

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

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# Introduction

## The Aim of the Article

The Compendium of Suśruta (*Suśrutasaṃhitā*) is amongst the most important treatises on medicine to survive from the ancient world. It has been studied seriously by historians since it first became available in print in the mid-nineteenth century.<sup>1</sup> Meulenbeld listed forty-four editions of the work since the first edition of 1835 by Gupta in Calcutta, and eight translations, starting from the Latin translation of 1844 by Hessler.<sup>2</sup> Many more translations have appeared in recent decades.

The study of this work has yielded rich historical discoveries about the earliest history of surgery, ancient pharmacology, toxicology and many other social and medical topics. Yet there remain fundamental unanswered questions about the history of the text itself and about related issues in the history of medicine in Asia.<sup>3</sup>

In January 2007, a previously unknown manuscript of the *Suśrutasaṃhitā* was brought to scholarly attention.<sup>4</sup> MS Kathmandu KL 699 is a Nepalese manuscript covering about two thirds of the text. It is dated to 878 CE and is amongst the earliest dated manuscripts known from South Asia (Harimoto 2011: 87–88). The manuscript has been declared by UNESCO to be part of the Memory of the World (UNESCO 2013).

The newly-discovered manuscript in Nepal is related to two other early palm-leaf manuscripts in the National Archives in Kathmandu, MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079. Klebanov (2010; 2021a) has assembled compelling evidence for believing that these Nepalese manuscripts present a version of the text that was in wider circulation in northern India, especially Bengal, in the period up to about 1200 CE. Generally speaking, the Nepalese version of the *Suśrutasaṃhitā* is more rudimentary than the versions commented on by Cakrapāṇidatta (fl. tenth century) and Ḍalhaṇa (fl. twelfth century). The version of the *Suśrutasaṃhitā* commented on by Ḍalhaṇa has formed the basis of modern

1 A selection of some prominent contributions includes: Hoernle 1897; 1906a,b; 1907a,b; Strauss 1934; Singhal et al. 1972–82; P. V. Sharma 1975; Rây et al. 1980; R. Adriaensen et al. 1984; Yano 1986; HIML; P. V. Sharma 1999–2001a; Valiathan 2007.

2 HIML: IB, 311 ff.

3 HIML: IA, 203–389.

4 Dimitrov and Tamot 2007.

printed editions, such as those of Yadavaśarman Trivikramātmaja Ācārya and others.<sup>5</sup> Some of the changes in the text between the Nepalese version and what we might call the Ḍalhaṇa version, or the vulgate version, consist of the addition and loss of numerous verses, changes to medical recipes, and reordering of chapters, especially in the Uttaratāntra or last part of the work. Lariviere hypothesized long ago, in a different context, that Sanskrit texts tended to continue to expand through the addition of new materials,

The process of addition to these compilations must have gone on for centuries. The hearers or readers of these compilations must have known other verses ... and it would be natural for them to include these verses in the compilation. This type of addition may have continued until a commentary on the collection was composed. A commentary would have served to fix the text. and the expansion of the text would have been more difficult after that.<sup>6</sup>

In the case of the *Suśrutasaṃhitā*, the Nepalese manuscripts appear to present us with the last recoverable snapshot of this stage of the work when it was still open to absorbing new materials, most notably the *Uttaratāntra*, and before the closing of the text by the composition of the earliest commentators.

This article presents a critical edition and annotated translation of the sixteenth chapter of the *Ślokaśthāna*, the first book of the Nepalese version of the *Suśrutasaṃhitā* (SS.1.16).<sup>7</sup> This chapter is important in the history of Indian medicine because of its discussion of surgical methods for repairing torn ears and severed noses. In addition to discussing the manuscripts and published editions used in this new edition, the introduction of the article addresses some of the challenges of editing the Nepalese manuscripts and the salient differences between the Nepalese version and that known to Cakrapāṇidatta and Ḍalhaṇa, as exemplified by the sixteenth chapter. The notes to the edition incorporate alternative readings mentioned by the commentators, and the annotations to the translation discuss instances where

<sup>5</sup> Su 1915; Su 1938; P. V. Sharma 1999–2001b.

<sup>6</sup> Lariviere 2003: xii, cited with agreement by Olivelle (2005: 51) in the context of legal literature and by Bronkhorst (2016: 62–63) in the context of epic literature. See the latter citation for further discussion of Sanskrit text formation between the empires.

<sup>7</sup> This book is called the *Sūtrasthāna* in subsequent versions of the *Suśrutasaṃhitā*.

the text is uncertain; non-standard spellings and syntax; the meaning of technical and obscure terms; relevant remarks by the commentators; ambiguities in the identification of medical ingredients, in particular, plant names; and the additional compounds, verses and passages in Ḍalhaṇa's version of the text. In short, this article is a pilot for undertaking a complete edition and translation of the Nepalese version of the *Suśrutasaṃhitā*.

### Importance of SS.1.16 in the History of Medicine

Simple forms of surgery have a long history in South Asia. In works datable to at least 1200 BCE we learn how a reed was used as a catheter to cure urine retention.<sup>8</sup> Cauterization too was described in the same sources, to prevent wounds from bleeding. The *Brāhmaṇa* literature of the early first millennium BCE contains more detailed descriptions of animal butchery in the context of religious sacrifice that involved the enumeration of internal organs and bones.<sup>9</sup> This exemplifies an early Sanskrit vocabulary for internal parts of bodies. However, this is not the same as anatomical dissection, whose methods and intentionality is quite different. As was pointed out long ago by Keith (1908), the enumeration of the bones in the *Brāhmaṇas* was derived from correspondences with the numbering of various verse forms, not from anatomical observation. With the *Suśrutasaṃhitā* we find ourselves in the presence of something quite different and more developed, in which the body was studied specifically for medical and surgical purposes.<sup>10</sup> The text gives us a historical window onto a school of professionalised surgical practice which existed almost two millennia ago, and which in its day was perhaps the most advanced school of surgery in the world.

The author of the *Suśrutasaṃhitā* describes how a surgeon should be trained and how various operations should be done. There are descriptions of ophthalmic couching (the dislodging of the lens of the eye), perineal lithotomy (cutting for stone in the bladder), the removal of arrows and splinters, suturing, the examination of dead human bodies for the study of anatomy, and other procedures.<sup>11</sup> The author of *Suśrutasaṃhitā*

8 Zysk 1985: 70–71.

9 Malamoud 1996; Saha 2015.

10 Zysk 1986.

11 Wilson 1823; Mukhopādhyāya 1913; Deshpande 2000; Wujastyk 2003; Narayana and Thrigulla 2011 and many other studies.

claimed that surgery is the most ancient and most efficacious of the eight branches of medical knowledge.<sup>12</sup> Anecdotal discussion with contemporary surgeons suggests that many details in the descriptions could only have been written by a practising surgeon: it is beyond doubt that elaborate surgical techniques were a reality in the author's circle.

**Torn ear lobes** Suśruta's description of the repair of torn ear lobes is unique for its time.<sup>13</sup> Majno noted that 'through the habit of stretching their earlobes, the Indians became masters in a branch of surgery that Europe ignored for another two thousand years'.<sup>14</sup> The different types of mutilated ear lobe which the *Suśrutasamhitā* describes are not always easy to understand from the Sanskrit: the illustrations supplied in Majno's text help visualization.<sup>15</sup>

**Rhinoplasty** One of the best-known surgical techniques associated with *Suśrutasamhitā* is rhinoplasty, the repair or rebuilding of a severed nose. The history of this operation and a translation of the Sanskrit passage from the vulgate edition of the *Suśrutasamhitā* were published in Wujastyk (2003: 67–70, 99–100).<sup>16</sup> This fascinating technique is certainly old in South Asia, having been witnessed by travellers from Marco Polo in the seventeenth century onwards.<sup>17</sup> Many witnesses, including the most famous, Cruso and Findlay,<sup>18</sup> describe an operation that differs from *Suśrutasamhitā* in that it takes the grafting skin from the forehead, not the cheek. But the nineteenth-century account of Thorburn is especially interesting, since the technique follows *Suśrutasamhitā* exactly in taking flesh from the cheek, not the forehead.<sup>19</sup>

As noted by Meulenbeld, none of the known commentators – Jejjāṭa, Gayadāsa, Cakrapāṇi or Ḍalhaṇa – explained the technique in any detail

12 *Suśrutasamhitā* 1.1.15–19 (Su 1938: 4).

13 The comprehensive study of ears in the history of Indian culture by Bollée (2010) oddly omits reference to *Suśrutasamhitā*'s surgery, although it mentions the text's description of ear diseases.

14 Majno 1975: 291.

15 Majno 1975: 290–291; reproduced with permission in Wujastyk 2003: 92–93.

16 See also HIML: IB, 327–328, note 186 for further literature and reflections.

17 Manucci 1907–8: ii.301.

18 Longmate 1794: 883, 891 f.

19 Thorburn 1876: 352–3.

beyond lexical glosses.<sup>20</sup> This suggests that the commentators did not in fact know the technique at first-hand.

