technical Terms

There is evidence of standardising and altering technical terminology in versions of the *Suśrutasamhitā* subsequent the Nepalese one. Two examples of this in *Suśrutasamhitā* 1.16 are the terms for “joins” (बन्ध) and “a slice of flesh” (वध). The Nepalese version uses three terms for “joining” splits in the ear flaps and the flesh of nose (बन्ध, सन्धान, सन्धि). Redactors of subsequent versions appear to have tried to standardise this terminology by replacing सन्धान and सन्धि with बन्ध in prose passages.⁴⁹ However, the use of the term सन्धान was retained in verses, perhaps because of the metrical challenges of making such a change or perhaps because the verses had greater

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- 39 For example, यदच्छाविद्धायां सिरायाम् (SS 1.16.4) → यदच्छया विद्धासु सिरासु (1.16.5, Su 1938: 76); धान्याष्टकपालचूर्ण (SS 1.16.10) → धान्याष्टुं कपालचूर्ण (1.16.20, Su 1938: 78).
- 40 For example, सुरामण्डकीरम् (SS 1.16.10) → सुरामण्डं कीरम् (1.16.15, Su 1938: 78).
- 41 For example, क्षीणाल्पमांसः (SS 1.16.12) → क्षीणोऽल्पमांसः (1.16.17, Su 1938: 79).
- 42 For example, सम्वर्द्धितः (SS 1.16.8) → विवर्द्धितः (1.16.9, Su 1938: 77); निवेश्य (SS 1.16.10) → सन्निवेश्य (1.16.15, Su 1938: 78); अवव्य (SS 1.16.10) → च वद्धा (1.16.15, Su 1938: 78).
- 43 For example, मासे (SS 1.16.2) → मासि (1.16.3, Su 1938: 76).
- 44 For example, अपि (SS 1.16.13) → वा (1.16.18, Su 1938: 79); च (SS 1.16.16) → तु (1.16.23, Su 1938: 79); तु (SS 1.16.18) → च (1.16.25, Su 1938: 80).
- 45 For example, ब्रक्षयेत् (SS 1.16.15) → योजयेत् (1.16.20, Su 1938: 79); नद्येत् (SS 1.16.21) → बद्धा (1.16.29, Su 1938: 81).
- 46 For example, [absent] (SS 1.16.6) → च (1.16.7, Su 1938: 77); [absent] (SS 1.16.10) → तत्र (1.16.15, Su 1938: 78); [absent] (SS 1.16.12) → अपि (1.16.17, Su 1938: 79).
- 47 The words भवति or भवन्ति are omitted four times in Dalhana’s version (1.16.10 (twice), 1.16.17 and 1.16.18 (Su 1938: 77, 79)).
- 48 For example, [absent] (SS 1.16.11) → भवति चात्र (1.16.16, Su 1938: 79).
- 49 For example, पञ्चदशसन्धानाकृतयः (SS 1.16.9) → पञ्चदशबन्धाकृतयः (see 1.16.10 (Su 1938: 77)); दशकर्णसन्धिविकल्पाः (SS 1.16.9) → कर्णबन्धविकल्पाः (see 1.16.10 (Su 1938: 77))

traditional authority. Also, the names of joins which incorporate सन्धान and सन्धि remained the same.⁵⁰

The Nepalese version contains the rather obscure term वध्र for the slice of flesh that a surgeon cuts from the cheek in order to construct a new nose.⁵¹ Modern dictionaries define वध्र as a leather strap or a slice of bacon,⁵² the latter of which is more indicative of its meaning in the Nepalese version. This word was written out of subsequent versions,⁵³ and it was not mentioned as an alternative reading by either Cakrapāṇidatta or Dālhana, which suggests that its use and meaning may not have been known to them. However, वध्र was used by the author of the *Aṣṭāṅgahṛdayasamhitā* in the context of rhinoplasty, so it likely to be the correct reading in the Nepalese version.⁵⁴

Augmenting the Text

Apart from adding whole passages and verses (as seen in Figure 2.3), redactors of subsequent versions augmented the text by expanding existing compounds and inserting new compounds and words. Within the microcosm of 1.16, adjectives and adverbs were inserted to clarify statements,⁵⁵ and phrases added to elaborate on diseases and treatments.⁵⁶ In particular, the characteristics and number of symptoms of a disease, as well as their reasons for arising, tend to increase in subsequent versions. For example, the Nepalese version (SS 1.16.5) said that the wick in a newly

⁵⁰ These names are नेमीसन्धानक, कपाटसन्धिक, and अर्धकपाटसन्धिक in SS 1.16.9 (cf. 1.16.10 ([Su 1938: 77](#))).

⁵¹ SS 1.16.20 and 23.

⁵² [Apte: 1385](#); [MW: 917](#).

⁵³ वध्रम् (SS 1.16.20) → बद्धम् (SS 1.16.28, [Su 1938: 81](#)) and तद्वप्तशेषं (SS 1.16.23) → तद्वप्तशेषं (SS 1.16.31, [Su 1938: 81](#)).

⁵⁴ Utt.18.62 ([Ah 1939: 841](#)). This may suggest some independence between the text of the *Suśrutasamhitā* as transmitted to its direct commentators and as transmitted to Vāgbhaṭa. The word वध्र is old, occurring, also in the form वध्र॑, from the *Atharvaveda* onwards ([Mayrhofer 1986–2001: v. 2, 521–522](#)).

⁵⁵ For example, छिद्रे (1.16.2, [Su 1938: 76](#)) → छिद्र आदित्यकरावभासिते (1.16.3, [Su 1938: 76](#)); [absent] (1.16.2) → शनैः शनैः (1.16.3); [absent] (SS 1.16.3) → आशु (1.16.5, [Su 1938: 77](#)).

⁵⁶ For example, घात्यङ्के (SS 1.16.2) → घात्यङ्के कुमारधराङ्के वा (1.16.3); [absent] (SS 1.16.2) → बालकीडनकैः प्रलोभ्य (1.16.3); [absent] (SS 1.16.3) → पिचुवर्ति प्रवेशयेत् (1.16.5).

pierced ear should be removed because of aggravated humours or a culpable piercing whereas the version known to Dalhaṇa (1.16.6 ([Su 1938: 77](#))) included two further reasons, namely, because of piercing with a painful, crooked and unrecommended needle or because of a wick that is too thick. Some of the split ear flaps in Dalhaṇa's version have additional characteristics,⁵⁷ and a list of four symptoms associated with incurable joins in the Nepalese version (SS 1.16.19) was increased to six in Dalhaṇa's version (1.16.10 ([Su 1938: 77](#))). Also, models of classifying symptoms were introduced in subsequent versions. For example, the Nepalese version (SS 1.16.4) lists the symptoms of mistakenly piercing a duct in the ear whereas the version known to Dalhaṇa (1.16.5, [Su 1938: 76–77](#)) classifies these symptoms according to three ducts called कालिका, मर्मरिका and लोहितिका, which results in some repetition of the symptoms mentioned.⁵⁸

Transposing Words, Verses and Passages

A close comparison of the Nepalese version with the vulgate reveals changes in the order of words, sentences and verses. Examples of such transpositions occur in SS 1.16. In most cases, the changes in word order are insignificant and may be result of different preferences in syntax or even scribal eye-brain-hand miscommunication.⁵⁹ However, the transposition of verses and passages is usually the result of efforts at redacting the text to add new material. A good example of this is the transposition of SS 1.16.17 and SS 1.16.18 in the Nepalese version to 1.16.26 and 1.16.25,

57 For example, पीठोपमपालिनिर्वेधिमः (1.16.9, [Su 1938: 77](#)) → पीठोपमपालिरुभयतः क्षीणपुत्रिकाश्रितो निर्वेधिमः (1.16.10, [Su 1938: 77](#)); इतराल्पपालिः संक्षिप्तः (SS 1.16.9) → उत्सन्नपालिरितराल्पपालिः संक्षिप्तः (1.16.10); तनुविषमपालिः (SS 1.16.9) → तनुविषमाल्पपालिः (1.16.10).

58 In Dalhaṇa's version (1.16.5, [Su 1938: 76–77](#)), the symptoms of fever and pain (ज्वर, वेदना) are repeated. This repetition does not occur in the Nepalese version. It is possible that this classification was not in the version of the *Suśrutasaṃhitā* known to Cakrapāṇidatta (1.16.4, [Su 1939: 126](#)) because he mentions that some read classifications of ducts at this point in the text and he cites verses from Bhoja on कालिका, मर्मरिका and लोहितिका, but he does not gloss or comment on the passage known to Dalhaṇa.

59 For example, अणुस्थूल० (SS 1.16.9) → स्थूलाणु० (1.16.10, [Su 1938: 77](#)); तत्रैते दशकर्ण० (SS 1.16.9) → तत्र दशैते कर्ण० (1.16.10, [Su 1938: 77](#)); नातिगाढन्नातिशिथिलं सूत्रेणाववध्य (SS 1.16.9) → सूत्रेणानवगाढमनतिशिथिलं च वद्धा (1.16.10, [Su 1938: 77](#)); पूर्वन्दक्षिणं कुमारस्य वामङ्गन्यायाः | प्रतनुं सूच्या बहलमारया (SS 1.16.2) → प्रतनुं सूच्या बहलमारया। पूर्व दक्षिणं कुमारस्य वामङ्गन्यायाः (1.16.3, [Su 1938: 76](#)).

respectively, in Ḑalhaṇa's. It seems that this transposition may have resulted from the insertion of new verses 1.16.23cd–24 and 1.16.26.1–19 in the latter.

Redacting Recipes and Elaborating on Treatments

Some of the additional text in subsequent versions of the *Suśrutasaṃhitā* introduces new ingredients in recipes and different procedures in treatments. In many instances, the new material merely clarifies or elaborates on the original but sometimes it changes the recipe or treatment significantly. An example of a suppletion that clarifies the text of the Nepalese version can be seen in 1.16.3 of Ḑalhaṇa's version (Su 1938: 76), which contains a statement that the physician should insert a wick of cotton after the ear has been pierced.⁶⁰ This statement anticipates the instructions in the Nepalese version (SS 1.16.5–6) on removing the wick because of aggravated humours and replacing the wick with a thicker one every three days. In this case, the additional statement of Ḑalhaṇa's version elucidates the role of the wick in the procedure of piercing the ear.

A similar clarification occurs in Ḑalhaṇa's version at 1.16.18 (Su 1938: 70),⁶¹ which reiterates the cure for an ear tainted by a humour that was described earlier in 1.16.7.⁶² The reiteration is quite apt because it follows a passage that outlines the various symptoms of ear disease arising from each of the three humours.⁶³ The author of the Nepalese version probably assumed that, after reading SS 1.16.12, the reader would refer back to SS 1.16.6 for the cure of an ear affected by a humour. However, in Ḑalhaṇa's version, the treatment is reiterated.

In Ḑalhaṇa's version of 1.16, there are two instances in which ingredients were added to recipes of medicines in the Nepalese version. The first is the recipe of an ointment that should be applied to a pierced ear that has not healed. In Ḑalhaṇa's version, the recipe was rewritten to include sesame seeds.⁶⁴ A more significant change occurs in another recipe for an admixture of an oil that is supposed to be rubbed into a healthy ear to

⁶⁰ For example, [absent] (SS 1.16.2) → पिचुवर्ति प्रवेशयेत् (1.16.3, Su 1938: 76).

⁶¹ Corresponding to SS 1.16.13 in the Nepalese version, lines 50–51 of the edition.

⁶² SS 1.16.6 in the Nepalese version, lines 13–14 of the edition.

⁶³ Ḑalhaṇa 1.16.17 (Su 1938: 79), corresponding to Nepalese SS 1.16.12, lines 46–49 of the edition.

⁶⁴ Nepalese version SS 1.16.5 (lines 11–12): यवमधुकमञ्जिष्ठागन्धवहस्तमूलैर्मधुघृतप्रगाढैरालेपयेत्

enlarge it. Dalhaṇa's version of the admixture has five additional ingredients, namely, *prickly chaff-flower*, *Withania*, *milk-white*, *sweet plants* and *Indian ipecac*.⁶⁵ It also has *beggarweed* instead of *Indian kudzu*.⁶⁶

The general tendency in redacting a recipe from the Nepalese version was to preserve most ingredients of the original and to add new ones.

Comparative therapeutics

For at least two reasons, it is interesting to compare the text materials of the *Suśrutasamhitā* 1.16 with parallel materials found in other texts, including the *Carakasamhitā*, *Aṣṭāṅgasaṅgraha*, and *Aṣṭāṅgahṛdayasaṅhitā*. The latter two works, both ascribed to Vāgbhaṭa, can safely be dated to a period after the composition of the *Suśrutasamhitā* but before the commentator Dalhaṇa, thus throwing light on a period of development for which witnesses are limited and also broadly the period at which the Nepalese version was current. Secondly, the manner in which Vāgbhaṭa's works incorporate and modify materials from the *Suśrutasamhitā* can help us to understand how recipes and therapies evolved within specific lines of textual transmission.

The materials presented in *Suśrutasamhitā* 1.16 are parallel to those in two chapters of the *Aṣṭāṅgasaṅgraha*, namely *Uttarasthāna*, chapters 1 and 22, titled “*bālopacaraṇīya*” and “*karṇarogapratiṣedha*,” and *Aṣṭāṅgahṛdayasaṅhitā*, *Uttarasthāna* 1 and 18 with the same chapter names.⁶⁷

First, let us return to the comments on the insertion of a wick that were mentioned above (p.23). The Nepalese version says nothing, while Dalhaṇa's version says “one should insert a cloth wick” (पिचुवर्ति प्रवेशयेत्). A little later, both versions say, “one should remove the wick”.⁶⁸ It seems likely that the editor of Dalhaṇa's version added the initial phrase about

which become, in Dalhaṇa 1.16.7 (*Su* 1938:77): मधुकैरण्डमूलमञ्जिष्ठायवतिलकल्कैर्मधुघृतप्रगादैरालेपयेत्.