It is worth highlighting here a point of critical medical importance: the continued attachment of the skin flap. One of the crucial innovations of the “Hindu Method” of nasal reconstruction, as observed and internationally reported in the eighteenth century, was that the skin flap taken from the face remained partially connected to its original location.<sup>21</sup> This ensured the blood flow essential to keeping the skin alive while it healed in its new location. The Sanskrit of the vulgate is ambiguous on this critical point and the wording of the Nepalese version is unclear. However, Ḍalhaṇa (Su 1938: 81) clarified the meaning of the vulgate here by stating that when reading the expression “connected,” one should understand “connected flesh.” He thus indicated that he understood the flesh to be connected to the face.<sup>22</sup> Thus, we cannot know definitively at present whether the connection of the flap was known to the redactors of the Nepalese version. It was probably known to the redactors of the vulgate, and was certainly known to Ḍalhaṇa in the twelfth century.

Perhaps by the late first millennium, the technique had moved into the professional competence of barber-surgeons? On the other hand, perhaps the influence was in the other direction, and a technique known to practitioners elsewhere in South Asia in the first millennium was written into the text of *Suśrutasamhitā*. The description consists of only five verses and they are written in the Upendravajrā metre, which is different from the rest of the chapter. The description’s appearance at the very end of the chapter, its terseness, its ornate metre, and the paucity of the commentators’ treatment could all be taken as pointing in this direction.

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20 HML: IB, 328. Ḍalhaṇa also noted cryptically that a rather different version of the text, cast in *śloka* metre, was also known to him from other sources (1.16.27–31 (Su 1938: 81a)). Ḍalhaṇa’s variant bears a resemblance to the description of the operation given in printed editions of the *Aṣṭāṅgahṛdayasamhitā* (Ah Utt.18.59–65 (Ah 1939: 841)).

21 See Wujastyk 2003: 67–70.

22 See p. 43 below.

## The Transmission of the Work

### The Nepalese Version

In the present article and the other publications of our research group, we focus on the study of what we call the ‘Nepalese version’ of the *Suśrutasaṃhitā*. The primary rationale behind using this designation was outlined in Klebanov (2021a: 2–3), 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 the phenomenon 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 *Suśrutasaṃhitā* 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 scripts which, to the best of our knowledge, was not used outside of the region.

Furthermore, we speak of a single “version” because we hold that these manuscripts attest to a peculiar line of transmission of the text, that is, in terms of stemmatic analysis, they share a common ancestor (hyparchetype) or a group of ancestors, while at the same time, bear no signs of significant contamination. This hypothesis was postulated in Klebanov (2010) and reiterated in Klebanov (2021b) as the result of a systematic analysis of two complete chapters (SS.1.3 and SS.1.15) as well as several shorter excerpts from the *Suśrutasaṃhitā* transmitted in the Nepalese manuscripts. On the one hand, these studies highlight that all three MSS preserve a highly uniform text with very few variations, virtually all of which can be explained as standard scribal errors or corrections. On the other hand, Klebanov (2010; 2021b) systematically compared the concerned textual excerpts with four printed editions, alternative readings (*pāṭhas*) reported by several commentators, parallel passages in other texts, and with a limited number of additional manuscripts of the *Suśrutasaṃhitā*. This analysis demonstrated that the text of the *Suśrutasaṃhitā* preserved in the Nepalese MSS differs decidedly from all the above standards of comparison. In this



way, for example, we establish that another Nepalese manuscript of the *Suśrutasaṃhitā*, MS Kathmandu NAK 1-1146,<sup>23</sup> does not belong to the peculiar line of textual transmission and need not be taken into consideration when reconstructing the reading of its hyparchetype.

However, in view of the more than two hundred handwritten copies of the *Suśrutasaṃhitā* preserved in different libraries across South Asia and in the absence of their systematic inclusion into the project's current collation, the assumption about the regional character of the transmission line remains hypothetical. As a matter of fact, we believe that the Nepalese MSS preserve many archaic features of the early *Suśrutasaṃhitā* and it is possible, even likely, that some of these features will be found in other manuscripts of this work that have yet to be studied.

Our research group builds upon the above hypothesis about the existence of a distinct Nepalese version of the *Suśrutasaṃhitā* and concentrates primarily on the study of this text in its own right and, additionally, in comparison to a single version of the compendium popularized by its late medieval commentator Ḍalhaṇa and recorded in the widely-used [Su 1938](#). The present study of SS.1.16 also considers the readings found in [Su 1939](#) and incorporates various observations made by both medieval commentators, Cakrapāṇidatta and Ḍalhaṇa, into the notes of the edition and some annotations of the translation.

The current paper and several earlier publications furnish a large catalogue of uniform features that are characteristic of the Nepalese MSS and set them apart from the vulgate version.<sup>24</sup> These features of the Nepalese MSS 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 are likely to be closer to an archaic version of the *Suśrutasaṃhitā*. This is partly because they preserve a version of the text that appears to be less edited, that is, slightly more idiosyncratic and original in expression, that in turn suggests that it precedes later editorial intervention, according to the principle of *lectio difficilior potior*. 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.

<sup>23</sup> Rimal and Wujastyk [2022](#).

<sup>24</sup> Earlier publications include, for example, Harimoto [2011](#); Wujastyk [2013](#); Birch, Wujastyk, Klebanov, Parameswaran, et al. [2021](#); Birch, Wujastyk, Klebanov, Rimal, et al. [2021](#).

Additionally, we want to make it clear that we do not think that the Nepalese MSS provide a so-called original text of the *Suśrutasamhitā*. Rather, the Nepalese MSS are witnesses to a hyparchetype, not the archetype, of the *Suśrutasamhitā*. The Nepalese MSS 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 Ḍalhaṇa in the twelfth century and is reproduced in printed editions of the *Suśrutasamhitā*. The oldest reconstructable text will only come into focus when all surviving witnesses for the work are 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 Uttaratāntra, that has a somewhat different character.

To summarize: the evidence arising from our studies to this point leads us to think that the Nepalese MSS 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.”

## The Versions of Cakrapāṇidatta and Ḍalhaṇa

The commentaries of Cakrapāṇidatta and Ḍalhaṇa, titled *Bhānumatī* and *Nibandhasaṅgraha* respectively, are based on similar but not identical versions of the *Suśrutasamhitā*, both of which are significantly different to the Nepalese version.<sup>25</sup> Ḍalhaṇa 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.<sup>26</sup> Ḍalhaṇa

<sup>25</sup> See [HIML](#): IA 374–379 on these authors. Meulenbeld already noted that “the text of the *Suśrutasamhitā* 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).

<sup>26</sup> [HIML](#): IB, 499, n. 162.

evidently also had several manuscripts of the *Suśrutasamhitā* available to him, since he frequently recorded their variant readings.<sup>27</sup>

In addition to the fine-grained issues raised by the relationship between these commentators, there are added difficulties introduced by the way the editors of the printed versions of these commentaries handled the texts in several cases. The most obvious difficulty is that Y. T. Ācārya and N. Śarman's text of the *Sūtrasthāna* commented on by Cakrapāṇidatta (Su 1939) simply duplicated the text of that section from Y. T. Ācārya and N. R. Ācārya's edition of Ḍalhaṇa's commentary (Su 1938).<sup>28</sup> This duplication of the root text creates the misleading impression that both commentators had the same *Suśrutasamhitā* before them. However, there is much evidence, including in SS.1.16, that this was not the case. For example, Ḍalhaṇa commented on four verses, 1.16.11–14 (Su 1938: 78), as part of his root text, that Cakrapāṇidatta cited separately only in his commentary (Su 1939: 128–129). Cakrapāṇidatta introduced each verse with “some people say” (केचित्पठन्ति). This clearly indicates that these verses were not in the version of the *Suśrutasamhitā* upon which Cakrapāṇidatta was commenting, but a century or so later they were part of the text before Ḍalhaṇa. But Y. T. Ācārya and N. Śarman included them in the root text of the *Suśrutasamhitā* as if they were. Such cases make it harder than it would otherwise be to remain clear that these two commentators were working off different versions of the *Suśrutasamhitā*.

Also, Cakrapāṇidatta did not acknowledge or comment on some verses in the version of the *Suśrutasamhitā* known to Ḍalhaṇa. Although it is possible that a commentator may not have remarked on a verse because its meaning was clear, in some cases the commentarial convention of citing the first words of a new verse or passage provides firmer ground for suspecting the absence of a verse in the root text.

27 Cf. HIML: IA, 377. Meulenbeld drew attention to Ḍalhaṇa'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, Ḍalhaṇa noted that certain readings known to the earlier commentators Jejjāta and Gayadāsa were, “not to be found in current manuscripts” (स च वर्तमानपुस्तकेषु न दृश्यते).