65 Dalhaṇa's version 1.16.7 (*Su* 1938:77).

66 Nepalese version SS 1.16.14 (lines 52–54): अर्कालर्कबलातिवलानन्ताविदारीमधुकजलशूकप्रतिवापन्तैलम्पाचयित्वा which become, in Dalhaṇa 1.16.19 (*Su* 1938:79): अर्कालर्कबलातिवलानन्तापामागांध्यगन्ध्याविदारिगन्ध्याक्षीरशुक्राजलशूकमधुरवर्गपयस्याप्रतिवापं तैलम्बा पाचयित्वा.

67 *As* 1980: 619–629 and 734–744 and *Ah* 1939: 777–781 and 837–841, respectively.

68 तत्र वर्त्तिमपहृत्य in the Nepalese version (line 11), and the less clear तत्र वर्त्तिमुपहृत्य in Dalhaṇa's version (1.16.6 (*Su* 1938:77)).

inserting the wick because it seemed necessary to say that the wick was applied before being removed. The older Nepalese version seems slightly less coherent on this point, but is perhaps represents an earlier recension on the principle of *lectio difficilior potior*. Both the *Aṣṭāṅgasaṅgraha* and the *Aṣṭāṅgahṛdayasaṁhitā* describe first inserting a thread in the pierced earlobe and subsequently replacing it every third day.⁶⁹ In this respect, they agree with Dalhaṇa's version.

Secondly, it is interesting to consider again the recipe prescribed to treat the vitiation of humours in the pierced ear, mentioned above. A slightly modified recipe is found in the *Aṣṭāṅgasaṅgraha* 6.1.63 (As 1980: 626), but the same is not present in *Aṣṭāṅgahṛdayasaṁhitā*. As pointed out above, Dalhaṇa's version adds a paste of sesame seeds (तिलकल्क) to the recipe attested by the Nepalese version. In the parallel version of recipe found in the printed editions of *Aṣṭāṅgasaṅgraha*, honey (मधु) is missing, but ghee (आज्य) is found. However, when checking the manuscripts of the *Aṣṭāṅgasaṅgraha*, one of them reads आच्यैः instead of आज्यैः(यवैरण्डजटायषीमञ्जिष्ठाज्यैः प्रलेपयेत).⁷⁰ Interestingly, the paste of sesame seeds (तिलकल्क) of Dalhaṇa's version is not present in the *Aṣṭāṅgasaṅgraha* and is replaced by जटा, which is most probably spikenard.

Since the paste of sesame seeds is the main differentiating factor between the recipe versions attested by the Nepalese version and Dalhaṇa's version, a general review of the contexts of its use in the major texts may be enlightening. References for the paste of sesame seeds are found in the texts shown in Table 2.1. Among them, references with the

<i>Text</i>	<i>Instances of sesame seed paste</i>
<i>Carakasaṁhitā</i>	6
<i>Suśrutasaṁhitā</i>	11
<i>Aṣṭāṅgasaṅgraha</i>	16
<i>Aṣṭāṅgahṛdayasaṁhitā</i>	4

Table 2.1: Sesame seed paste (तिलकल्क) in different texts.

combination of the paste of sesame seeds, ghee and honey are not rare either, with four instances each in *Suśrutasaṁhitā* and *Aṣṭāṅgasaṅgraha*

69 6.1.58 (As 1980: 626) and 6.1.36 (Ah 1939: 780) respectively.

70 MS Mumbai, Asiatic Society 162, catalogue no. BD 263/1–6

and two instances in *Aṣṭāṅgahṛdayasaṁhitā*. A combination of the paste of sesame seeds, ghee and honey has also been specifically quoted as a general healing recipe.⁷¹

Another matter of interest is the combination of ghee and honey. We find many instances where this unique combination alone or in combination with other drugs is used in a variety of clinical contexts including those prescribed for the healing of ulcers or surgical wounds.⁷²

This material evidence points to the general trend that medicines in the older Nepalese version of the *Suśrutasamhitā* present a central core recipe, consisting of a few drugs, that develops with ever-increasing complexity in the more recent version of Dalhaṇa and later authors.

⁷¹ E.g., *Suśrutasamhitā* 1.11.22ab ([Su 1938: 49](#)), *Aṣṭāṅgasaṅgraha* 1.38.21 ([As 1980: 249–250](#)) and *Aṣṭāṅgahṛdayasaṁhitā* 1.30.34 ([Ah 1939: 357](#)).

⁷² E.g., *Aṣṭāṅgasaṅgraha* 1.37.30 ([As 1980: 246](#)) for क्षतकण्ठ and *Aṣṭāṅgasaṅgraha* 4.17.22 ([As 1980: 517](#)) for healing of the surgical wound in उदररोग.

4 The Manuscripts

Our edition is based on the textual evidence of three manuscripts. All three were produced in the Kathmandu Valley, Nepal and preserved in libraries there. Klebanov (2021a: §2.1) provided a comprehensive description of the individual manuscripts, quotes and translates their colophons and thoroughly examines various problems involved in their interpretation.¹ That is why we will present only the key data essential for the study of our edition in the present book. In referring to the manuscripts, we use the sigla K, N and H, which correspond to the initial letters in the names of the libraries and collection where the respective bundles were discovered.

MS Kathmandu KL 699, siglum K This manuscript has been preserved at the Kaiser Shamsher (KL) library in Kathmandu, accession number KL 699.² See Fig. 4.1. It was microfilmed and catalogued by the NGMPP/ NGMCP as C 80-7.³ The MS comprises 152 palm-leaf folios that originally belonged to several different codicological units written by different scribes.⁴ The folios are 53.5 × 4.4 cm in size and have two string holes. The text is written in the so-called transitional Gupta script, with six to eight lines per folio.⁵ The MS is incomplete and contains a large part of the *Suśrutasamhitā* as well as the *Sauśrutanighaṇṭu*.⁶ The date stated in the colophon at the end of the compendium is verified for Sunday, April 13, 878 ce. However, physical damage to the manuscript folio containing the colophon means

¹ See also Harimoto 2010; 2011; 2014.

² See also the description by Klebanov (2021a: §2.1).

³ See http://catalogue-old.ngmcp.uni-hamburg.de/mediawiki/index.php/C_80-7_Suśrutasamhitā (accessed on October 22, 2021).

⁴ Bhattacharai (2020: 46) and Klebanov (2021a: 11) agree that four to five scribes were involved in the manuscript's production.

⁵ Codicological features of the manuscript, such as the layout, peculiarities of the script, various ornamental and text-dividing symbols and many more, were scrutinized in Bhattacharai (2020).

⁶ Klebanov (2021a: 11) provided a detailed description of the content.



Figure 4.1: Folio 17r of MS Kathmandu Kaiser Library 699.

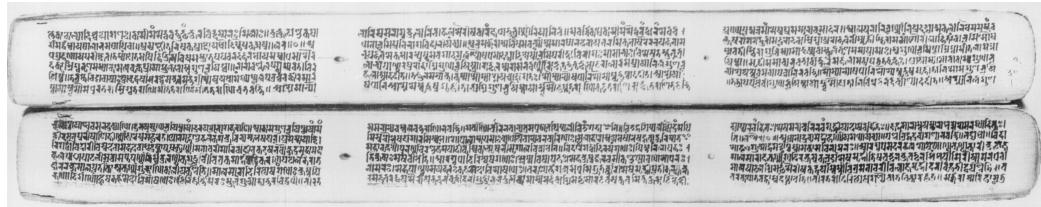


Figure 4.2: Folios 30r and 30v of MS Kathmandu National Archives 1-1079.

that it is no longer possible to interpret it definitively. In particular, two persons are mentioned in the concluding remarks, someone called Śrī Harṣacandra and Vaidya Vasuvarman, but their roles are not perfectly clear. Klebanov (2021a: 16) thinks that the former,

...either sponsored the copying enterprise or wrote the manuscript himself, [and that he subsequently] donated it to Vaidya Vasuvarman on the condition that he (Vasuvarman) would study the text and explain it to others. The second condition was that the manuscript should remain in the family and not be given away either for sale or as a pawn. If the manuscript sat unused, it should be returned to Śrī Harṣacandra.⁷

MS Kathmandu NAK 1-1079, siglum N This MS is kept at the National Archives Kathmandu (NAK), under accession number 1-1079 क.⁸ See Fig. 4.2. It was microfilmed twice by the NGMPP as A 45-5(1)

⁷ Klebanov (2021a: 13–17) provides a translation and study of the colophon, as well as an exposition of different positions related to its interpretation.

⁸ See also the description by Klebanov (2021a: §2.2).

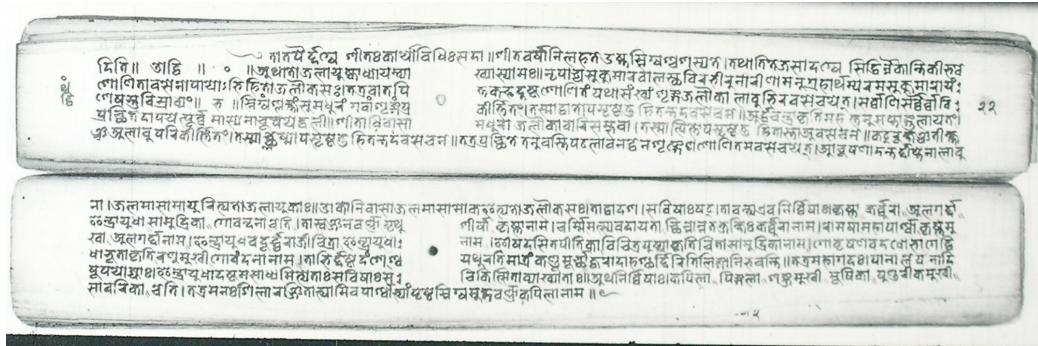


Figure 4.3: Folios 22v and 23r of MS Kathmandu National Archives 5-333.

and A 1267-11(2).⁹ The MS comprises 65 palm-leaf folios, 56 × 5 cm in size, with two string holes each, and it is bundled together in a composite manuscript with at least one other medical work. The text is written in a variety of Newari script, with seven lines per folio on average. Although the text contained in the MS does not cover the entire *Suśrutasamhitā* and breaks off abruptly in the second chapter of the *śārīrasthāna*, the actual MS, as a codicological unit, appears complete, that is, no leaf seems to be missing from the originally unitary artefact. Based on paleographic considerations, the MS can be dated tentatively to the twelfth or thirteenth century.

MS Kathmandu NAK 5-333, siglum H This MS belonged to the historical collection of Hemarāja Śarman (fl. 1878–1953) and is currently kept at the NAK under accession number NAK 5-333.¹⁰ See Fig. 4.3. It has been microfilmed twice by the NGMPP as B 29-19 and B 30-15, but the latter microfilm is incomplete.¹¹ The manuscript comprises 435 palm-leaf folios, 34 × 5 cm in size, with one string-hole left of centre. It is written in a type of Newari script that is more recent than that of N, with approximately six lines per folio. The MS is exceptionally well preserved. Most importantly for the present project, the MS supports

9 See [http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/A_45-5_\(Suśrutasamhitā\)](http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/A_45-5_(Suśrutasamhitā)) (accessed on October 22, 2021).

10 See also the description by Klebanov (2021a: §2.3).

11 See http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/B_29-19_Suśrutasamhitā (accessed on October 22, 2021).

the complete *Suśrutasamhitā* and the *Sauśrutanighaṇṭu*. The final colophon identifies the scribe of the MS as Vaidya Amarasimhaka, son of Kamaladatta, and states the date on which he concluded the copying of the text. Both reading the colophon, that is, deciphering the actual characters, and the interpretation of the concerned passage involve diverging opinions, all of which concur, however, in assigning the MS to the sixteenth century. Klebanov (2021a: 21–26) gave an analytical account of the views expressed in literature, considered further options, and proposed that the MS was completed on Sunday, July 29, 1543.

Editorial Principles

Method

The data for the critical edition comes from the witnesses of the Nepalese version, described above. Diplomatic transcriptions of SS 1.16 of these manuscripts have been created by researchers of the [Suśruta Project](#) according to a subset of TEI Guidelines that has been formulated by Charles Li and tailored for the Saktumiva platform.¹² MS Kathmandu NAK 5-333 was transcribed first because its script is relatively easy to read, the scans are clear, it is the most complete of the manuscript witnesses, and its text is extremely close to that of MS Kathmandu KL 699. Following that, MS Kathmandu KL 699 and MS Kathmandu NAK 1-1079 were transcribed.

The diplomatic transcriptions were uploaded to Li's manuscript collation platform called Saktumiva, chapter by chapter as they were completed.¹³ An electronic edition of the vulgate of the *Suśrutasamhitā*, that was transcribed, without the commentaries, by Tsutomu Yamashita and Yasutaka Muroya on the basis of Ācārya's 1931 and 1938 Bombay editions has also been included on the Saktumiva platform and is available for collation.¹⁴

¹² See Wujastyk et al. 2021–3, The TEI Consortium 2010 and Li 2017–: “TEI Tagging”.

¹³ See the Saktumiva interface Li 2017–.