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

To give an example, there is a prose passage at Su.1.16.18 of the *Suśrutasaṃhitā* that Cakrapāṇidatta commented on in his *Bhānumatī*.<sup>29</sup> It is followed by several verses also in the main text of the *Suśrutasaṃhitā* that elaborate on the content of the prose passage.<sup>30</sup> Ḍalhaṇa commented on these explanatory verses, citing keywords that show they all formed part of the main text of the *Suśrutasaṃhitā* that was before him.<sup>31</sup> However, Cakrapāṇidatta's older commentary showed no awareness of the first few verses in this group, Su.1.16.19–21ab.<sup>32</sup> 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.<sup>33</sup>

A similar instance of this 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.<sup>34</sup> This verse was almost certainly not in the text of the *Suśrutasaṃhitā* known to Cakrapāṇidatta.

The manuscript on which the editor's edition of the *Bhānumatī* was mainly based, MS London BL H. T. Colebrooke 908, does not include the root text of the *Suśrutasaṃhitā*.<sup>35</sup> Therefore, it requires a detailed reading of the commentary itself to infer what its author, Cakrapāṇidatta, was seeing in the manuscripts of the *Suśrutasaṃhitā* that he had before him in the eleventh century. But, to summarize, there is no evidence that they included the verses SS.1.16.19–21ab and 31 that are printed in [Su 1939](#) as if they were present to Cakrapāṇidatta.

In fact, there is some evidence that the Nepalese version was more similar to Cakrapāṇidatta's version than to Ḍalhaṇa's. For example, 1.16.5 of the Nepalese version begins with the compound दोषसमुदयात्

You say, "Both Cakrapāṇidatta and Ḍalhaṇa introduced these verses and cited the opening words of the first verse before glossing specific terms." but that's not right. *Bhānumatī* shows no awareness of verses 19–21ab. Cakra doesn't say "svedito..."

Took out: "Cakrapāṇidatta did not introduce, cite or comment on the same verses as Ḍalhaṇa (Su.1.16.20–22ab, Su 1938: 79)."

29 [Su 1939](#): 130, i.e., अथाप्रदुष्टस्याभिवर्धनार्थम् ... निदध्यात् । It is numbered Su.1.16.19 in Ḍalhaṇa's *Nibandhasaṅgraha* ([Su 1938](#): 79).

30 Su.1.16.19–23 in [Su 1939](#), i.e., स्वेदितो ..., यवाश्च ..., तैलं ..., तेषाम् ..., वद्ध ....

31 1.16.19–23 ([Su 1938](#): 79–80).

32 [Su 1939](#): 130–131.

33 The editors remarked in a footnote that verses 20–21a were not in the Nepalese manuscript they consulted ([Su 1939](#): 130, n. 2).

34 The verse begins नाडीयोगे विनौष्यस्य. 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).

35 The MS is described in *IOLR*: vol. 1.5, 928, #2647. The section on p. 25 below describes the sources that the editors used for the 1939 edition.

whereas the version known to Ḍalhaṇa (SS.1.16.6, [Su 1938](#):77) inserts two compounds, क्लृष्टजिह्वाप्रशस्तसूचीव्यधात् and गाढतरवर्तित्वात्, before this. Cakrapāṇidatta (SS.1.16.5, [Su 1939](#):126–127) begins his comment on this passage by glossing *doṣasamudayāt*, which suggests that he was not aware of any compounds prior to this one. If one looks beyond SS.1.16, there are instances where the Nepalese version (1.1.28) and the root text of Cakrapāṇidatta have the same reading, which Ḍalhaṇa mentions as an alternative read by others. For example, 1.1.28 of the Nepalese version has *tatrāsmiṇ chāstre*, which is the reading commented on by Cakrapāṇidatta ([Su 1939](#):17). However, Ḍalhaṇa (SS.1.1.22, [Su 1938](#):5) comments on *asmiṇ chāstre* and states that others read *tatrāsmiṇ chāstre*. Also, in his commentary on SS.1.1.8.1, Ḍalhaṇa ([Su 1938](#):5) notes the variant reading *ṣaṣṭyā vidhānaiḥ*, which is not in his root text but evidently was in Cakrapāṇidatta's (SS.1.1.6, [Su 1939](#):11). As discussed elsewhere (Birch 2021), the reading of *ṣaṣṭyā vidhānaiḥ* is likely a corruption of *ṣaṣṭyābhidhānaiḥ* in the Nepalese version (1.1.9).

## Differences between the Nepalese and Subsequent Versions of SS.1.16

Several differences between the text of the *Suśrutasaṃhitā* as found in its multiple printed versions and as reconstructed on the basis of the Nepalese MSS have been already pointed out in previous publications. In terms of the overall organization and structuring themes and elements of the text, Klebanov ([2021a](#): 27f.) lists differences in the chapter sequence, Wujastyk ([2013](#)), Klebanov ([2021a](#): 28-32) and most recently Birch, Wujastyk, Klebanov, Parameswaran, et al. ([2021](#)) and Birch, Wujastyk, Klebanov, Rimal, et al. ([2021](#): 2-4) talk about variations in the frame story, Klebanov ([2021a](#): 32-36) highlights the interchangeable use of two names (*Ślokasthāna* and *Sūtrasthāna*) of the first book of the text, and Klebanov ([2021a](#): 37-44) examines another peculiarity of the Nepalese version, namely, additional verse or prose colophons found at the end of each book but also each decade of chapters of the *Suśrutasaṃhitā*.

As the current paper demonstrates, many distinct features pertaining to the actual content of the Nepalese version continuously come to light as we proceed with our study of the manuscripts. Among observations made in previous literature, Klebanov ([2021a](#): 44-47) makes some general

This is a complicated sentence. It might be better to use semi-colons, e.g., [...], sequence; [...], frame story; [...] of the text; [...]



remarks, along with a few arbitrary examples, and details two case studies (Ibid.:47-55). The first study deals with the list of skin lesions associated with urinary disease (*pramehapīṭakā* in the Nepalese spelling), whose signs and pathogenesis are described in *nidānasthāna* 6 and whose treatment is the subject of *cikitsāsthāna* 12. The second study focuses on the variation in another list, that of vital energies (*prāṇas*), mentioned in *śārīrasthāna* 4. The list of skin lesions exemplifies a case where the text of the *Suśrutasamhitā* transmitted in the Nepalese MSS is internally more coherent than that commented on by Ḍalhaṇa, and where the incoherence of the latter version already had been identified by an early commentator, Gayadāsa, who, based on text-external evidence, effectively had proposed a textual conjecture that corresponds to the reading of the Nepalese version.<sup>36</sup> The study at hand also provides a rare example of interpolation, for which we can postulate its likely source, namely, the medical theory associated with the *Carakasamhitā*. The discussion of the textual variant in the second case study, the list of vital energies, also recurses to Gayadāsa's learned remarks. Here, the scholar commented on the reading transmitted in the Nepalese MSS as the original one and reported an alternative reading and its interpretation preferred by another ancient commentator, Jejjaṭa. It is precisely this reading that is known to modern readers of the *Suśrutasamhitā* from the vulgate version of the text. Another exemplary investigation of textual variants in the Nepalese version is found in Harimoto (2011: 101–104). This study looks at the classification of snakes in *kalpasthāna* 4 and reveals that, compared to the versions of the *Suśrutasamhitā* found in different printed sources, the Nepalese MSS preserve a text that is internally more consistent and coherent.

On the whole, these observations indicate that many features of the Nepalese version of the *Suśrutasamhitā* are likely to go back to an older state of the textual development common to other versions of the compendium. However, other textual peculiarities, such as the text-structuring colophons concluding every tenth chapter, are likely to have occurred within a local transmission of the text, and it is improbable that they are attested in the MSS from other regions. When evaluating the Nepalese readings historically, however, it is further necessary to keep in mind

<sup>36</sup> According to our current knowledge, KL 699 was copied before the time in which Gayadāsa flourished. This relative chronology excludes the possibility that the Nepalese version incorporates Gayadāsa's conjecture rather than transmitting an original variant.

You could save repetition by placing this sentence before 'The discussion of the textual variant in the second case study [...]' and change this sentence to 'The discussion of the textual variant in the list of vital energies also recurses [...]'

do you mean to say that Gayadāsa has text-external evidence? That how it sounds. Perhaps, omit the phrase.

this study?

new paragraph?

the referent of this is not so clear. 'this alternative reading'?

that there is plentiful evidence suggesting an ancient age of the readings accepted into Ḍalhaṇa's version of the text.

The following detailed comparison of 1.16 of the Nepalese version with Ḍalhaṇa's *Nibandhasaṅgraha* unfolded as the chapter was edited. The differences appear to emanate largely from attempts to standardise, simplify or clarify the language of the Nepalese version, add and redact information, and introduce changes to recipes and treatments. Examples from 1.16 have been provided to demonstrate the general observations which, it is hoped, a larger survey of the text will verify.