¹⁴ This electronic edition is also available on the SARIT website (Wujastyk, Pollock, et al. 2008–: sub “*Suśrutasamhitā*”). The version at Saktumiva has received several corrections and the intention is to merge these back into the SARIT edition eventually.

Saktumiva's collation function standardises punctuation and orthographic variants according to filters which can be turned off or on.¹⁵ These filters enable the editors to ignore *dandas*, numbers and floral punctuation marks (*puṣpikā*) in the transcripts, as well as orthographic variants, such as ङ and ङ, certain germinated consonants, and *visarga* variants. On the basis of the automatic collation, Jason Birch created a provisional edition of SS.1.16, which the project's researchers read together at weekly seminars. Manuscript images were routinely checked to verify the transcripts, particularly when a reading was uncertain; the commentaries of Cakrapāṇidatta and Ḟalhaṇa were read, and variant readings reported by these commentators were included in notes to the edition. Also, various reference books were consulted, to elucidate the meaning of technical terms and identify relevant information in other medical works.¹⁶

An initial draft of the translation and many annotations were written by Wujastyk during the seminars as the Project researchers discussed the text's meaning. The transcripts, provisional edition and translation were uploaded to the project's repository at Github on a weekly basis.¹⁷ Therefore, the project's work has been publicly available as it evolves. The software tools used in the project have been described on the project website.¹⁸

Stemma

The data from transcripts collated by Saktumiva can be exported as a FASTA file and aligned according to characters, syllables or words by a program called Helayo.¹⁹ The resulting NEXUS file can be read by phylogenetic software to build a stemmatic tree.²⁰ This procedure was done with transcripts of several chapters of the Nepalese witnesses, and the results confirmed the editors' preliminary stemmatic hypothesis that K and H are more closely related to one another than K and N.²¹ Given

¹⁵ On the rationale for implementing text-critical principles as algorithms, see Li 2017 and Li 2018: §4.4.

¹⁶ Particularly valuable reference resources included Nadkarni (1954) and V. Jošī and N. H. Jošī (1968), Meulenbeld (HML), and the literature on *materia medica* cited on pp. 91 ff. below.

¹⁷ Wujastyk et al. 2021–3.

¹⁸ Wujastyk et al. 2021b–b: "The toolbox".

¹⁹ Li 2022a.

²⁰ This process is discussed in greater detail by Li (2022b).

²¹ See chapter 2 above for further discussion.

the early date of K and the small number of other surviving witnesses of the Nepalese version, the relationship between the manuscripts at our disposal is reasonably clear and, in the case of SS.1.16, the manuscript data was largely confined to N and H owing to a missing folio of K. Rather than have to assess numerous variant readings from a large number of witnesses, the challenge of editing has been to repair the text where it has become corrupt in the few witnesses available to us.

The Edition and Apparatus

The critical edition of SS.1.16 in this article retains many of the peculiarities of MS Kathmandu KL 699 because the editors have endeavoured to present to the reader a hyparchetype of the text that was transmitted by this ninth-century manuscript. Therefore, the Sanskrit has been standardised as little as possible and, although the text has been corrected and repaired wherever it was corrupt in the witnesses, it has not been normalized or conventionalized to the extent of many modern editions of Sanskrit works.

The editors have assumed that the authors of the Nepalese *Suśrutasamhitā* were familiar with Pāṇinian Sanskrit and, although there are some non-standard spellings and grammatical forms in the text, there are very few instances of hyper-Sanskritization, Buddhist-Hybrid Sanskrit or Epic forms that would suggest that this assumption is unreasonable.²² Therefore, the editors of SS.1.16 have opted to retain some perhaps unfamiliar features of the Sanskrit in MS Kathmandu KL 699 when they are grammatically correct. For example, in external *sandhi*, the class nasal is usually used at the end of a word instead of an *anusvāra* (e.g., 1.16.3, ऽवाचनन्धात्र्य०), although the *anusvāra* is sometimes used (1.16.15, उदकं धान्धास०). In most cases, the consonant following a रेफ is doubled, but this is not always the

²² On the contrary, the text of the *Suśrutasamhitā* sometimes retains legitimate Pāṇinian forms that are rare or unknown elsewhere in Sanskrit literature. For example, the term *kārmuka* “effective,” formed by P.5.1.103, is virtually unknown in classical Sanskrit, and is said even by the authors of the *Kāśikāvṛtti* to occur uniquely as an adjective describing a bow. Yet it occurs in both the *Suśrutasamhitā* (1.41.5 ([Su 1938: 182](#))) and the *Carakasamhitā* (1.26.13 ([Ca. 1941: 138](#))), describing “effective” drug substances. Cf. the observation by M. Deshpande ([1988: 118](#)) that other rare Pāṇinian usages in the early Sanskrit medical texts provide evidence that, “... in all likelihood there was a dialect of Sanskrit closer to Pāṇini’s time and region in which [such peculiar Pāṇinian usage existed]. This peculiarity did not exist in most other dialects of Sanskrit.”

case.²³ Since these inconsistencies seem inherent to the transmission of the text and may have even been authorial, the critical edition reflects them as they occur in K and, when the testimony of K is not available, the witness most similar to K, which is H.

The Nepalese manuscripts often have an *anusvāra* before a *dandā* at the end of a sentence or verse. Whether these *anusvāras* should be changed to the consonant म् is a moot question because there is no formal Pāṇinian concept of ‘end-of-sentence’ and his rules on *sandhi* are contingent on the close contact of sounds (*samhitā*).²⁴ However, it is reasonable to assume that at the end of a verse, paragraph or sentence the speakers would have paused for breath or thought, so *sandhi* should be applied, in which case a final *anusvāra* or class nasal of the following consonant is changed to म्. Nonetheless, this remains an assumption about how the text would be pronounced. Therefore, in a critical edition, inserting *dandas* and changing *anusvāras* to म् before them are subjective decisions by the editors. The scribal use of *dandas* and *anusvāras* in the Nepalese manuscripts can be seen in the digital edition if one switches off the filters for ignoring *dandas* and final *anusvāra* variants.

Unconventional spellings and grammatical forms have been retained and noted in the annotations to the translation. However, the editors have corrected scribal errors and repaired corruptions in the transmitted text with conjectures wherever possible. Therefore, although the edition retains many of the peculiarities of the Nepalese manuscripts, it is not a diplomatic transcript or a hybrid of diplomatic and critical editing because the features of the transmitted text have been retained or changed deliberately, and the reasons for doing so are given in either the introduction or, in more specific cases, the annotations to the translation.

Digital Edition

The editors are producing both printed and digital editions of the Nepalese *Suśrutasamhitā*. Since the print and digital environments differ markedly,

²³ Examples of the germination of consonants are कण्ठ (1.16.1 ff), मुहूर्त (1.16.2), पूर्व (1.16.2), गन्धर्व (1.16.5), ॐलौर् मधु० (1.16.5), वर्ति (1.16.6) and पुनर्जिघ्येत् (1.16.6). Examples where it does not occur in 1.16 are ॐार्थम् (1.16.8,19), कुर्यात् (1.16.16, 32), ॐपालिर्वल्लूर० (1.16.10); ॐपालिर्वयोजिमः (1.16.10) and दीर्घैक० (1.16.10).

²⁴ Pāṇini 1.4.109 परः सञ्चिकर्षः संहिता, *et passim*.

d **NE** **K** m kumārasya vāmañ kanyāy
 pratanum sūcyā bahalam ārayā ||2||

(A: tataḥ N, H: pratanū)
 A: [ADD] picuvartim A: [OM]
 A: praveśayet ||

Figure 4.4: The digital edition of SS.1.16.3

each edition has its own format.

Instructions for reading the digital edition have been provided by Li at [Saktumiva](#). In brief, you can generate the apparatus by choosing a base text and one or more of the other witnesses. You can also choose to hide or ignore in varying degrees TEI tags, punctuation and orthographical variants in the transcripts of the witnesses. On the right side of the text, the digital edition displays an apparatus that is negative in so far as the lemma and its witnesses are not included. This apparatus intelligently truncates variants where possible.

For example, as seen in Figure 4.4, the apparatus for the words *pratanum sūcyā bahalam ārayā* is on the right side of the display. This entry means that the editors have chosen to read *pratanum*, which the reader must infer is attested by K, whereas A has *tataḥ* and N and H *pratanū*. Witness A has added the word *picuvartim* after *tataḥ*, omitted *sūcyā bahalam*,²⁵ and has *praveśayet* instead of *ārayā*, which is attested by all of the Nepalese witnesses.

A popup on a dark background, as shown in Figure 4.4, displays the manuscript sigla for the witnesses that support the selected reading, which is labelled “NE” (“New Edition”). As seen in Figure 4.5, the positive apparatus of *pratanum sūcyā bahalam ārayā* appears in a pop-up window in which the lemma and variants are aligned according to letters, and the variations are highlighted in yellow. The positive apparatus can be expanded by highlighting one or more words, and even entire passages or verses, and clicking on the collapsed menu icon.

In both the negative and positive apparatuses of the digital edition, you must infer conjectures and corrections by the editors. Testimonia and notes are in the apparatus on the right side of the “provisional edition” text. They give an opportunity for the editors to provide scholarly commentary of various kinds, but the editors cannot write comments directly into

²⁵ The omitted words are displayed by hovering the cursor over [OM] adjacent to A in the apparatus.

SP: pratanum	sūcyā bahalam ārayā	
A: tataḥ [ADD]	picuvartim [OM]	praveśayet
K: pratanum	sūcyā bahalam ārayā	
N: pratanū	sūcyā bahalam ārayā	
H: pratanū	sūcyā bahalam ārayā	

Figure 4.5: The witnesses to a selected passage of SS.1.16.3

the textual apparatus itself, since it is constructed live each time the text is displayed.

The digital form of the edition is “soft,” in the sense that editorial work on the files that generate the critical text is potentially continuous, adding ever greater refinement and precision. And, especially, as more manuscript witnesses come to light and are transcribed, the edition is open to continuous enrichment.

Printed Edition

The printed edition of SS.1.16 has four layers of footnotes. The first layer reports the witnesses that have been collated. Line numbers and lemmata have been used to identify the witnesses that have been collated for a particular section of the text, as seen in the following example.

१-७ अथातः – ०विद्वलिङ्गम्] MSS K, H, and N

The above entry means that a textual passage beginning with अथातः on line 1 and ending with ०विद्वलिङ्गम् on line 7 is attested by manuscripts K, H and N. This layer also indicates passages that are missing or omitted in a particular witness.

The second layer of footnotes reports the variant readings of the Nepalese witnesses. This apparatus is negative, that is to say, only the testimony of the variant readings have been reported, and not that of the lemma. The following entry is an example of the apparatus’ syntax:

५ प्रतनुं] प्रतनू N H

This entry means that on line five of the edition the editors have chosen to read प्रतनुं, instead of प्रतन्, which is attested by witnesses N and H. The reader can infer that प्रतनुं is attested by K because the first layer of footnotes indicates that K has been collated here. In prose passages, the lemmata and variants consist of corresponding words and, in verses, corresponding syllables. Emendations by the editors are indicated by the abbreviation *em.*, and omissions and suppletions in the witnesses are indicated by *om.* and *add.*, respectively. A wavy line under a letter means that it is unclear to the editors. Text deleted by a scribe is shown underscored by double lines, and the scribe's substitution is appended in quotation marks.

There are minor notational variations between the online digital edition and the printed edition presented here. For example, a scribal "crow's foot" mark (काकपद), often indicating a marginal insertion, is displayed in the digital edition as,

N: ane~~X~~]

and in print as

अनेन] अने X N.

The third layer of footnotes contains the variant readings of the vulgate, which have been presented in the same format as the second layer. If a reading of the vulgate has been accepted by the editors against different readings in the Nepalese witnesses, the siglum for the vulgate (i.e., A) has been placed next to lemma in the second layer of footnotes.

The fourth layer of footnotes notes includes various testimonia and notes. The testimonia mainly consists of the variant readings noted by the commentators Cakrapāṇidatta and Dalhaṇa. Those known to Gayadāsa may be added in future publications. The notes include brief comments on certain emendations and editorial decisions. More elaborate discussions on such issues have been included in the annotations to the translation.

In the printed edition below, the numbering of passages has been adjusted to follow the text of the Nepalese version of the work. The numbering of the corresponding passages in the vulgate is presented in small digits in the right margin.

Abbreviations

ARK references can be found by prefixing the resolver "<http://n2t.net>,"
e.g., <http://n2t.net/ark:/13960/t3tt6967d>.

Ah 1939	Kumṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇāśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्भाग्मटविरचितम् अष्टाङ्गहृदयम्, श्रीमद्रुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदरसायनाह्यया टीकया च समुल्सितम् = <i>The Astāngahṛidaya</i> (6th edn., Mum̄bayyām: Nirṇayasāgara Press), ark:/13960/t3tt6967d .
Anup	<i>Anup Sanskrit Library.</i>
Apte	Apte, Vaman Shivaram (1992), <i>The Practical Sanskrit-English Dictionary</i> (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Reprinted from Gode and Karve 1957–9 .
AS	<i>Asiatic Society.</i>
As 1980	Āṭhavale, Anamta Dāmodara (1980) (ed.), <i>Āṣṭāṅgasāṅgrahāḥ. Śrīmad Vṛddhavāgbhaṭaviracitāḥ Induvyākhyāsaḥitāḥ</i> (Puṇe: Maheśa Anaṁta Āṭhavale, Śrīmad Ātreya Prakāśanam), ark:/13960/t9773bb9z .
Bhela 1921	Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), <i>The Bhela Samhita. Sanskrit Text</i> (Calcutta: University of Calcutta), ark:/13960/t3sv3157j ; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4 , P. P. S. Sastri 1933: #11085).