Table 1 reveals the extent to which 1.16 of the Nepalese version was redacted to create the one known by Ḍalhaṇa. In this particular case, twenty-seven verses have been added, eight (11-14, 21-22ab, 23cd-24, 32) of which 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 Ḍalhaṇa. These verses cover additional diseases of the ear lobes, as well as their treatment and complications. Although Ḍalhaṇa concedes that some 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,<sup>37</sup> and Ḍalhaṇa's comments prompted him to place them in parentheses. Be this as it may, this large block of verses is absent in the Nepalese version.

In Table 1, one can also see that verses 17 and 18 of the Nepalese version were transposed in the redaction of Ḍalhaṇa's version, in which they are 26 and 25 respectively. Although this only occurs once in 1.16, such transposing of verses and even their hemistiches is more prevalent in the redaction of other chapters of the *Suśrutasaṃhitā*.

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

<sup>37</sup> Ācārya (Su 1938: 80) does not state that these verses were absent in some or all of his manuscripts, which he usually does in a footnote if this is the case. A broader survey of manuscripts would be helpful for establishing whether these verses were part of the transmission of the *Suśrutasaṃhitā* in India. For example, they are in MS Hyderabad Osmania 137-3(b).

[...] suggesting that some of the readings accepted by Ḍ were ancient, if not original. (?)

Nepalese version	Dalhaṇa'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

Table 1: A Comparison of Verses in 1.16 of the Nepalese and Dalhaṇa's Versions



## Changing Spelling, Sandhi and Syntax

In the majority of cases, efforts were made by redactors to standardise, simplify or improve the language of the Nepalese version. Such changes include the standardising of spelling,<sup>38</sup> sandhi,<sup>39</sup> and verbal forms,<sup>40</sup> as well as interventions to simplify and clarify syntax,<sup>41</sup> which often involved splitting compounds.<sup>42</sup> In some instances, these changes improved the grammar,<sup>43</sup> or altered the meaning.<sup>44</sup> However, some prefixes of verbal forms,<sup>45</sup> case endings,<sup>46</sup> and indeclinables were changed for less apparent reasons.<sup>47</sup> There is also a tendency to replace uncommon words with generic ones,<sup>48</sup> add indeclinables,<sup>49</sup> omit the verb to be at the end of sentences,<sup>50</sup> and introduce verses after a prose passage with the phrase *bhavati cātra*.<sup>51</sup>

38 For example, *pattāṅga* (SS.1.16.21) → *paṭaṅga* (1.16.29, Su 1938: 81). For more information on this, see the relevant footnote to the translation.

39 or example, °*hastena ṛju* (SS.1.16.2) → °*hastena rju* (1.16.3, Su 1938: 76).

40 For example, *unnāmayitoā* (SS.1.16.21) → *prānnamya* (1.16.29, Su 1938: 81); *avacūrṇayīta* (SS.1.16.21) → *upaharet* (1.16.29, Su 1938: 81).

41 For example, *śoṇitabahutvanivedanāyām cānyadeśaviddham iti jānīyāt | nirupadravatā taddeśaviddhalingam |* (SS.1.16.3) → *śoṇitabahutvena vedanayā cānyadeśaviddham iti jānīyāt | nirupadravatayā taddeśaviddham iti |* (1.16.4, Su 1938: 76); *āmatailapariṣekenopacaret* (SS.1.16.6) → *āmatailena pariṣecayet* (1.16.7, Su 1938: 77); *supariḡrhitam* (SS.1.16.10) → *supariḡrhitam ca kṛtvā* (1.16.15, Su 1938: 78); *anena* (SS.1.16.15) → *snehenaitena* (1.16.20, Su 1938: 79).

42 For example, *yadṛcchāviddhāyām sirāyām* (SS.1.16.4) → *yadṛcchayā viddhāsu sirāsu* (1.16.5, Su 1938: 76); *dhānyāmlakapālacūrṇam* (SS.1.16.10) → *dhānyāmlam kapālacūrṇam* (1.16.20, Su 1938: 78).

43 For example, *surāmaṇḍakṣīram* (SS.1.16.10) → *surāmaṇḍam kṣīram* (1.16.15, Su 1938: 78).

44 For example, *kṣīṇālpamāṁsaḥ* (SS.1.16.12) → *kṣīṇo 'lpamāṁsaḥ* (1.16.17, Su 1938: 79).

45 For example, *samvārdhitah* (SS.1.16.8) → *vivārdhitah* (1.16.9, Su 1938: 77); *niveśya* (SS.1.16.10) → *sanniveśya* (1.16.15, Su 1938: 78); *avabadhya* (SS.1.16.10) → *ca baddhvā* (1.16.15, Su 1938: 78).

46 For example, *māse* (SS.1.16.2) → *māsi* (1.16.3, Su 1938: 76).

47 For example, *api* (SS.1.16.13) → *vā* (1.16.18, Su 1938: 79); *ca* (SS.1.16.16) → *tu* (1.16.23, Su 1938: 79); *tu* (SS.1.16.18) → *ca* (1.16.25, Su 1938: 80).

48 For example, *mrakṣayet* (SS.1.16.15) → *yojayet* (1.16.20, Su 1938: 79); *nahyet* (SS.1.16.21) → *baddhvā* (1.16.29, Su 1938: 81).

49 For example, [absent] (SS.1.16.6) → *ca* (1.16.7, Su 1938: 77); [absent] (SS.1.16.10) → *tatra* (1.16.15, Su 1938: 78); [absent] (SS.1.16.12) → *api* (1.16.17, Su 1938: 79).

50 The words *bhavati* or *bhavanti* are omitted four times in Ḍalhaṇa's version (1.16.10 (twice), 1.16.17 and 1.16.18, Su 1938: 77, 79).

51 For example, [absent] (SS.1.16.11) → *bhavati cātra* (1.16.16, Su 1938: 79).

## Changing Technical Terms

There is evidence of standardising and altering technical terminology in subsequent versions of the *Suśrutasamhitā*. Two examples of this in SS.1.16 are the terms for joins (*bandha*) and a slice of flesh (*vadhra*). The Nepalese version uses three terms for joining (*bandha*, *sandhāna*, *sandhi*) splits in the ear flaps and the flesh of nose. Redactors of subsequent versions appear to have tried to standardise this terminology by replacing *sandhāna* and *sandhi* with *bandha* in prose passages.<sup>52</sup> However, the use of the term *sandhāna* was retained in verses, perhaps because of the metrical challenges of making such a change. Also, the names of joins which incorporate *sandhāna* and *sandhi* remained the same.<sup>53</sup>

The Nepalese version (SS.1.16.20,23) contains the rather obscure term *vadhra* for the slice of flesh that a surgeon cuts from the cheek in order to construct a new nose. Modern dictionaries define *vadhra* as a leathern strap ([Apte: 1385](#), [MW: 917](#)) or a slice of bacon ([MW: 917](#)), the latter of which is more indicative of its meaning in the Nepalese version. This word was written out of subsequent versions,<sup>54</sup> and it was not mentioned as an alternative reading by either Cakrapāṇidatta or Ḍalhaṇa, which suggests that its use and meaning may not have been known to them. However, *vadhra* was used by the author of the *Aṣṭāṅgahṛdayasamhitā* (Ah Utt.18.62 ([Ah 1939: 841](#))) in the context of rhinoplasty, so it likely to be the correct reading in the Nepalese version.

## Augmenting the Text

Apart from adding whole passages and verses (as seen in Table 1), 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

52 For example, *pañcadaśasandhānākṛtayaḥ* (SS.1.16.9) → *pañcadaśabandhākṛtayaḥ* (SS.1.16.10, [Su 1938: 77](#)); *daśakarṇasandhivikalpāḥ* (SS.1.16.9) → *karṇabandhavikalpāḥ* (SS.1.16.10, [Su 1938: 77](#))

53 These names are *nemīsandhānaka*, *kapāṭhasandhika*, and *ardhakaṇṭhasandhika* in SS.1.16.9.

54 *vadhrām* (SS.1.16.20) → *baddham* (SS.1.16.28, [Su 1938: 81](#)) and *tadvadhrāśeṣam* (SS.1.16.23) → *tad ardhaśeṣam* (SS.1.16.31, [Su 1938: 81](#)).

statements,<sup>55</sup> and phrases added to elaborate on diseases and treatments.<sup>56</sup> 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) says that the wick in a newly pierced ear should be removed because of aggravated humours or a culpable piercing whereas the version known to Ḍalhaṇa (1.16.6, [Su 1938: 77](#)) includes 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 Ḍalhaṇa's version have additional characteristics,<sup>57</sup> and a list of four symptoms associated with incurable joins in the Nepalese version (SS.1.16.19) was increased to six in Ḍalhaṇa'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 Ḍalhaṇa (1.16.5, [Su 1938: 76–77](#)) classifies these symptoms according to three ducts called *kālikā*, *marmarikā* and *lohitikā*, which results in some repetition of the symptoms mentioned.<sup>58</sup>

### Transposing Words, Verses and Passages

A close comparison of the Nepalese version with subsequent ones 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

55 For example, *chidre* (SS.1.16.2) → *chidra ādityakarāvabhāsīte* (1.16.3, [Su 1938: 76](#)); [absent] (SS.1.16.2) → *śanaiḥ śanaiḥ* (1.16.3, [Su 1938: 76](#)); [absent] (SS.1.16.3) → *āśu* (1.16.5, [Su 1938: 77](#)).

56 For example, *dhātryaṇke* (SS.1.16.2) → *dhātryaṇke kumāradharāṇke vā* (1.16.3, [Su 1938: 76](#)); [absent] (SS.1.16.2) → *bālakṛīḍanakaiḥ pralobhya* (1.16.3, [Su 1938: 76](#)); [absent] (SS.1.16.3) → *picuvarṭim praveśayet* (1.16.5, [Su 1938: 77](#)).

57 For example, *pīṭhopamapālir nirvedhimaḥ* (SS.1.16.9) → *pīṭhopamapālir ubhayataḥ kṣīṇaputrikāśrito nirvedhimaḥ* (1.16.10, [Su 1938: 77](#)); *itarālpapālīḥ saṃkṣiptaḥ* (SS.1.16.9) → *utsannapālir itarālpapālīḥ saṃkṣiptaḥ* (1.16.10, [Su 1938: 77](#)); *tanuviṣamālpapālīḥ* (SS.1.16.9) → *tanuviṣamālpapālīḥ* (1.16.10, [Su 1938: 77](#)).

58 In Ḍalhaṇa's version (1.16.5, [Su 1938: 76–77](#)), the symptoms of fever (*jvara*) and pain (*vedanā*) 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 *kālikā*, *marmarikā* and *lohitikā*, but he does not gloss or comment on the passage known to Ḍalhaṇa.

insignificant and may be result of different preferences in syntax or even scribal eye-brain-hand miscommunication.<sup>59</sup> 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, respectively, in Ḍalhaṇa'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 Ḍalhaṇa's version (Su 1938: 76), which contains a statement that the physician should insert a wick of cotton after the ear has been pierced.<sup>60</sup> This statement anticipates the instructions in the 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 Ḍalhaṇa's version elucidates the role of the wick in the procedure of piercing the ear.

A similar clarification occurs in 1.16.18 of Ḍalhaṇa's version (Su 1938: 79), which reiterates the cure for an ear tainted by a humour that was described in 1.16.7 (= SS.1.16.6). The reiteration is quite apt because it follows a passage (1.16.17, Su 1938: 79 = SS.1.16.12) that outlines the various symptoms of ear disease arising from each of the three humours. 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 Ḍalhaṇa's version, the treatment is reiterated at 1.16.18.

59 For example, *aṇusthūla*° (SS.1.16.9) → *sthūlāṇu*° (1.16.10, Su 1938: 77); *tatraite daśakarṇa*° (SS.1.16.9) → *tatra daśaite karṇa*° (1.16.10, Su 1938: 77); *nātigāḍhan nātīsthilam sūtreṇāvabadhya* (SS.1.16.9) → *sūtreṇānavagāḍhaman atīsthilam ca baddhvā* (1.16.10, Su 1938: 77); *pūrvan dakṣiṇam kumārasya vāmaṇ kanyāyāḥ | pratanuṃ sūcyā bahalam ārayā* (SS.1.16.2) → *pratanukam sūcyā bahalam ārayā | pūrvam dakṣiṇam kumārasya vāmaṇ kanyāyāḥ* (1.16.3, Su 1938: 76).

60 For example, [absent] (SS.1.16.2) → *picuvartim praveśayet* (1.16.3, Su 1938: 76).

In Ḍalhaṇa'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 anointment that should be applied to a pierced ear that has not healed. In Ḍalhaṇa's version (1.16.7, [Su 1938: 77](#)) the recipe was rewritten to include sesame seeds.<sup>61</sup> 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 enlarge it. Ḍalhaṇa's version (1.16.7, [Su 1938: 77](#)) of the admixture has five additional ingredients, namely, prickly chaff-flower (*apāmārga*), Withania (*aśvagandhā*), giant potato (*kṣīraśuklā*), the 'sweet' savour (*madhuravarga*)<sup>62</sup> and 'milk flower' (*payasyā* → *vidāri*)<sup>63</sup>. It also has beggarweed (*vidārigandhā*) instead of milk flower (*vidāri*).<sup>64</sup> This method of redacting a recipe of Nepalese version appears to be somewhat typical in so far as most of the ingredients of the original were retained and new ones simply added.

Perhaps, Dr Madhu could add a comment on whether these additional ingredients would change the effects of the treatment in any significant way?

61 *yavamadhukamañjiṣṭhāgandharvahanastamūlair madhughṛtapragāḍhair ālepayet* (SS.1.16.5) → *madhukairāṇḍamūlamañjiṣṭhāyavatilakalkair madhughṛtapragāḍhair ālepayet* (1.16.7, [Su 1938: 77](#)).

62 The items which exemplify the 'sweet' savour (*madhuravarga*) are enumerated at SS.1.42.11.

63 *Pueraria tuberosa* (Willd.) DC. (ADPS 510, IMP 1.792f., AVS 4.391; not Dymock 1.424f. See GJM supplement 444, 451, IMP 1.187, but IMP 3.1719 = *Ipomoea mauritiana*, Jacq.).

64 *arkālarkabalātibalānantāvidārīmadhukajalaśūkaprativāpan tailam pācayitvā* (SS.1.16.14) → *arkālarkabalātibalānantāpāmārgāśvagandhāvidārigandhākṣīraśuklājalaśūkamadhuravargapayasyāprativāpan tailam vā pācayitvā* (1.16.19, [Su 1938: 79](#)).

## The Edition

### The Printed Editions

The careful survey of printed editions of the *Suśrutasamhitā* by Meulenbeld lists no fewer than 44 entries.<sup>65</sup> These range from the first edition by Madhusūdana Gupta (1835) to editions in the 1970s. The number of reprints and editions since that time might almost double that number. Translations begin with Hessler's Latin translation in 1844 and continue up to the present in scores of publications in many languages.<sup>66</sup>

### The Vulgate

The great ayurvedic scholar Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Suśrutasamhitā* with the commentary of Ḍaḷhaṇa, in 1915, 1931 and 1938. These editions, especially the last, are generally considered the most scholarly and reliable editions of the work, and have been constantly reprinted up to the present day.<sup>67</sup> We refer to the last of these editions as "the vulgate."

The 1915 edition was based on three manuscripts. The 1931 edition used another seven manuscripts plus two printed editions. For his final 1938 edition, Ācārya used a further three manuscripts.<sup>68</sup> These sources are described as follow, with an overview in Table 2.

### The sources of the 1915 edition

- 1 Calcutta, Royal Asiatic Society. Covers the *sūtra*, *nidāna*, *śārīra* and *kalpa sthānas*.
- 2 Jaipur, Pandit Gaṅgādharaḥṭṭaśarman, lecturer at the Royal Sanskrit University. Covers the *cikitsāsthāna* and the *uttaratantra*.
- 3 Bundi, my great friend the royal physician Paṃ. Śrīprasādaśarman. Covers the *uttaratantra*.

65 [HIML](#): IIB, 311–314.

66 Zysk 1984: E.g., [HIML](#): IIB, 314–315.

67 See also the study of these editions by Klebanov (2021a: §1.2) and Wujastyk (2013: 143–144).

68 The following account of the sources is paraphrased from Y. T. Ācārya and N. R. Ācārya's own account of his sources (Su 1938: 22).

## The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāṭhaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachoḍalāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.
- 3 From the personal library of my great friend Sva. Vā. Vaidya Murārājīśarman. Extremely old. No commentary. Covers the *śārīrasthāna*.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.<sup>69</sup>
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.
- 6 Bombay, Asiatic Society. Incomplete.<sup>70</sup>
- 7 Varanasi, the private library of Vaidya Tryambakaśāstrī. Covers the *cikitsāsthāna*. The variant readings of this MS were compiled by Prof.
- 8 A printed edition together with the commentary *Suśrutasandīpana-bhāṣya* by Professor Hārāṇacandra Cakravārtti. Complete work. This is the 1910 Calcutta edition numbered “t” by Meulenbeld ([HIML](#): IB, 312).<sup>71</sup>
- 9 A printed edition of the first 43 chapters of the *sūtrasthāna*, printed in Bengali script, with the commentaries *Bhānumatī*, *Nibandhasaṅgraha*, edited by Vijayaratnasena and Nīśikāntasena. This is the 1886 Calcutta edition numbered “g” by Meulenbeld ([HIML](#): IB, 311).<sup>72</sup>

## The sources of the 1938 edition

- 1 Gwalior, from the library of my great friend Paṃ. Rāmeśvaraśāstrin Śukla. Covers the *sūtra*, *nidāna*, *śārīra*, *cikitsā* and *kalpasthānas*.