Bhela 2000	Krishnamurthy, K. H. (2000), <i>Bhela-saṃhitā. Text with English Translation, Commentary and Critical Notes</i> (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
BL	<i>British Library.</i>
Ca. 1941	Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छुष्येणान्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्या संवलिता (3rd edn., Mumbaiyām: Nirnaya Sagara Press), ark:/13960/t48q2f20n .
HIML	Meulenbeld, Gerrit Jan (1999–2002), <i>A History of Indian Medical Literature</i> , 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
IOLR	Eggeling, Julius et al. (1887–1935), <i>Catalogue of the Sanskrit Manuscripts in the Library of the India Office</i> (London: Secretary of State for India), ark:/13960/s2kbk5zcr9 .
KL	<i>Kaiser Library.</i>
MN	Ācārya, Yādavaśarma Trivikrama (1932) (ed.), महामतिश्रीमाधवकरप्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोशाव्याख्याया, श्रीवाचस्पति-वैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुद्धसितम् = <i>Mādhavanidāna</i> by Mādhavakara with the Two Commentaries, <i>Madhukosha</i> by Vijayarakshita & Śrīkanthadatta and <i>Ātankadarpaṇa</i> by Vāchaspati Vaidya (3rd edn., Bombay: Nirnaya Sagara Press), ark:/13960/t66452x0h ; Reprinted Varanasi: Chowkhambha, 1986.
MW	Monier-Williams, Monier, Leumann, E., Cappeller, C., et al. (1899), <i>A Sanskrit–English Dictionary Etymologically and Philologically Arranged, New Edition</i> (Oxford: Clarendon Press); 1970 reprint.
NAK	<i>National Archives of Kathmandu.</i>

- NCC Raghavan, V. et al. (1949–), *New Catalogus Catalogorum, an Alphabetical Register of Sanskrit and Allied Works and Authors*, 39 vols. (Madras University Sanskrit Series; Madras: University of Madras); v.1: revised edition, 1968. Searchable at <https://vmlt.in/ncc/>.
- NGMCP NGMCP (2014), “Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue,” Universität Hamburg and Deutsche Forschungsgemeinschaft, URL: <http://catalogue.ngmcp.uni-hamburg.de/>.
- RORI *Rajasthan Oriental Research Institute.*
- Su 1889 Bhaṭṭācāryya, Jīvānanda Vidyāsāgara (1889) (ed.), सुश्रुतः. सूत्र-निदान-शारीर-चिकित्सा-कल्पोत्तर-तत्त्व-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), ark:/13960/t1nh6j09c; HML: IB, 311, edition b.
- Su 1915 Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुद्धसिता, आचार्योपाहेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhita of Sushruta, the Nibandhasangraha Commentary of Shri Dalhaṇāchārya* (Mumbayyāṁ: Nirṇayasāgaramudrāyantrālaye), ark : / 13960 / t3sv0mt50, accessed 29/07/2020; HML: IB, 312 edition *v.
- Su 1931 Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुतसंहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुद्धसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतत्त्वात्मकः. आचार्योपाहेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhaṇāchārya* (2nd edn., Mumbayyāṁ: Pāṇḍurāṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye), ark : / 13960 / t9j41sg94, accessed 09/06/2020; HML: IB, 312 edition *v.

- Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाख्याख्यया च समुद्धसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), [ark:/13960/t09x0sk1h](#); [HML](#): IB, 313, edition cc ('the vulgate').
- Su 1938² Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाख्याख्यया च समुद्धसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition ([Su 1938](#)).
- Su 1939 Ācārya, Yādavaśarma Trivikrama and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिदत्तविरचितया भानुमतीब्याख्याया समेतम् = *Sushrut-saṅhitā* (*sūtra Sthān*) with *Bhānumati* Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen (Śrīsvāmi Lakṣmīrāma Nidhi Granthamālā = Shrī Swāmī Lakshmī Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), [ark:/13960/t54g0d12m](#); Printed at the Nirṇayasāgara Press, Bombay.
- Su 1945 Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलिता = the *Suśrutasaṅhitā* of *Suśruta* with Various Readings, Notes and Appendix etc. (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), [ark:/13960/t8kd4jh7n](#).
- TMSSML *Tanjore Maharaja Serfoji Saraswati Mahal Library*.
- Viṣṇudh. Śarman, Madhusūdana and Śarman, Mādhavaprasāda (1912) (eds.), विष्णुधर्मोत्तरपुराणम् = [Viṣṇudharmottarapurāṇa] (Mumbai: Khemarāja

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Edited on the basis of a manuscript belonging to
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Bibliography

Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकटृष्णबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्या संवलिता (3rd edn., Mumbaiyām: Nirnaya Sagara Press), ark:/13960/t48q2f20n.

Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलिता = *the Suśrutasaṃhitā of Suśruta with Various Readings, Notes and Appendix etc.* (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), ark:/13960/t8kd4jh7n.

Adriaensen, Rob, Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), “An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa’s Nyāyacandrikā,” in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.

Adriaensen, Rob C. R., Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), “An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa’s Nyāyacandrikā,” in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.

Āgāśe, Ve. Śā. Rā. Rā. Kāśīnātha Śāstrī and Āpaṭe, Hari Nārāyaṇa (1904) (eds.), *Vācaspatimiśraviracitaṭīkāsanīvalitavyāsabhbhāṣyasametāni Pātañjalayogaśūtrāṇi Tathā Bhojadevaviracitarājamārtāṇḍābhidhavṛttisametāni Pātañjalayogaśūtrāṇi* (Ānandāśramasāṃskṛtagranthāvalih, 47; Puṇyākhyā-pattana: Ānandāśramamudraṇālaya), [ark :/ 13960 / t40s27g36](https://ark:/13960/t40s27g36).

- Agrawal, V. S. (1963), *India As Known to Pāṇini: A Study of the Cultural Material in the Aṣṭādhyāyī* (2nd edn., Varanasi: Prthvi Prakashan); First published in 1953.
- Angermeier, Vitus (2020), *Regenzeiten, Feuchtgebiete, Körpersäfte. Das Wasser in der klassischen indischen Medizin* (Wien: Österreichische Akademie der Wissenschaften).
- Baber, Zaheer (1996), *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany: State University of New York Press).
- Bakker, Hans T. (2019), "Some Methodological Considerations with Respect to the Critical Edition of Puranic Literature," in *Holy Ground: Where Art and Text Meet* (Leiden: Brill), 175–84. doi: 10.1163/9789004412071_010.
- Barceloux, Donald G. (2008), *Medical Toxicology of Natural Substances. Foods, Fungi, Medicinal Herbs, Plants, and Venomous Animals* (Hoboken, NJ, etc.: John Wiley & Sons), 1196 pp., ISBN: 047172761X, URL: https://www.ebook.de/de/product/6928604/barceloux_natural_substances.html.
- Bausi, Alessandro et al. (2015), *Comparative Oriental Manuscript Studies. An Introduction* (Hamburg: Tredition). doi: 10.5281/ZENODO.46784.
- Bendall, Cecil (1883), *Catalogue of the Buddhist Sanskrit, Manuscripts in The, University Library, Cambridge: With Introductory Notices and Illustrations of the Palaeography and Chronology of Nepal and Bengal* (Cambridge: University Press), ark:/13960/t03x8vz7b.
- Bhaṭṭācārya, Candrakānta (1910–7) (ed.), सुश्रुतसंहिता प्रथमखण्डम् सूत्रस्थानात्मकम् हाराणचन्द्रचक्रवर्तिकविराजविरचितसुश्रुतार्थसन्दीपनभाष्य-समेतम्...चन्द्रकान्त भट्टाचार्य-प्रमुखैः संशोधितम् = [The Suśrutasamhitā with the Commentary Suśrutārthaśandīpanabhāṣya by Hārāṇacandra Cakravarti] (Kalikātā: Satya Press); Edition "t" in HIML: IB, 312.
- Bhattarai, Bidur (2020), *Dividing Texts. Conventions of Visual Text-Organisation in Nepalese and North Indian Manuscripts* (Studies in Manuscript Cultures; Berlin/Boston: de Gruyter), 388.
- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Parameswaran, Madhu K., et al. (2021), "Further Insight into the Role of Dhanvantari, the Physician to the Gods, in the Suśrutasamhitā," *Academia Letters*. doi: 10.20935/AL2992.

- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Rimal, Madhusudan, et al. (2021), “*Dalhaṇa* and the Early ‘Nepalese’ Version of the Suśrutas-*amṛhitā*.” doi: [10.20935/al3733](https://doi.org/10.20935/al3733).
- Bole, P. V. and Vaghani, Yogini (1986), *Field Guide to the Common Trees of India* (Bombay, Delhi, Oxford, etc.: World Wildlife Fund – India and Oxford University Press), ISBN: 0-19-561595-6; 4th reprint.
- Bollée, Willem (2010), “Remarks on the Cultural History of the Ear in India,” in Nalini Balbir (ed.), *Svasti: Essays in Honour of Professor Hampa Nagarajaiah for His 75th Birthday* (Bangalore: K. S. Mudappa Smaraka Trust), 141–67, URL: <https://jainelibrary.org/book-detail/?srno=007006>, accessed 23/01/2022.
- Breton, P. (1826), “On the Native Mode of Couching,” *Transactions of the Medical and Physical Society of Calcutta*, 2: 341–82, ark:/13960/t3dz8nn5t, URL: <https://archive.org/details/s8id13658440/page/338/mode/2up>, accessed 02/06/2021.
- Bronkhorst, Johannes (2016), *How the Brahmins Won: From Alexander to the Guptas* (Leiden: Brill). doi: [10.1163/9789004315518](https://doi.org/10.1163/9789004315518).
- (2021), “Patañjali’s Āryāvarta = Śunga realm?,” *Academia Letters*. doi: [10.20935/al1291](https://doi.org/10.20935/al1291); Article 291.
- Bronner, Yigal (2021) (ed.), “The Pandit Project” (30 Sept.), URL: <http://panditproject.org>.
- Burghart, Marjorie (2016), “The TEI Critical Apparatus Toolbox: Empowering Textual Scholars through Display, Control, and Comparison Features,” *Journal of the Text Encoding Initiative*, 10/Issue 10. doi: [10.4000/jtei.1520](https://doi.org/10.4000/jtei.1520), URL: <http://journals.openedition.org/jtei/1520>, accessed 12/12/2017.
- (2017), “Textual Variants,” in Marjorie Burghart, James Cummings, and Elena Pierazzo (eds.), *Digital Editing of Medieval Texts: A Textbook* (DEMM), URL: <https://www.digitalmanuscripts.eu/wp-content/uploads/2017/09/04-Textual-variants-MB.pdf>, accessed 04/07/2021.
- Burnell, Arthur Coke (1880), *A Classified Index to the Sanskrit MSS. in the Palace at Tanjore* (London: Trübner), ark:/13960/t4xh86j61; Bhelas-*amṛhitā* described on pp. 67 ff.

- Carpue, J. C. (1816), *An Account of Two Successful Operations for Restoring a Lost Nose from the Integuments of the Forehead...Including Descriptions of the Indian and Italian Methods* (London: Longman et al.), [ark:/13960/t2q57fn42](https://ark.org/ark:/13960/t2q57fn42), accessed 20/03/2019.
- Chadha, Gita and Thomas, Renny (2022) (eds.), *Mapping Scientific Method: Disciplinary Narrations* (Science and Technology Studies; Abingdon and New York: Routledge). doi: [10.4324/9781003298908](https://doi.org/10.4324/9781003298908).
- Chopra, R. N., Chopra, I. C., Handa, K. L., et al. (1958), *Chopra's Indigenous Drugs of India* (2nd edn., Calcutta: Dhur & Sons), [ark:/13960/t9673t140](https://ark.org/ark:/13960/t9673t140).
- Chopra, R. N., Chopra, I. C., and Varma, B. S. (1969), *Supplement to Glossary of Indian Medicinal Plants* (Reprint 1986, New Delhi: National Institute of Science Communication), ISBN: 8185038872.
- Chopra, R. N., Nayar, S. L., and Chopra, I. C. (1956), *Glossary of Indian Medicinal Plants* (3rd reprint, 1992, New Delhi: Council of Scientific and Industrial Research); vol. 2: R. N. Chopra, I. C. Chopra, and Varma ([Chopra GIMP suppl.](#)).
- Cone, Margaret (2001), *A Dictionary of Pāli* (Oxford: The Pali Text Society), ISBN: 0 86013 394 x.
- Cordier, P. (1903), "Récentes découvertes de mss. médicaux sanscrits dans l'Inde (1898–1902)," *Muséon, Nouvelle Série*, 4: 321–52, [ark:/13960/t26b2j457](https://ark.org/ark:/13960/t26b2j457), accessed 02/01/2020; Reprinted in Roșu 1989: 539–70.
- Coult, Ro. (1731), "An Account of the Diseases of Bengall," in *Indian Science and Technology in the Eighteenth Century* (Impex India), 141 f., 276.
- Crawford, D. G. (1930), *Roll of the Indian Medical Service, 1615–1930* (London, Calcutta, Simla: Thacker).
- Dave, K. N. (1985), *Birds in Sanskrit Literature* (Delhi: Motilal BanarsiDass), ISBN: 0-89581-676-8, [ark:/13960/t2c94cv80](https://ark.org/ark:/13960/t2c94cv80).
- Deshpande, Madhav (1988), "Pāṇini and the Northwestern Dialect: Some Suggestions on Sūtra 3.3.10," in Mohammad Ali Jazayery and Werner Winter (eds.), *Languages and Cultures: Studies in Honor of Edgar C. Polomé*, xxxvi (Trends in linguistics. Studies and monographs; Berlin, New York: Mouton de Gruyter), 111–23.

- Deshpande, Madhav M. (2010), "Pañca Gauḍa and Pañca Drāviḍa: Contested Borders of a Tradition Classifications," in Klaus Karttunen (ed.), *Anantaṇī Śāstram. Indological and Linguistic Studies in Honour of Bertil Tikkannen* (Studia Orientalia, 108; Helsinki: Finnish Oriental Society), 29–58, ISBN: 9789519380742.
- Deshpande, Vijaya (1999), "Indian Influences on Early Chinese Ophthalmology: Glaucoma As a Case Study," *Bulletin of the School of Oriental and African Studies*, 62: 306–22. doi: 10.1017/S0041977X00016724.
- (2000), "Ophthalmic Surgery: A Chapter in the History of Sino-indian Medical Contacts," *Bulletin of the School of Oriental and African Studies*, 63/3: 370–88, ISSN: 0041-977X. doi: 10.1017/s0041977x00008454.
- Dimitrov, Dragomir and Tamot, Kashinath (2007), "Kaiser Shamsher, His Library and His Manuscript Collection," *Kaiser Shamsher, His Library and His Manuscript Collection*, 3 (Jan.): 26–36, URL: <http://www.uni-hamburg.de/ngmcp/newsletter.html>.
- Dutt, Uday Chand (1922), *The Materia Medica of the Hindus...with a Glossary of Indian Plants by George King. Revised Edition...by Binod Lall Sen and Ashutosh Sen and Pulin Krishna Sen* (Krishnadas Sanskrit Studies; 3rd edn., Calcutta: Madan Gopal Dass for the Adi-Ayurveda Machine Press), URL: <https://archive.org/details/mobot31753000838638>, accessed 04/10/2017; Reprinted Varanasi: Chowkhamba Saraswati Bhawan, 1980.
- Dymock, William, Warden, C. J. H., and Hooper, David (1890), *Pharmacographia Indica: A History of the Principal Drugs of Vegetable Origin Met with in British India* (London, Bombay, Calcutta: Kegan Paul), URL: [https://archive.org/search.php?query=Dymock+Pharmacographia&&and\[\]=collection:%22rcpedinburgh%22](https://archive.org/search.php?query=Dymock+Pharmacographia&&and[]=collection:%22rcpedinburgh%22), accessed 24/10/2022.
- Edgerton, Franklin (1939), "The Epic Triṣṭubh and Its Hypermetric Varieties," *Journal of the American Oriental Society*, 59/2: 159–74. doi: 10.2307/594060.
- (1953), *Buddhist Hybrid Sanskrit Grammar and Dictionary. Vol. 2: Dictionary* (William Dwight Whitney Linguistic Series; New Haven: Yale University Press).

- Eggeling, Julius et al. (1887–1935), *Catalogue of the Sanskrit Manuscripts in the Library of the India Office* (London: Secretary of State for India), [ark:/13960/s2kbk5zcrg9](#).
- Elliot, Robert Henry (1918), *The Indian Operation of Couching for Cataract: Incorporating the Hunterian Lectures Delivered before the Royal College of Surgeons of England on February 19 and 21, 1917* (London: H. K. Lewis).
- Emeneau, M. B. (1969), “Sanskrit Syntactic Particles – “kila, khalu, nū-nam”,” *Indo-Iranian Journal*, 11/4: 241–68.
- Falk, Harry (1991), “Silver, Lead and Zinc in Early Indian Literature,” *South Asian Studies*, 7/1: 111–7. doi: [10.1080/02666030.1991.9628430](https://doi.org/10.1080/02666030.1991.9628430).
- Fan, Ka Wai (2005), “Couching for Cataract and Sino-indian Medical Exchange Fromthe Sixth to the Twelfth Century Ad,” *Clinical and Experimental Ophthalmology*: 188–90. doi: [10.1111/j.1442-9071.2005.00978.x](https://doi.org/10.1111/j.1442-9071.2005.00978.x); Unaware of V. Deshpande 1999; 2000.
- Fitzgerald, James L. (2009), “A Preliminary Study of the 681 Triṣṭubh Passages of the Mahābhārata,” in Robert P. Goldman and Muneo Tokunaga (eds.), *Epic Undertakings* (Papers of the 12th World Sanskrit Conference; Delhi: Motilal Banarsidass Publishe), 95–117.
- Ganapatiśāstrī, T. (1920–5), *Āryamañjuśrīmūlakalpaḥ* (Trivandrum Sanskrit Series, 70; Anantaśayane: Rājakīyamudraṇayantrālaye), [ark:/13960/t4pk5sj0j](#).
- Gode, P. K. and Karve, C. G. (1957–9) (eds.), *Revised and Enlarged Edition of Prin. V. S. Apte's the Practical Sanskrit-English Dictionary* (Poona: Prasad Prakashan), [ark:/13960/t3gx47212](#), accessed 20/10/2017.
- Gombrich, Richard (1979), “‘He cooks softly’: dverbs in Sanskrit grammar,” *Bulletin of the School of Oriental and African Studies*, 42/2 (June): 244–56. doi: [10.1017/s0041977x0014580x](https://doi.org/10.1017/s0041977x0014580x).
- Griffiths, Mark (1994), *The New Horticultural Society Index of Garden Plants* (London: Macmillan).
- Gupta, Sri Madhusudana (1835–6) (ed.), *Āyur-veda-prakāśa [also Called Suśruta-saṃhitā] by Suśruta. the Suśruta, or System of Medicine, Taught by Dhanwantari, and Composed by His Disciple Suśruta*, 2 vols. (Calcutta: Education Press and Baptist Mission Press), [ark:/13960/t6841qw6x](#).

- Harimoto, Kengo (2010), “[Preliminary Edition of the Nepalese MSS of the Suśrutasamhitā, adhyāyas 1.1–3, 6.4]” (prepublished).
- (2011), “In Search of the Oldest Nepalese Manuscript,” *Rivista degli Studi Orientali*, 84/1–4: 85–106, ISSN: 0392-4866, URL: <https://www.academia.edu/4128593/>, accessed 08/09/2019.
- (2014), “Nepalese Manuscripts of the Suśrutasamhitā,” *Journal of Indian and Buddhist Studies (Indogaku Bukkyogaku Kenkyū)*, 62/3: 23–29 (1087–1093). DOI: 10.4259/ibk.62.3_1087, URL: <https://www.academia.edu/6695321/>, accessed 08/09/2019.
- Hayashi, Takao (2017), “The Units of Time in Ancient and Medieval India,” *History of Science in South Asia*, 5/1: 1–116. DOI: 10.18732/h2ht0h.
- Hemarāja Śarman (1938) (ed.), काश्यपसंहिता (वृद्धजीवकीयं तत्रां वा) महर्षिणा मारीच-कश्यपेनोपदिष्टा ... हेमराजशर्मणा लिखितेन विस्तृतेन उपोद्घातेन सहिता ... सत्यपाल भिषगा कृतया विद्योतिनी हिन्दीव्याख्या ... समुद्धसिता (1st edn., Mumba: Nirṇayasāgara Press), URL: <https://archive.org/details/TheKasyapaSamhita>, accessed 02/02/2018.
- Hendley, T. Holbein (1895), *A Medico-topographical Account of Jeypore, Based on the Experience of Twenty Years' Service As a Residency Surgeon and Thirteen As Superintendent of Dispensaries at Jeypore, Rajputana* (Calcutta: Calcutta Central Press Company).
- Hessler, Franciscus (1844–55), *Suśrutas Ayurvédas: id est Medicinae Systema a Venerabili D'hanvantare Demonstratum a Susruta Discipulo Compositum; Nunc Primum Ex Sanskrita in Latinum Sermonem Vertit, Introductionem, Annotationes Et Rerum Indice Franciscus Hessler* (Erlangen: Ferdinandum Enke), URL: <https://archive.org/details/b24991806/>, accessed 04/11/2017.
- Hoernle, A. F. Rudolf (1893–1912) (ed.), *The Bower Manuscript: Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation with Notes* (New Imperial Series, 22; Calcutta: Government of India and under the patronage of the Bengali Government, Archaeological Survey of India), ark:/13960/t05z1bg4q.

- Hoernle, A. F. Rudolf (1897), *Suśrutasamhitā = The Suṣruta-Saṃhitā or the Hindū System of Medicine According to Suṣruta Translated from the Original Sanskrit* (Bibliotheca Indica, 911; Calcutta: Asiatic Society), [ark:/13960/t8pd1kw9r](#), accessed 03/01/2018; No more published; Hoernle does not state which edition he is translating, but it includes the "Dhanvantari phrase".
- (1906a), "Studies in Ancient Indian Medicine I: The Commentaries on Suśruta," *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 283–302, URL: <https://www.jstor.org/stable/25210249>, accessed 26/06/2019.
- (1906b), "Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms," *Journal of the Royal Asiatic Society of Great Britain and Ireland*, 4: 915–41, URL: <http://www.jstor.org/stable/25210334>, accessed 25/06/2019.
- (1907a), "Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the the Journal, 1906, p. 941)," *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 1–18, URL: <http://www.jstor.org/stable/25210361>, accessed 25/06/2019.
- (1907b), *Studies in the Medicine of Ancient India: Osteology or the Bones of the Human Body* (Oxford: Clarendon Press), [ark:/13960/t1pg9cq8b](#).
- Hofer, Theresia (2007), "Swami Laxmi Ram's Ayurvedic Pharmacy in Jaipur, India," *Wellcome History*, 34: 2–3, URL: https://eprints.whiterose.ac.uk/64252/1/Wellcome_History_34_Spring_2007_.pdf, accessed 01/07/2021.
- Holwell, J. Z. (1767), *An Account of the Manner of Inoculating for the Small Pox in the East Indies With...Observations on The...Mode of Treating That Disease in Those Parts* (London: T. Becket & P. A. de Hondt), [ark:/13960/t3ws9h63c](#).
- Jack, David Morton (1884), "A Thesis on Cataract in India: Its Pathology and Treatment," Wellcome Library, London, MS 3007, URL: <https://catalogue.wellcomelibrary.org/record=b1842019~S8>, accessed 02/06/2021.

- Jośī, Veṇīmādhavaśāstrī and Jośī, Nārāyaṇa Harī (1968), *Āyurvedīya Mahākośah arthāt Āyurvedīya Śabdakośah Saṃskṛta–Saṃskṛta* (Mum̄baī: Mahārāṣṭra Rājya Sāhitya āṇi Saṃskṛti Mamḍala), URL: <https://archive.org/details/AyurvediyaSabdakosa1968>.
- Kangle, R. P. (1969), *The Kautilīya Arthaśāstra* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 81-208-0042-7, ark:/13960/t3gz6qh1s, accessed 23/09/2021.
- Keith, Arthur Berriedale (1908), review of A. F. Rudolf Hoernle (1907), "Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the Journal, 1906, p. 941)," *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 1–18, URL: <http://www.jstor.org/stable/25210361>, accessed 25/06/2019, in *Zeitschrift Der Deutschen Morgenländischen Gesellschaft*, 1/62: 134–9, URL: <https://www.jstor.org/stable/43367361>, accessed 17/04/2021.
- Kirtikar, K. R., Basu, B. D., and an I.C.S (1987), *Indian Medicinal Plants*, ed. E. Blatter, J. F. Caius, and K. S. Mhaskar, 8 vols. (2nd edn., Dehradun: International Book Distributors); First published in Allahabad, 1918.
- Klebanov, Andrey (2010), "The *Nepalese Version of the Suśrutasaṃhitā and Its Interrelation with Buddhism and the Buddhists," MA thesis (Hamburg: Hamburg University, Sept.), URL: <https://www.academia.edu/12177425/>, accessed 08/09/2019.
- (2021a), "On the Textual History of the Suśrutasaṃhitā (1): A Study of Three Nepalese Manuscripts," *eJIM: Electronic Journal of Indian Medicine*, 12/1: 1–64. doi: 10.21827/ejim.12.1.37385.
- (2021b), "On the Textual History of the Suśrutasaṃhitā, (2): An Anonymous Commentary and its Identified Citations," in Toke Lindegaard Knudsen, Jacob Schmidt-Madsen, and Sara Speyer (eds.), *Body and Cosmos: Studies in Early Indian Medical and Astral Sciences in Honor of Kenneth G. Zysk* (Leiden, Boston: Brill), 110–39.
- Kuist, James M. (1982), *The Nichols File of The Gentleman's Magazine* (Madison: University of Wisconsin Press), ISBN: 0-299-08480-9, ark:/13960/t53g2ct2z.
- Lariviere, Richard W. (2003), *The Nāradasmṛti. Critically Edited with an Introduction, annotated Translation, and Appendices* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120818040; First edition: Philadelphia, 1989.