69 Not one of the three MSS of the *śārīrasthāna* described in H. D. Sharma 1939.

70 Possibly MS Mumbai AS B.I.3 or MS Mumbai AS B.D.109 (Velankar 1925–30: v. 1, # 212 and 213). But both these have the *Nibandhasaṅgraha*. The first covers only the *śārīrasthāna*; the second may be complete, but Velankar calls it only “disorderly.”

71 Bhaṭṭācārya 1910–7.

72 Sena et al. 1886–93.

73 Covers chapters 1–43 only.

74 Covers chapters 1–9 only.



Table 2: The sources of Yādavaśarman T. Ācārya's three editions: manuscript coverage (●) and print coverage (○).

edition source	1915			1931									1938		
	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
<i>sthāna</i>															
<i>sū.</i>	●							●	?		○	○ <sup>73</sup>	●		●
<i>nī.</i>	●			●				●	?		○		●	●	●
<i>śā.</i>	●				●	●	●	●	?		○		●		●
<i>cī.</i>		●						●	?	●	○		●		● <sup>74</sup>
<i>ka.</i>	●							●	?		○		●		
<i>utt.</i>		●	●	●				●	?		○				

- 2 Bikaner, from the library of the Royal Palace, supplied by Paṃ. Candrasekharaśāstrin. Contains the commentary *Nyāyacandrikāpañjikā-vyākhyā* by Gayadāsa. Covers the *nidānasthāna*.

This is almost certainly MS Bikaner Anup 4390.<sup>75</sup>

- 3 Kathmandu, located in the private library of the Royal Guru Hemarāja Śarman. An extremely old palm-leaf manuscript. Readings from this MS were compiled by Paṃ Nityānandaśarman Jośi and sent to Ācārya. Covers from the beginning of the work to the end of the ninth chapter of the *cikitsāsthāna*. The siglum for this manuscript in footnotes was ता for तालपत्रपुस्तके.

## Evaluation

Estimates show that there are approximately 230 extant manuscript witnesses for the *Suśrutasamhitā*.<sup>76</sup> Many of these manuscripts cover only one or more of its chapters. Nevertheless, this is an order of magnitude more evidence than was considered by Ācārya for his vulgate editions.

While the descriptions provided by Ācārya of his source materials

<sup>75</sup> See Dominik Wujastyk, "MS Bikaner AnupLib 4390." *Pandit*. <<http://panditproject.org/entity/108068/manuscript>>.

<sup>76</sup> This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.



seems at first to be moderately comprehensive, Table 2 reveals the underlying paucity of textual sources for these editions. At first, it appears that fifteen manuscripts were consulted. However, we quickly see that two of the sources were other people's printed editions, and one of those covered less than a quarter of the work (no. 9 of 1931). That reduces the manuscript base to 13 manuscripts. Ācārya does not appear to have seen two of the manuscripts at all, having been sent collations prepared for him by others (7 of 1931 and 3 of 1938). Thus, Ācārya's final edition was based on the personal consultation of eleven partial manuscripts. One of them remains unidentified (6 of 1931). Only a single manuscript covers the whole of the *Suśrutasaṃhitā*, no. 5 of the 1931 edition. Manuscript 1 of 1938 is the next most complete, but it omits the *uttaratantra*, which comprises a third of the work. Manuscript 1 of the 1915 edition is third in size, but it still omits both of the longest chapters, and thus offers less than half the work. For the rest, the evidence is spotty, with each part of the work being supported by only between four and eight manuscripts, excluding the printed editions.

Two sources stand out for their historical importance. The first is no. 3 of 1931, which Ācārya calls "extremely old." It covered the *śārīrasthāna* only, and unfortunately we know nothing of the later history of this manuscript. The second is no. 3 of 1938, which is one of the important Nepalese manuscripts being considered in the present project. Ācārya's remarks and references to Hemarājaśarman's introduction to the *Kāśyapasaṃhitā* allow us to identify this manuscript as MS Kathmandu NAK 5-333.<sup>77</sup> But that manuscript covers the whole work, not just up to the ninth chapter of the *cikitsāsthāna* as Y. T. Ācārya and N. R. Ācārya stated.<sup>78</sup> Perhaps the editors only received collations for this portion of the manuscript and did not know that it was a witness for the whole work.

## The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman co-edited an edition of the *sūtrasthāna* of the *Suśrutasaṃhitā* that was published by the Swami Laxmi Ram ayurvedic centre in Jaipur, and printed at the

<sup>77</sup> Su 1938: 22; Hemarāja Śarman 1938: 56–57. Discussed by Klebanov (2021a: §1.1, 2.3). See also HIML: IIB, 25–41; Wujastyk 2003: 161–169.

<sup>78</sup> Su 1938: 22.

famous Nirṇayasāgara Press in Mumbai (see Fig. 1).<sup>79</sup> The text was edited on the basis of the following sources.

#### For the *Bhānumatī*

1. A printed edition. Covered the *Bhānumatī* up to chapter Su.sū.40. The siglum was मु for *mudrita*.<sup>80</sup>
2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune.<sup>81</sup> This manuscript covered the *Bhānumatī* b up to the end of the *sūtrasthāna*. The siglum was ह for हस्तलिखित.<sup>82</sup>

#### For the *Suśrutasamhitā*

1. A palm leaf manuscript from Hemarājaśarman's personal library.<sup>83</sup> The siglum was ता for ताडपत्र.
2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः.<sup>84</sup>
3. Hārānacandra Cakravartī's published edition with his own commentary.<sup>85</sup> The siglum was हा.

#### Evaluation

The main innovation of this publication was to present the only surviving part of the commentary on the *Suśrutasamhitā* by the great eleventh-

79 Su 1939. The description of the sources below is based on Yādavaśarman T. Ācārya's remarks in his introduction (pp. 3–4). See also the remarks on this edition by Klebanov (2021b: 7). On the Swami Laxmi Ram centre, see Hofer 2007.

80 Sena et al. 1886–93. The manuscript on which this edition was based is probably in the library of the Calcutta Sanskrit College, and described in H. Sastri and Gui 1895–1917: v. X.1, which is not available to me. See also HIML: IB, 495, n. 57 for mention of this manuscript. The reference at Rama Rao et al. 2005: 217 to CACL accession number 97 in Bengali script may be this manuscript.

81 At this time, manuscripts from Britain were routinely lent to scholars in India and vice versa.

82 Wujastyk 2021; MS London BL H. T. Colebrooke 908 (PanditProject #109978, consulted on July 03, 2021).

83 I.e., MS Kathmandu NAK 5-333.

84 Su 1938. It is noteworthy that Ācārya refers to his 1938 edition as representing “the Ḍalhaṇa recension.”

85 Bhaṭṭācārya 1910–7.

चरके—“लभोपायो हि शस्तानां रसावीनां रसायनम्” (च. चि. अ. १ पा. १) । पारिशेष्याद्वाजीकरणतन्त्रम् । अवाजिनं वाजीकुर्वन्ति येन तद्वाजीकरणम् । ‘अन्येषामपि दृश्यते’ (पा. अ. ६।३।१३७) इति धीर्घत्वम् । येन वाऽत्यर्थं स्त्रीषु व्यज्यते तद्वाजीकरणम् । तदुक्तं चरके—“येन नारीषु सामर्थ्यं वाजिवल्लभते नरः । प्रजेन्नाप्यधिकं येन वाजीकरणमेव तत्” (च. चि. अ. २, पा. ४) इति ॥ ५ ॥

अथास्य प्रत्येकाङ्गलक्षणसमासः—तत्र, शल्यं नाम विविधतृणकाष्ठ-पाषाणपांशुलोदलोष्टास्थिवालनखपूयास्त्रावदुष्टव्रणान्तर्गर्भशल्योद्धरणार्थं षष्ठ्या विधानैः, यन्त्रशस्त्रक्षाराग्निप्रणिधानव्रणविनिश्चयार्थं च; शालाक्यं नामोर्ध्वजत्रुगतानां श्रवणनयनवदनघ्राणादिसंश्रितानां व्याधीनामुपशमनार्थं; कायचिकित्सा नाम सर्वाङ्गसंश्रितानां व्याधीनां ज्वररक्तपित्तशोफोन्मादापसारकुष्ठमेहातिसारादीनामुपशमनार्थं; भूतविद्या नाम देवांसुरगन्धर्वयक्षरक्षःपितृपिशाचनैलग्रहाद्युपसृष्टचेतसां शान्तिकर्मबलिहरणादिग्रहोपशमनार्थं; कौमारभृत्यं नाम कुमारभरणघात्रीक्षीरदोषसंशोधनार्थं दुष्टस्तन्यग्रहसमुत्थिनां च व्याधीनामुपशमनार्थम्; अगदतन्त्रं नाम सर्पकीटलृतामूषकादिदृष्टविषव्यञ्जनार्थं विविधविषसंयोगोपशमनार्थं च; रसायनतन्त्रं नाम वयःस्थापनमायुर्मेधाबलकरणं रोगापहरणसमर्थं च; वाजीकरणतन्त्रं नामारूपदुष्टक्षीणशुष्करेतसामाप्यार्थेनप्रसादोपचयजनननिमित्तं प्रहर्षणजननार्थं च ॥ ६ ॥