- Leffler, Christopher T. et al. (2020), "The History of Cataract Surgery: From Couching to Phacoemulsification," *Annals of Translational Medicine*, 8/22: 1551–97, ISSN: 2305-5847. doi: [10.21037/atm-2019-rcc-04](https://doi.org/10.21037/atm-2019-rcc-04), URL: <http://atm.amegroups.com/article/view/54993>, accessed 02/11/2020.
- Li, Charles (2017), "Critical Diplomatic Editing: Applying Text-critical Principles As Algorithms," in Peter Boot et al. (eds.), *Advances in Digital Scholarly Editing. Papers Presented at the Dixit Conferences in the Hague, Cologne, and Antwerp* (Leiden: Sidestone Press), 305–10, ISBN: 978-90-8890-485-1, URL: <https://www.sidestone.com/bookviewer/9789088904837>, accessed 10/11/2020.
- (2017–), "Saktumiva," URL: <https://saktumiva.org>, accessed 21/01/2023.
- (2018), "Limits of the Real: A Hypertext Critical Edition of Bhartṛhari's Dravyasamuddeśa, with the Commentary of Helārāja," en, PhD thesis (Cambridge: University of Cambridge). doi: [10.17863/CAM.31454](https://doi.org/10.17863/CAM.31454).
- (2022a), "Helayo: Reconstructing Sanskrit Texts from Manuscript Witnesses," *Journal of Open Source Software*, 7/71: 4022. doi: [10.21105/joss.04022](https://doi.org/10.21105/joss.04022).
- (2022b), "Reconstructing a Sanskrit Text" (19 Nov.), URL: <https://chchch.github.io/sanskrit-alignment/docs/index.html>, accessed 20/01/2023.
- Lienhard, Siegfried (1978), "On the Meaning and Use of the Word Indragopa," *Indologica taurinensis*, 6: 177–88, URL: http://www.asiainstitutetorino.it/Indologica/volumes/vol06/vol06_art14_Lienhard.pdf, accessed 06/02/2021; The indragopa is a 'red velvet mite'.
- Longmate, Barak (1794), "A Curious Chirurgical Operation," *The Gentleman's Magazine and Historical Chronicle*, 64.4 (Oct.): 883, 891, 892; I am grateful to the late John Symons of the Wellcome Library who identified the author 'B. L.' as the journalist Barak Longmate. See also Kuist 1982: 87.

- Maas, Philipp André (2013), "A Concise Historiography of Classical Yoga Philosophy: leslie," in Eli Franco (ed.), *Historiography and Periodization of Indian Philosophy* (Vienna: Sammlung de Nobili), 53–90, URL: <http://www.academia.edu/3520571/>, accessed 27/05/2016.
- Majno, Guido (1975), *The Healing Hand. Man and Wound in the Ancient World* (Cambridge, MA: Harvard University Press), URL: <https://archive.org/details/healinghandmanwo00majn>, accessed 26/08/2021.
- Malamoud, Charles (1996), "Paths of the Knife: Carving up the Victim in Vedic Sacrifice," in *Cooking the World: Ritual and Thought in Ancient India. Translated from the French by David White* (Delhi, Bombay, etc.: Oxford University Press), 169–80.
- Manucci, Niccolò (1907–8), *Storia Do Mogor or, Mogul India, 1653–1708 by Niccolao Manucci, Venetian; Translated with Introduction and Notes, by William Irvine* (The Indian Texts Series; London: J. Murray), URL: [https://archive.org/search.php?query=storia%20do%20mogor&and\[\]=collection:%22robarts%22](https://archive.org/search.php?query=storia%20do%20mogor&and[]=collection:%22robarts%22), accessed 04/10/2021.
- Masai, François (1950), "Principes et conventions de l'édition diplomatique," *Scriptorium*, 4: 177–93. doi: [10.3406/script.1950.2294](https://doi.org/10.3406/script.1950.2294).
- Mayrhofer, Manfred (1953–72), *Kurzgefaßtes etymologisches Wörterbuch des Altindoarischen; a Concise Etymological Sanskrit Dictionary* (Heidelberg: Carl Winter, Universitätsverlag).
- (1986–2001), *Etymologisches Wörterbuch des Altindoarischen* (Heidelberg: Carl Winter, Universitätsverlag), ISBN: 3-533-03826-2.
- McHugh, James (2021), *An Unholy Brew: Alcohol in Indian History and Religions* (New York: Oxford University Press), 416 pp., ISBN: 9780199375936, URL: https://www.ebook.de/de/product/41295809/james_mchugh_an_unholy_brew_alcohol_in_indian_history_and_religions.html.
- Meulenbeld, Gerrit Jan (1974a), "Sanskrit Names of Plants and their Botanical Equivalents," in id., *The Mādhanīdāna and Its Chief Commentary: Chapters 1–10. Introduction, Translation, and Notes* (Leiden: Brill), chap. Appendix Four, 520–611, ark:/13960/t25b8q97g.
- (1974b), *The Mādhanīdāna and Its Chief Commentary: Chapters 1–10. Introduction, Translation, and Notes* (Leiden: Brill), ISBN: 978-90-04-03892-9, ark:/13960/t25b8q97g.

- Meulenbeld, Gerrit Jan (1984), "The Surveying of Sanskrit Medical Literature," in id. (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 37–56.
- (1988), "G. J. Meulenbeld's Additions to his "Sanskrit Names of Plants and their Botanical Equivalents"," in Rahul Peter Das, *Das Wissen von der Lebensspanne der Bäume: Surapālas Vṛkṣāyurveda* (Stuttgart: Franz Steiner Verlag), chap. Appendix 1, 425–65, ISBN: 9783515046633; Supplement to [GJM1](#).
- (1989), "The Search for Clues to the Chronology of Sanskrit Medical Texts As Illustrated by the History of Bhaṅgā (cannabis Sativa Linn.)," *Studien zur Indologie und Iranistik*, 15: 59–70.
- (1992), "The Characteristics of a Doṣa," *Journal of the European Āyurvedic Society*, 2/1: 1–5, URL: <https://archive.org/details/journalofeuropea02unse/page/n7/mode/2up>, accessed 31/08/2021.
- (2008), *The Mādhavanidāna with "Madhukośa," the Commentary by Vijayarakṣita and Śrīkaṇṭhadatta* (Ch. 1–10). *Introduction, Translation, and Notes* (Delhi: Motilal Banarsidass).
- (2011), "The Relationships between Doṣas and Dūṣyas: A Study on the Meaning(s) of the Root Murch-/mūrch," *eJournal of Indian Medicine*, 4/2: 35–135, URL: <http://ugp.rug.nl/eJIM/article/view/24740>, accessed 13/10/2017.
- Miles, M. (1999), "Personal Communication," Mar.; Letter of 4 March.
- Moureau, Sébastien. (2015), "The Apparatus Criticus," in Alessandro Bausi et al. (eds.), *Comparative Oriental Manuscript Studies: An Introduction* (Hamburg: Tredition), 348–52, ISBN: 978-3-7323-1768-4, URL: <http://hdl.handle.net/2078.1/155652>, accessed 04/07/2021.
- Mukhopādhyāya, Girindranāth (1913), *The Surgical Instruments of the Hindus, with a Comparative Study of the Surgical Instruments of the Greek, Roman, Arab, and the Modern Eouropean (sic) Surgeons* (Calcutta: Calcutta University), <ark:/13960/t1zd2pq29>, accessed 29/01/2018; Vol.2: <ark:/13960/t9r25qd8m>. Reprinted as a single volume, New Delhi, 1987.

- Nadkarni, K. M. (1954), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised by A. K. Nadkarni, Bombay: Popular Prakashan), ark:/13960/t6rz4h160.
- (1982a), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL: <https://books.google.ca/books?id=RA4Npohz4CEC>.
- (1982b), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL: <https://books.google.ca/books?id=RA4Npohz4CEC>.
- Narayana, Ala and Thrigulla, Saketh Ram (2011), "Tangible Evidences of Surgical Practice in Ancient India," *Journal of Indian Medical Heritage*, 16: 1–18, URL: <https://ayushportal.nic.in/pdf/108234.pdf>, accessed 02/06/2021.
- NGMCP (2014), "Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue," Universität Hamburg and Deutsche Forschungsgemeinschaft, URL: <http://catalogue.ngmcp.uni-hamburg.de/>.
- Oberlies, Thomas (2003), *A Grammar of Epic Sanskrit* (Indian Philology and South Asian Studies, 5; Berlin: De Gruyter), ISBN: 9783110144482. doi: [10.1515/9783110899344](https://doi.org/10.1515/9783110899344).
- Olivelle, Patrick (2005), *Manu's Code of Law: A Critical Edition and Translation of the Manava-dharmasastra*, With the editorial assistance of Suman Olivelle (South Asia research; New York: Oxford University Press), ISBN: 0195171462.
- (2013), *King, Governance, and Law in Ancient India: Kautilya's Arthaśāstra. a New Annotated Translation* (New York: Oxford University Press), ISBN: 9780199891825. doi: [10.1093/acprof:osobl/9780199891825.003.0001](https://doi.org/10.1093/acprof:osobl/9780199891825.003.0001).

- Osbaldeston, Tess Anne and Wood, R. P. A. (2000), *Dioscorides. De Materia Medica. Being an Herbal with Many Other Medicinal Materials Written in Greek in the First Century of the Common Era. a New Indexed Version in Modern English* [Introductory Notes by R. P. Wood] (Johannesburg: IBIDIS Press), ISBN: 0-620-23435-0, URL: <http://panaceavera.com/demateriaindex.html>.
- Pandey, Anshuman (2012), "Proposal to Encode the Newar Script in ISO/IEC 10646," URL: <https://www.unicode.org/L2/L2012/12003r-newar.pdf>.
- Pass, Gregory (2003), *Descriptive Cataloging of Ancient, Medieval, Renaissance, and Early Modern Manuscripts* (Chicago: American Library Association), ISBN: 0-8389-8218-2, URL: http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/booksanddigitalresources/digital/AMREMM_full.pdf.
- Pillay, V. V. (2010), "Common Indian Poisonous Plants," in D. A. Warrell, T. M. Cox, and J. D. Firth (eds.), *Oxford Textbook of Medicine* (5th edn., Oxford University Press), 1371–5. doi: [10.1093/med/9780199204854.003.090302](https://doi.org/10.1093/med/9780199204854.003.090302).
- (2013), *Modern Medical Toxicology* (New Delhi: Jaypee Brothers Pvt. Ltd), ISBN: 9789350259658.
- Pillay, Vijay V. and Sasidharan, Anu (2019), "Oleander and Datura Poisoning: An Update," *Indian Journal of Critical Care Medicine*, 23/Supplement 4: 5250–5. doi: [10.5005/jp-journals-10071-23302](https://doi.org/10.5005/jp-journals-10071-23302).
- Prater, S. H. (1993), *The Book of Indian Animals* (3rd edn., Bombay, Delhi, etc.: Oxford University Press); 4th impression of 3rd corrected 1980 edition.
- Preisendanz, Karin (2007), "The Initiation of the Medical Student in Early Classical Āyurveda: Caraka's Treatment in Context," in Birgit Kellner et al. (eds.), *Pramāṇakīrtih. Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday. Part 2*, ii, 2 vols. (Wiener Studien zur Tibetologie und Buddhismuskunde, 70.2; Wien: Arbeitskreis für Tibetische Und Buddhistische Studien Universität Wien), 629–68, ISBN: 9783902501097, URL: https://www.istb.univie.ac.at/caraka/file_download/36.

Price, Kenneth M. (2013), "Electronic Scholarly Editions," in Ray Siemens and Susan Schreibman (eds.), *A Companion to Digital Literary Studies* (Chichester, UK: John Wiley & Sons, Ltd), 434–50. doi: 10.1002/9781405177504.ch24, URL: <http://www.digitalhumanities.org/companionDLS/>, accessed 04/07/2021.

Rādhākāntā Deva, Rājā (1876), *Śabdakalpadrumah* = *Shabda Kalpadrumah, Or, the Tree Bearing All the Words That May Be Wished For* (Calcutta: Baradākānta Mitra & Co. at the New Bengal Press), URL: <https://archive.org/details/ShabdaKalpadrumaComplete>, accessed 23/11/2017.

Rai, Saurav Kumar (2019), "Invoking 'Hindu' Ayurveda: Communalisation of the Late Colonial Ayurvedic Discourse," *The Indian Economic & Social History Review*, 56/4: 411–26. doi: 10.1177/0019464619873820; Online first.

Rama Rao, B. et al. (2005), *Sanskrit Medical Manuscripts in India* (New Delhi: Central Council for Research in Ayurveda & Siddha), ark:/13960/t88h7763b.

Rama Sastri and Krishnamurthi Sastri, S. R. (1952) (eds.), पातञ्जलयोग-सूत्रभाष्यविवरणम्। (शङ्करभगवत्पादप्रणीतम्) = *Pātñjala*[sic]-yogaśūtra-bhāṣya Vivaraṇam of Śaṅkara-Bhagavatpāda. Critically Edited with Introduction (Madras Government Oriental Series, 94; Madras: Government Oriental Manuscripts Library), ark:/13960/t7jq3m14w, accessed 20/10/2017.

Rāy, Priyadarjan, Gupta, Hirendra Nath, and Roy, Mira (1980), *Suśruta Samhita (a Scientific Synopsis)* (New Delhi: Indian National Science Academy), ark:/13960/t64511t6v, accessed 13/09/2019.

Rhys Davids, Thomas William and Stede, William (1921–5), *The Pali Text Society's Pali-English Dictionary* (London: The Pali Text Society), URL: <https://archive.org/details/palitextsociety00pali>.

Rimal, Madhusudana and Wujastyk, Dominik (2022), "MS Kathmandu NAK 1/1146," Pandit Project (18 May), URL: <https://www.panditproject.org/entity/104942/manuscript>.

Roelli, Philipp (2020) (ed.), *Handbook of Stemmatology* (Berlin: De Gruyter). doi: 10.1515/9783110684384.

- Roşu, Arion (1989), *Un demi-siècle de recherches ayurvédiques. Gustave Liétard et Palmyr Cordier: Travaux sur l'histoire de la médecine indienne* (Paris: Institut de Civilisation Indienne).
- Saha, Mridula (2015), *The History of Indian Medicine Based on the Vedic Literature Satapatha Brahmana* (Kolkata: The Asiatic Society), ISBN: 978-9381574294.
- Sarukkai, Sundar (2016), "Translation As Method: Implications for History of Science," in Bernard Lightman, Gordon McOuat, and Larry Stewart (eds.), *The Circulation of Knowledge Between Britain, India and China* (Leiden: BRILL), 309–29. doi: [10.1163/9789004251410_014](https://doi.org/10.1163/9789004251410_014).
- Sastri, Hrishikesh and Gui, Siva Chandra (1895–1917), *A Descriptive Catalogue of Sanskrit Manuscripts in the Library of Calcutta Sanskrit College* (Calcutta: Baptist Mission Press).
- Sastri, P. P. S. (1933), *A Descriptive Catalogue of the Sanskrit Manuscripts in the Tanjore Maharaja Serfoji's Sarasvati Mahal Library Tanjore: Natya, Sangita, Kamasashastra, Vaidya & Jyotisa, nos. 10650–11737* (Srirangam: Sri Vani Vilas Press), ark:/13960/t3nw8bc12.
- Śāstri, Vardhamāna Pārvanātha (1940) (ed.), उग्रादित्याचार्यकृत कल्याणकारक (राष्ट्रभाषानुवादसहित) = *The Kalyāṇa-kārakam of Ugrādityacharya, Edited with Introduction, Translation, Notes, Indexes and Dictionary* (Sakhārāma Nemacāmḍa Gramthamālā, 129; Solāpura: Seṭha Govīṇḍajī Rāvajī Dōṣī), ark:/13960/t2q617g4d.
- Scott, H. (1817), "Some Remarks on the Arts of India, with Miscellaneous Observations on Various Subjects," *Journal of Science and the Arts*, 2: 67–72, ill. after 133, ark:/13960/t9870jt4g; Breton 1826: 358–363 cites Scott's description of cataract couching.
- Semeka-Pankratov, Elena (1979), "A Semiotic Approach to the Polysemy of the Symbol *nāga* in Indian Mythology," in Irene Portis Winner and Jean Umiker-Sebeok (eds.), *Semiotics of Culture* (Approaches to Semiotics, 53; The Hague, Paris, NY: Mouton), 237–90. doi: [10.1515/9783110823134-009](https://doi.org/10.1515/9783110823134-009); The contents of this volume were published simultaneously in *Semiotica* (1/3) 1979 (**seme-1979b**).
- Sena, Gaṅgāprasād et al. (1886–93) (eds.), सुश्रुतसंहिता...दल्लनाचार्य-कृत-निवन्ध-संग्रह, चक्रपाणिदत्त-कृत-भानुमती-टीका...वज्ञानुवाद...इरेजि प्रतिशब्द (Calcutta: Maṇirāma Press); Edition "g" in [HML](#): IB, 311.

- Sharma, Har Dutt (1939), *Descriptive Catalogue of the Government Collections of Manuscripts Deposited at the Bhandarkar Oriental Research Institute, Vol. XVI, Part I, Vaidyaka* (Descriptive Catalogue of Manuscripts in the Government Manuscripts Library, XVI.I; Pune: Bhandarkar Oriental Research Institute), ark:/13960/t0ms6rc70, accessed 23/10/2019.
- Sharma, Priya Vrat (1972), *Indian Medicine in the Classical Age* (Varanasi: Chowkhamba Sanskrit Series Office).
- (1975), *Āyurved Kā Vaijñānik Itihās* (Jayakṛṣṇadāsa Āyurveda Granthamālā; Vārāṇasī: Caukhambā Orientalia).
- (1982), *Dalhana and his Comments on Drugs* (Delhi: Munshiram Manoharlal).
- (1999–2001a), *Suśruta-Saṃhitā, with English Translation of Text and Dalhana's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- (1999–2001b), *Suśruta-Saṃhitā, with English Translation of Text and Dalhana's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- Shastri, R. Shama (1920) (ed.), बोधायनगृहसूत्रम् *The Bodhāyana Grihyasutra* (Mysore: University of Mysore), ark:/13960/t2t492622.
- Singh, Thakur Balwant and Chunekar, K. C. (1972), *Glossary of Vegetable Drugs in Brhattrayī* (Varanasi: Chowkhamba Sanskrit Series Office), URL: <https://archive.org/details/Singh-Chunekar-1972>.
- Singhal, G. D. et al. (1972–82), *Diagnostic [and Other] Considerations in Ancient Indian Surgery* (Varanasi: Singhal Publications); A translation of the *Suśrutasaṃhitā* in 10v.
- Sircar, Dinesh Chandra (1987), “6. Rākshaskhāli (Sundarban) Plate; Śaka 1118,” *Epigraphia Indica* (1953–54), 30: 42–3.
- Sivarajan, V. V. and Balachandran, Indira (1994), *Ayurvedic Drugs and Their Plant Sources* (New Delhi, Bombay, Calcutta: Oxford & IBH Publishing).
- Sleeman, W. H. (1893), *Rambles and Recollections of an Indian Official* (London: Constable), ark:/13960/t22c4bx7w, accessed 14/03/2018; V. 2 at <http://n2t.net/ark:/13960/t2s52bq7w>.

- Smith, Brian K. (1994), *Classifying the Universe: The Ancient Indian Varṇa System and the Origins of Caste* (New York, Oxford: Oxford University Press), ISBN: 0-19-508498-5.
- Spink, M. S. and Lewis, G. L. (1973) (eds.), *Albucasis on Surgery and Instruments: A Definitive Edition of the Arabic Text with English Translation and Commentary* (London: Wellcome Institute of the History of Medicine).
- Srikantha Murthy, K. R. (2000–2), *Illustrated Suśruta Saṃhitā: Text, English Translation, Notes, Appendices and Index* (Jaikrishnadas Ayurveda Series, 102; 1st edn., Varanasi: Chaukhambha Orientalia).
- Steingass, F. (1930), *A Comprehensive Persian-English Dictionary Including the Arabic Words and Phrases to Be Met with in Persian Literature* (London: Kegan Paul, Trench, Trubner), ark:/13960/s25bwz0337d; Reprint, Delhi: Oriental Reprint, 1973.
- Strauss, Bettina (1934), “Das Giftbuch des Śānāq: eine Literaturgeschichtliche Untersuchung,” *Quellen und Studien zur Geschichte der Naturwissenschaften und der Medizin*, 4/2: [89]–[152] followed by Arabic text, ark:/13960/s2hb5j66s95.
- Suvedī, K. S. and Tīvārī, N. (2000) (eds.), सौश्रुतनिधण्टुः: ग्रन्थादौ विस्तृतेन ग्रन्थवै-शिष्यप्रकाशकेनोपोद्धातेन अवसाने च द्रव्याणाम् अनेकभाषानाम् आवली- पर्यायसङ्घात्यां सम-लङ्घतः सुश्रुतसंहितायां प्रयुक्तानाम् औषधद्रव्याणां पर्याय-गुणकर्मवर्णात्मको पूर्वग्रन्थः (Belajhundī, Dāñ: Mahendrasaṃskṛtaviśvavidyālayah).
- Tavernier, Jean-Baptiste (1684), *Collections of Travels through Turkey (sic), into Persia, and the East-Indies* (London: M. Pitt), ark:/13960/t9g45vn74.
- The TEI Consortium (2010), *TEI P5: Guidelines for Electronic Text Encoding and Interchange*, ed. C. M. Sperberg-McQueen et al. (Oxford, Providence, Charlottesville, Nancy: TEI Consortium), URL: <http://www.tei-c.org/Guidelines/P5/>.
- The Unicode Consortium (1991–2020), “The Unicode Standard 13.0, NewaRange: 11400–1147F,” URL: <https://unicode.org/charts/PDF/U11400.pdf>, accessed 20/07/2021.
- Thorburn, S. S. (1876), *Bannu; or Our Afghan Frontier* (London: Trübner & Co.), ark:/13960/t39z96g7m; Reprinted Lahore: Niaz Ahmad, 1978.

- UNESCO (2013), "International Memory of the World Register Susruta Samhita (Nepal)," UNESCO, URL: <http://tinyurl.com/susruta>, accessed 11/09/2019.
- Unschuld, Paul Ulrich (1984), *Medicine in China: A History of Ideas* (Berkeley: University of California Press), ISBN: 0520050231.
- Valiathan, M. S. (2007), *The Legacy of Suśrata* (Hyderabad, Chennai, etc.: Orient Longman).
- Velankar, H. D (1925–30), *Descriptive Catalogue of the Sanskrta and Prākṛta Manuscripts in the Library of the Bombay Branch of the Royal Asiatic Society* (Bombay: Royal Asiatic Society, Bombay), ark:/13960/t53g00h0n; Biswas #0115.
- Warrier, P. K., Nambiar, V. P. K., and Ramankutty, C. (1994–6) (eds.), *Indian Medicinal Plants: A Compendium of 500 Species. Vaidyaratnam P. S. Varier's Arya Vaidya Sala, Kottakal* (Madras: Orient Longman).
- Watt, George (1889–96), *A Dictionary of the Economic Products of India* (Calcutta: Dept. Revenue and Agriculture, Government of India), URL: <https://tinyurl.com/watt1889>, accessed 28/04/2021.
- (1908), *The Commercial Products of India, Being an Abridgement of "the Dictionary of the Economic Products of India"* (London: John Murray), ark:/13960/t8cg7dm79.
- Whitney, William Dwight (1885), *The Roots, Verb-forms, and Primary Derivatives of the Sanskrit Language. A Supplement to his Sanskrit Grammar* (Leipzig: Breitkopf and Härtel), ark:/13960/t3qv3p906.
- Wilson, H. H. (1823), "On the Medical and Surgical Sciences of the Hindus," *The Oriental Magazine and Calcutta Review*, 1: 207–12, 349–56, URL: <https://books.google.ca/books?id=OhkoAAAAYAAJ>.
- Wren, R. C. (1956), *Potter's New Cyclopaedia of Botanical Drugs and Preparations*, ed. R. W. Wren (Rustington, Sussex: Health Science Press), ark:/13960/t14n65c9g.
- Wren, R. C., Williamson, Elizabeth M., and Evans, Fred J. (1994), *Potter's New Cyclopaedia of Botanical Drugs and Preparations* (Saffron Walden: C. W. Daniel Company Ltd.); Reprint of revised 1988 edition.

- Wujastyk, Dagmar (2012), *Well-mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda* (New York: Oxford University Press). doi: [10.1093/acprof:oso/9780199856268.001.0001](https://doi.org/10.1093/acprof:oso/9780199856268.001.0001).
- (2013a), “Perfect Medicine. Mercury in Sanskrit Medical Literature,” *Asian Medicine: Tradition & Modernity*, 8/1 (Sept.): 15–40, issn: 1573-4218. doi: [10.1163/15734218-12341278](https://doi.org/10.1163/15734218-12341278).
- (2019), “Iron Tonics: Tracing the Development from Classical to Iatrocchemical Formulations in Ayurveda,” *HIMALAYA, the Journal of the Association for Nepal and Himalayan Studies*, 39/1, issn: 2471-3716, URL: <https://digitalcommons.macalester.edu/himalaya/vol39/iss1/11>, accessed 23/07/2019.
- Wujastyk, Dominik (1993), “Indian Medicine,” in W. F. Bynum and Roy Porter (eds.), *Companion Encyclopedia of the History of Medicine*, i (London: Routledge), chap. 33, 755–78, ISBN: 0-415-04771-4, URL: <https://www.academia.edu/492290>.
- (2002), “Cannabis in Traditional Indian Herbal Medicine,” in Ana Salema (ed.), *Āyurveda at the Crossroads of Care and Cure. Proceedings of the Indo-European Seminar on Ayurveda held at Arrábida, Portugal, in November 2001* (Lisbon: Centro de História de Além-Mar, Universidade Nova de Lisboa), 45–73, ISBN: 972-98672-5-9, URL: <https://www.academia.edu/188844/>, accessed 27/05/2019.
- (2003), *The Roots of Ayurveda: Selections from Sanskrit Medical Writings* (Penguin Classics; 3rd edn., London, New York, etc.: Penguin Group), ISBN: 0-140-44824-1.
- (2004), “Agni and Soma: A Universal Classification,” *Studia Asiatica: International Journal for Asian Studies*, IV–V, ed. Eugen Ciurtin: 347–70, issn: 1582-9111, URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2585368/>.
- (2013b), “New Manuscript Evidence for the Textual and Cultural History of Early Classical Indian Medicine,” in *Medical Texts and Manuscripts in Indian Cultural History*, ed. Dominik Wujastyk, Anthony Cerulli, and Karin Preisendanz (New Delhi: Manohar), 141–57, URL: <https://www.academia.edu/4125988/>.