शल्यग्रविशेषाश्च शालुं प्रतिलक्षणं संक्षेपेणाह—अथास्येत्यादि । एकमेकमङ्गं प्रति लक्षणानां समासः संक्षेपः प्रत्येकाङ्गलक्षणसमासः । तृणादीनां, तथा दुष्टव्रणस्य, तथाऽन्तर्गत(र्भशल्य)स्य उद्धरणार्थमिति प्रत्येकमुद्धरणशब्दः संबध्यते । दुष्टव्रणस्यान्तस्तृणाद्याहरणार्थमित्यन्ये । षष्ठ्या विधानैरिति द्विव्रणीयोचैरपतर्पणाद्यै रक्षाविधानान्तैः; इत्थंभूतलक्षणे तृतीया । जत्रु ग्रीवामूलं, जत्रुण ऊर्ध्वमूर्ध्वजत्रु । घ्राणादीत्यादिग्रहणाच्छिरःकपालादिग्रहणम् । उत्तरतन्त्रे प्रतिपादितक्रमप्राप्त्या ज्वरानन्तरमतीसारः पठितः, तस्यान्ते पाठोऽतिसारस्य सर्वाङ्गीणदोषारब्धत्वात्, अन्येषामपि तन्मध्यपाठेन सर्वाङ्गीणदोषारब्धत्वप्रतिपादनाध्यतिक्रमं वदन्ति । शान्तिकर्म बलिहरणादिना ग्रहाणां देवादीनामुपशमो यस्तदर्थः; यदि वा ग्रहणं ग्रहो देवानामावेशस्तदुपशमार्थम् । दुष्टस्तन्यग्रहसमुत्थितानामिति दुष्टस्तन्येन

१ ‘सर्वशरीरावस्थितानां’ व्याधीनामुपशमकरणार्थं, ज्वरशोफयुग्मरक्तपित्तोन्मादापसार-प्रमेहातीसारादीनां च’ इति ता. । २ ‘देवदानव’ इति ता. । ३ ‘विनायकनागग्रहोप-सृष्टचेतसां’ इति ता. । ४ ‘विषवेगोपशमनार्थं’ इति ता. । ५ ‘शुक्राप्यायन’ इति ता. । ६ ‘घ्राणादीनां शल्यान्तानां’ इति सु. । ७ ‘अन्ये तु तस्यान्ते पाठेन’ इति पा० । ८ ‘ग्रहणाद्’ इति सु. ।

Figure 1: A page of the 1939 *Bhānumatī* edition, showing the variant readings in the footnotes.

century medical scholar Cakrapāṇidatta, namely the *Bhānumatī*.<sup>86</sup> A secondary purpose was to present the text of the *sūtrasthāna* as read in MS Kathmandu NAK 5-333, that had recently been brought to the editors' attention. In their judgement, the Kathmandu manuscript presented a text that was closer to what Cakrapāṇidatta had before him than the text according to Ḍalhaṇa. This was the first *Suśrutasamhitā* edition in which Ācārya used sigla to identify the sources from which variant readings were reported, so while it has limitations, it for the first time enables us to get some idea of origins of the text (see Figure 1).

Ācārya noted in his introduction that the manuscripts containing the Ḍalhaṇa's commentary all came together with the root-text of the *Suśrutasamhitā*, and thus the main *Suśrutasamhitā* text reflected the readings chosen by Ḍalhaṇa. But the manuscripts of the *Bhānumatī* contained the commentary alone, without the root-text, and had many explanations based on different readings of the root-text than those of Ḍalhaṇa. In many of these cases it was hard to know what the text that Cakrapāṇidatta had before him. But Ācārya noted that Cakrapāṇidatta had a text before him that had much in common with the text of the Nepalese manuscript.<sup>87</sup>

There is compelling evidence that Cakrapāṇidatta's *Bhānumatī* commentary once covered the whole text of the *Suśrutasamhitā*.<sup>88</sup> The loss of the rest of the work ranks amongst the greatest disasters in Āyurvedic literature. Remarkably, the whole *Bhānumatī* may still have existed in the early twentieth century. In 1903, Palmyr Cordier reported being privately informed of a complete copy of the work in a personal manuscript collection in Benares.<sup>89</sup>

## The Manuscripts

Our edition results from considering the textual evidence of three manuscripts, all of which were preserved and most likely produced in Nepal, in Kathmandu valley, to be more precise. Klebanov (2021a: §2.1) furnishes a comprehensive description of the individual manuscripts, quotes and

86 HIML: IA, 374–375 and IB, 495–496.

87 Su 1939: 3–4. See discussion by Klebanov (2021b: 7).

88 HIML: IA, 375.

89 Cordier 1903: 332.

translates their colophons and thoroughly examines various problems involved in their interpretation. That is why we will present only the key data essential for the study of our edition in the present paper. 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.

**Siglum K:** The MS has been preserved at the Kaiser Shamsheer (KL) library in Kathmandu, accession number KL 699. It was microfilmed and catalogued by the NGMPP/ NGMCP as C 80-7.<sup>90</sup> The MS comprises 152 palm-leaf folios that originally belonged to several different codicological units written by different scribes.<sup>91</sup> 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.<sup>92</sup> The MS is incomplete and contains a large part of the *Suśrutasaṃhitā* as well as the *Sauśrutaniḥṣṭu*.<sup>93</sup> The date stated in the colophon at the end of the compendium is verified for Sunday, April 13, AD 878. However, some controversy is involved in interpreting the exact roles of two persons mentioned in the same concluding remarks, someone Śrī Harṣacandra and Vaidya Vasuvarman. 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.”<sup>94</sup>

**Siglum N:** This MS is kept at the National Archives Kathmandu (NAK), under accession number 1-1079 क. It was microfilmed twice by the

90 See [http://catalogue-old.ngmcp.uni-hamburg.de/mediawiki/index.php/C\\_80-7\\_Suśrutasaṃhitā](http://catalogue-old.ngmcp.uni-hamburg.de/mediawiki/index.php/C_80-7_Suśrutasaṃhitā) (accessed on October 22, 2021).

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

92 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 Bhattarai (2020).

93 See Klebanov (2021a: 11) for a detailed description of the content.

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

NGMPP as A 45-5(1) and A 1267-11(2).<sup>95</sup> 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 ca. seven lines per folio. 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 12th or 13th century.

**Siglum H:** The MS belongs to the historical collection of Hemarāja Śarman (fl. 1878-1953) and is currently kept at the NAK under accession number NAK 5-333. It is microfilmed twice by the NGMPP as B 29-19 and B 30-15, but the latter microfilm is incomplete.<sup>96</sup> The MS comprises 435 palm-leaf folios, 34 × 5 cm in size, with one string-hole in the middle. It is written in a type of Newari script that is more recent than the one used in N, with approximately six lines per folio. The MS is exceptionally well-preserved and complete, containing the text of the *Suśrutasamhitā* as well as the *Sauśrutaniḥṣṭu*. 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, that is, deciphering the actual characters, and interpretation of the concerned passage involve diverging opinions, all of which concur, however, in assigning the MS to the 16th century. Klebanov (2021a: 21–26) gives an analytical account of the views expressed in literature, considers further options and puts forward his understanding that the MS was completed on Sunday, July 29, AD 1543.

### Palaeographical features

- śrita for śṛta.
- yātri for yāṭṛ (Su.ka.1.63)

95 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)/

96 See [http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/B\\_29-19\\_Suśrutasamhitā](http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/B_29-19_Suśrutasamhitā) (accessed on October 22, 2022).

- punarṇavā (Su.ka.1.61)
- ś and s in KL 699.
- b and v in KL 699 and NAK 5-333.
- cha and ccha
- line-fillers
- ṇ for n (punarṇavā)
- vyājī-kṛ for vājī-kṛ

## Editorial Principles

### Method

The data for the critical edition comes from the witnesses of the Nepalese version, which are MS KL 699, NAK 5-333 and NAK 1-1079. 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.<sup>97</sup> MS NAK 5-333 was transcribed first because its script is easy to read, the scans are clear, and it is the most complete of the manuscript witnesses. Then, MS KL 699 and MS NAK 1-1079 were transcribed.

The diplomatic transcripts were uploaded to Charles Li's platform Saktumiva, which automatically collates them. An electronic text of the vulgate of the *Suśrutasaṃhitā*, which was transcribed without the commentaries by Tsutomu Yamashita and Yasutaka Muroya on the basis of Ācārya's 1931 and 1938 Bombay editions,<sup>98</sup> has also been included in the collation.