- (2021a), “A New Translation of Carakasamhitā, Vimānasthāna, Chapter 1, Based on the Vienna Critical Edition,” in Toke Lindegaard Knudsen, Jacob Schmidt-Madsen, and Sara Speyer (eds.), *Body and Cosmos. Studies in Early Indian Medical and Astral Sciences in Honor of Kenneth G. Zysk* (Leiden, Boston: Brill), chap. 6, 77–109. doi: [10.1163/9789004438224_007](https://doi.org/10.1163/9789004438224_007).
- Wujastyk, Dominik et al. (2021a–a), “New Digital Edition of the Suśrutasamhitā: The Suśruta Project at Saktumiva,” ed. Dominik Wujastyk, Jason Birch, Andrey Klebanov, et al., University of Alberta, URL: <https://saktumiva.org/wiki/wujastyk/susrutasamhita/start>.
- (2021–3), “Sushrutaproject: Version Control for Suśruta Text TEI Transcriptions: Suśruta Project Manuscript Transcriptions,” URL: <https://wujastyk.github.io/sushrutaproject/>, accessed 21/01/2023.
- (2021b–b), “The Suśruta Project: The Textual and Cultural History of Medicine in South Asia Based on Newly-Discovered Manuscript Evidence,” ed. Dominik Wujastyk, Jason Birch, Andrey Klebanov, et al., URL: <https://sushrutaproject.org>, accessed 21/01/2023.
- Wujastyk, Dominik (2021 b), “MS London BL H. T. Colebrooke 908,” URL: panditproject.org/entity/109978/manuscript.
- Wujastyk, Dominik, Pollock, Sheldon, et al. (2008–), “SARIT: Search and Retrieval of Indic Texts,” URL: <http://sarit.indology.info>, accessed 21/01/2023.
- Wujastyk, Dominik, SKSEC Team, and Kessler, O. (2020), “Suśrutasamhitā,” PanditProject (6 Oct.), URL: <http://panditproject.org/entity/42004/work>, accessed 14/09/2022.
- Yano, Michio (1986), “A Comparative Study of *Sūtrasthānas*: Caraka, Suśruta, and Vāgbhaṭa,” in Teizo Ogawa (ed.), *History of Traditional Medicine: Proceedings of the 1st and 2nd International Symposia on the Comparative History of Medicine—East and West* (Osaka: Division of Medical History, the Taniguchi Foundation), 325–44.
- Zimmermann, F. (1983), “Suśrutasamhita. Essay review.” *Bulletin of the History of Medicine*, 57/2: 291–3, ISSN: 00075140, URL: <https://www.jstor.org/stable/44441590>.

- Zimmermann, Francis (1999), *The Jungle and the Aroma of Meats* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120816188.
- Zysk, Kenneth G. (1984), "An Annotated Bibliography of Translations into Western Languages of Principle Sanskrit Medical Treatises," *Clio Medica*, 19/3–4: 281–91.
- (1985), *Religious Healing in the Veda: With Translations and Annotations of Medical Hymns from the Rgveda and the Atharvaveda and Renderings from the Corresponding Ritual Texts* (Transactions of the American Philosophical Society; Philadelphia: American Philosophical Society), ISBN: 0871697572.
- (1986), "The Evolution of Anatomical Knowledge in Ancient India with Special Reference to Cross-cultural Influences," *Journal of the American Oriental Society*, 106: 687–705. doi: [10.2307/603532](https://doi.org/10.2307/603532).
- (2000), *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery* (Indian Medical Tradition; 2nd edn., Delhi: Motilal Banarsi-dass); First published 1991. Reprint of 1998 edition.

Botanical sourcebooks

- ADPS Sivarajan, V. V. and Balachandran, Indira (1994), *Ayurvedic Drugs and Their Plant Sources* (New Delhi, Bombay, Calcutta: Oxford & IBH Publishing).
- AVS Warrier, P. K., Nambiar, V. P. K., and Ramankutty, C. (1994–6) (eds.), *Indian Medicinal Plants: A Compendium of 500 Species. Vaidyaratnam P. S. Varier's Arya Vaidya Sala, Kottakal* (Madras: Orient Longman).
- BIA Prater, S. H. (1993), *The Book of Indian Animals* (3rd edn., Bombay, Delhi, etc.: Oxford University Press); 4th impression of 3rd corrected 1980 edition.
- Chopra GIMP suppl. Chopra, R. N., Chopra, I. C., and Varma, B. S. (1969), *Supplement to Glossary of Indian Medicinal Plants* (Reprint 1986, New Delhi: National Institute of Science Communication), ISBN: 8185038872.
- Chopra, GIMP Chopra, R. N., Nayar, S. L., and Chopra, I. C. (1956), *Glossary of Indian Medicinal Plants* (3rd reprint, 1992, New Delhi: Council of Scientific and Industrial Research); vol. 2: R. N. Chopra, I. C. Chopra, and Varma ([Chopra GIMP suppl.](#)).
- Chopra's IDG Chopra, R. N., Chopra, I. C., Handa, K. L., et al. (1958), *Chopra's Indigenous Drugs of India* (2nd edn., Calcutta: Dhur & Sons), [ark:/13960/t9673t140](#).

- CIPP Pillay, V. V. (2010), "Common Indian Poisonous Plants," in D. A. Warrell, T. M. Cox, and J. D. Firth (eds.), *Oxford Textbook of Medicine* (5th edn., Oxford University Press), 1371–5. doi: [10.1093/med/9780199204854.003.090302](https://doi.org/10.1093/med/9780199204854.003.090302).
- Dutt Dutt, Uday Chand (1922), *The Materia Medica of the Hindus...with a Glossary of Indian Plants by George King. Revised Edition...by Binod Lall Sen and Ashutosh Sen and Pulin Krishna Sen* (Krishnadas Sanskrit Studies; 3rd edn., Calcutta: Madan Gopal Dass for the Adi-Ayurveda Machine Press), URL: <https://archive.org/details/mobot31753000838638>, accessed 04/10/2017; Reprinted Varanasi: Chowkhamba Saraswatibhavan, 1980.
- Dymock Dymock, William, Warden, C. J. H., and Hooper, David (1890), *Pharmacographia Indica: A History of the Principal Drugs of Vegetable Origin Met with in British India* (London, Bombay, Calcutta: Kegan Paul), URL: [https://archive.org/search.php?query=Dymock+Pharmacographia&&and\[\]=collection:%22rcpedinburgh%22](https://archive.org/search.php?query=Dymock+Pharmacographia&&and[]=collection:%22rcpedinburgh%22), accessed 24/10/2022.
- GJM1 Meulenbeld, Gerrit Jan (1974a), "Sanskrit Names of Plants and their Botanical Equivalents," in id., *The Mādhavanidāna and Its Chief Commentary: Chapters 1–10. Introduction, Translation, and Notes* (Leiden: Brill), chap. Appendix Four, 520–611, ark:/13960/t25b8q97g.
- GJM2 Meulenbeld, Gerrit Jan (1988), "G. J. Meulenbeld's Additions to his "Sanskrit Names of Plants and their Botanical Equivalents"," in Rahul Peter Das, *Das Wissen von der Lebensspanne der Bäume: Surapālas Vṛksāyurveda* (Stuttgart: Franz Steiner Verlag), chap. Appendix 1, 425–65, ISBN: 9783515046633; Supplement to GJM1.

- GVDB Singh, Thakur Balwant and Chunekar, K. C. (1972), *Glossary of Vegetable Drugs in Brhattrayī* (Varanasi: Chowkhamba Sanskrit Series Office), URL: <https://archive.org/details/Singh-Chunekar-1972>.
- IGP Griffiths, Mark (1994), *The New Horticultural Society Index of Garden Plants* (London: Macmillan).
- K&B Kirtikar, K. R., Basu, B. D., and an I.C.S (1987), *Indian Medicinal Plants*, ed. E. Blatter, J. F. Caius, and K. S. Mhaskar, 8 vols. (2nd edn., Dehradun: International Book Distributors); First published in Al-lahabad, 1918.
- Nadkarni Nadkarni, K. M. (1982a), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, URL: <https://books.google.ca/books?id=RA4Npohz4CEC>.
- Trees Bole, P. V. and Vaghani, Yogini (1986), *Field Guide to the Common Trees of India* (Bombay, Delhi, Oxford, etc.: World Wildlife Fund – India and Oxford University Press), ISBN: 0-19-561595-6; 4th reprint.

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beggarweed (*vidārigandhā*) → *śālaparnī*.
Desmodium gangeticum (L.) DC. See
Dymock: v. 1, 428, **GJM1**: 602, cf.
Nadkarni: #1192; **ADPS**: 382, 414 and
AVS: v. 2, 319, 4.366 are confusing,
24, 59

country mallow (*atibalā*) Abutilon
indicum, (L.) Sweet, but may be other
kinds of mallow, e.g., Sida rhombifolia,
L.. See **Nadkarni**: #11, **IGP**: 1080,
Nadkarni: #2300, **ADPS**: 71, 77, 58

country sarsaparilla (*anantā*)
Hemidesmus indicus, (L.) R. Br. See
ADPS: 434, **AVS**: v. 3, 141–5,
Nadkarni: #1210. But see **GVDB**: 13 for
complications that may suggest that it
is to be equated with *sārivā*, which may
sometimes be Cryptolepis or
Ichnocarpus frutescens R. Br.
(**GVDB**: 429–431), 58

elixir salve (*rasāñjana*) → *añjana*, q.v., 60

giant potato (*kṣīravidārī*) possibly →
kṣīraśukla. Ipomoea mauritiana, Jacq.
See **ADPS**: 510, **AVS**: v. 3, 222, **AVS**: v. 3,
1717 ff, 95, 96

heart-leaf sida (*balā*) Sida cordifolia, Linn.
See **ADPS**: 71, **Nadkarni**: #2297, 58

Holostemma creeper (*jīvantī*) →
sūryavallī? Holostemma ada-kodien,
Schultes. See **ADPS**: 195, **AVS**: v. 3, 167,
Nadkarni: #1242, **AVS**: v. 3, 1619, 96

hornwort (*jalaśūka*) ← *jalanilikā*.

Ceratophyllum demersum, L. See
AVS: v. 2, 56, **IGP**: 232. Singh and
Chunekar (**GVDB**: 166) suggest
pondweed. Dalhaṇa noted on 1.16.19
(**Su 1938**: 79) that some people
interpret it as a poisonous, hairy,
air-breathing, underwater creature, 59

Indian barberry (*añjana*) → *rasāñjana*,
dāruharidrā. Berberis aristata, DC.
Dymock: v. 1, 65, **Nadkarni**: #685,
GJM1: 562, **IGP**: 141, 60

Indian ipecac (*payasyā*) Uncertain.
Possibly Tylophora indica (Burm.f.)
Merr. Perhaps a synonym of
sun-flowered, giant potato, purple
roscoea, and plants like asthma plant
and Gulf sandmat (**GVDB**: 237–238),
24, 59, 96

Indian kudzu (*vidārī*) → *payasyā*. Pueraria
tuberosa (Willd.) DC. See **ADPS**: 510,
AVS: v. 1, 792 f, **AVS**: v. 4, 391; not
Dymock: v. 1, 424 f. See **GJM2**: 444, 451,
AVS: v. 1, 187, but **AVS**: v. 3, 1719 =
Ipomoea mauritiana, Jacq, 24, 59

liquorice (*madhuka*) Glycyrrhiza glabra, L.
See **AVS**: v. 3, 84, **Nadkarni**: #1136, 59

liquorice (*yāṣṭīmadhuka*) Glycyrrhiza
glabra, L. **AVS**: v. 3, 84,
Nadkarni: #1136, **GVDB**: 329 f., 60

milk-white (*kṣīraśuklā*) An unidentified
plant. **GVDB**: 126: see purple roscoea
and giant potato, 24, 59, 96

- plants like asthma plant and Gulf sandmat (*kṣīriṇī*) various milky plants, perhaps including *Euphorbia hirta* Linn. (asthma plant) and *E. microphylla* Heyne (Gulf sandmat) (GVDB: 127), 95
- pondweed (*śaivāla*) *Zannichellia palustris* L. or *Zannichellia palustris* L. Sometimes identified with *dūrvā*. GVDB: 409, 95
- prickly chaff-flower (*apāmārga*) *Achyranthes aspera*, L. See GJM1: 524 f, AVS: v. 1, 39, ADPS: 44 f, AVS: v. 3, 2066 f, Dymock: v. 3, 135, 24, 59
- purple calotropis (*arka*) *Calotropis gigantea*, (L.) R. Br. See ADPS: 52, AVS: v. 1, 341, Nadkarni: #427, Wren et al. 1994: 57, Chopra's IDG: 305–308, 58
- purple roscoea (*kṣīrakākoli*) GVDB: 89 notes that many physicians use *Roscoea procera* Wall. in this context. But the identification is uncertain. Possibly connected to milk-white or giant potato., 95
- sappanwood (*pattāṅga*) Also *pattāṅga*.
- Caesalpinia sappan, L. AVS: v. 1, 323, K&B: v. 2, 847 f, GVDB: 234, 60
- spikenard (*jaṭāmāṇīśī*) *Nardostachys jatamansi* DC GVDB: 163, etc, 25
- sun-flowered (*arkapusī*) Maybe identical to Indian ipecac, giant potato and similar sweet, milky plants. See GVDB: 24, 127, 238, 441, 443 for discussion. For discussion in the context of Holostemma creeper, see ADPS: 195 and AVS: v. 3, 171. The etymology of the name suggests *Helianthus annus* Linn., but this plant is native to the Americas., 95
- sweet plants (*madhuravarga*) The sweet plants are enumerated at SS 1.42.11. See also GVDB: 127, 24, 59
- white calotropis (*alarka*) *Calotropis procera*, (Ait.) R. Br. See Nadkarni: #428, Chopra, GIMP: 46b, Chopra's IDG: 305–308, 58
- Withania (*aśvagandhā*) *Withania somnifera* (L.) Dunal. See AVS: v. 5, 409 f, Dymock: v. 2, 566 f., Chevallier 150, 24, 59