Saktumiva's automatic collation function standardises punctuation and orthographic variants according to filters which can be turned off or on. These filters enable the editors to ignore *daṇḍas*, numbers and *puṣpikās* in the transcripts, as well as orthographic variants, such as *ba* and *va*, 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 Ḍalhaṇa were

<sup>97</sup> These guidelines are at <https://saktumiva.org/wiki/tei>, accessed 20/10/2021.

<sup>98</sup> This e-text is available on the SARIT website; <https://sarit.indology.info/susrutasaṃhitā.xml?view=div>, accessed 20/8/2021.



read, and variant readings reported by these commentators were included in notes to the edition. Also, various reference books were consulted, such as the Nadkarni (1954) and V. Joṣī and N. H. Joṣī (1968) and Meulenbeld (HIML), to elucidate the meaning of technical terms and identify relevant information in other medical works.

An initial draft of the translation and many annotations were written by Dominic 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. Therefore, the project's work has been publicly available as it evolves. The following software tools have been selected by Wujastyk for the procedures described above:

1. [oXygen XML editor](#) (which has plugins for Github and TEI, and can validate the code).
2. [Saktumiva](#) (a platform for producing and publishing critical editions of Sanskrit texts).
3. [Quick Palaeographer](#) (a browser-based tool for reading MS images and developing a catalogue of character shapes).
4. [Filezilla](#) (document transfer to Saktumiva).
5. [Github](#) (document sharing, security and versioning).
6. [LaTeX](#) (document preparation).
7. [qdpmp](#) (project management).

## 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. The resulting NEXUS file can be read by phylogenetics software to build a stemmatic tree.<sup>99</sup> This procedure was done with transcripts of several chapters of the Nepalese witnesses, and the results confirmed the editors' provisional stemmatic hypothesis that K and H are more closely related to one another than K and N.<sup>100</sup> Given the early date of K and the small number of other surviving witnesses of the Nepalese version, the relationship between the manuscripts at our

99 This process is discussed in greater detail by Charles Li at <https://chchch.github.io/sanskrit-alignment/docs/index.html#tree>, accessed 21/8/2021.

100 See section 'Features of the Manuscript Transmission' for further discussion of this.



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 KL 699 because the editors have endeavoured to present to the reader an archetype of the text that was transmitted by this ninth-century manuscript. Therefore, the Sanskrit has been standardised as minimally 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 *Suśrutasaṃhitā* 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. Therefore, the editors of SS.1.16 have opted to retain some unusual features of the Sanskrit in MS 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, °*vācanan dhātry*°), although the *anusvāra* is sometimes used (1.16.15, *udakaṃ dhānyāmla*°). In most cases, the consonant following a *repha* is doubled, but this is not always the case.<sup>101</sup> 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 *daṇḍa* at the end of a sentence or verse. Whether these *anusvāras* should be changed to the consonant *m* is a moot question because there is no Pāṇinian concept of

<sup>101</sup> Examples of the germination of consonants are *karṇṇa* (1.16.1 ff), *muhūrta* (1.16.2), *pūrva* (1.16.2), *gandharva* (1.16.5), °*mūlair mmadhu*° (1.16.5), *vartti* (1.16.6) and *punar vvidhyet* (1.16.6). Examples where it does not occur in 1.16 are °*ārtham* (1.16.8,19), *kuryāt* (1.16.16, 32), °*pāḥir vallūra*° (1.16.10); °*pāḥir vyāyojimaḥ* (1.16.10) and *dīrghaika*° (1.16.10).

‘end-of-sentence’ and his rules on *sandhi* are contingent on the close contact of sounds (*saṃhitā*). 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 *m*. Nonetheless, this remains an assumption about how the text would be pronounced. Therefore, in a critical edition, inserting *daṇḍas* and changing *anusvāras* to *m* before them are subjective decisions by the editors. The scribal use of *daṇḍas* and *anusvāras* in the Nepalese manuscripts can be seen in the digital edition if one switches off the filters for ignoring *daṇḍas* and final *anusvāra* variants.

refs?

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.

## Printed Edition

[To be written when the printed edition of SS.1.16 is finalised]

## Digital Edition

Instructions for reading the digital edition have been provided by Charles Li on [Saktumiva](#). In brief, the reader is able to generate the apparatus by choosing a base text and one or more of the other witnesses. The reader 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 truncates variants wherever possible.

For example, as seen in Figure 2, the apparatus for the highlighted words *bahutvanivedanāyāṃ* is on the right side between the purple square brackets. This entry means that the editors have chosen to read

śoṇitabāhūtvānivedanāyāṃ cānyadeśavidham iti jānīyāt | nirupadravatā taddeśavidha-  
liṅgam ||3||

{ A: °hutvena vedanāyā N: °hutveti veda-  
nās H: °nāyāc } A: °vatayā A: °vidham  
iti ||  
testimonia

Figure 2: The digital edition of SS.1.16.3

°bahutvanivedanāyāṃ, which is the reading of K, whereas A has °bahutvena nivedanayā, N °bahutveti vedanās and H °bahutvanivedanāyāc. The final *c* in the reading of H is italicised because it has been marked by the transcriber as unclear.

A positive apparatus is available if one highlights with the cursor one or more words, and even entire passages or verses, and clicks on the collapsed menu icon. As seen in Figure 3, the positive apparatus of °bahutvanivedanāyāṃ appears in a pop-up window in which the lemma and variants are aligned according to letters, and the variations are highlighted in yellow.

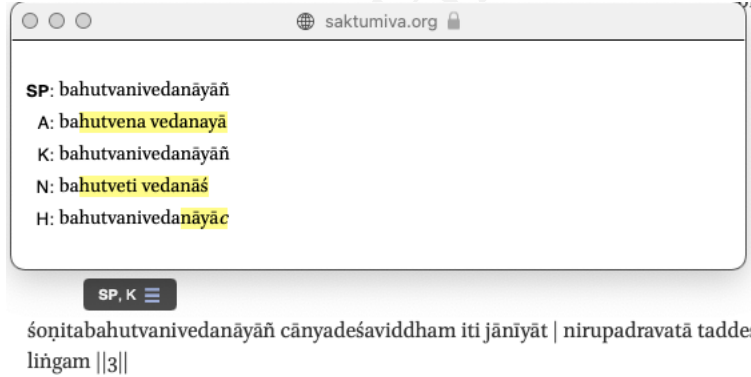


Figure 3: The digital edition of SS.1.16.3

In both the negative and positive apparatuses of the digital edition, the reader must infer conjectures and corrections by the editors at the time of writing this article. Testimonia and notes are in the apparatus on the right side of the text.

## The Translation

### Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for piercing the ear.<sup>102</sup>
- 2 One may pierce a child's ears for the purpose of preserving and decorating. On renowned days, half days, hours and constellations during the first half of the sixth or seventh lunar month, the physician sits the boy, who has received a benediction (*kṛtamaṅgala*) – blessings pronounced (*svastivācana*)<sup>103</sup> –, on the lap of a wet-nurse and pacifies him.<sup>104</sup> Then, having pulled his ear with the left hand, he should use his right hand to pierce the ear straight through at a naturally occurring cleft.<sup>105</sup> For a

<sup>102</sup> The topic of piercing the ear (*karṇavyadha*) is not discussed in the *Carakasamhitā* (HIML: IB, 326, n. 175), but it is mentioned in some texts that followed the *Suśruta-samhitā*, such as the *Kaśāpyasamhitā* (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the *Aṣṭāṅgahṛdayasūtra* 1.26.26 (kunt-1902). In the versions of the text known to Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125), the heading of this chapter is *karṇavyadhabandhavidhi* ('the method of piercing and joining the ear'), instead of the Nepalese version's *karṇavyadhavidhi*. The topic of *karṇabandha* is discussed in passages 17–20 of the Nepalese version. However, it appears that only subsequent redactors reflected its importance by including it in chapter headings. The Nepalese version also omits the opening remark on Dhanvantari that appears in subsequent versions. For a discussion of the frame story in the Nepalese version, see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021. Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125) state that only the ears of healthy people should be pierced, and they quote Bhoja to affirm this: 'When piercing the ears of children who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase' (for the Sanskrit, see Su 1938: 76).

<sup>103</sup> The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. In the versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76), the words are united in a compound that reads more naturally.

<sup>104</sup> The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) have the additional compound *kumāradharāṅke* ('on the lap of one who holds the child') after *dhātryaṅke*. The gender of *kumāradhara* is made clear by Ḍalhaṇa's gloss 'a man who holds the child'. Also, both versions add *bālakṛīḍanakaiḥ pralobhya* ('having enticed with children's toys') to indicate that the child should be tempted with toys to stay on the assistant's lap. According to Ḍalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Ḍalhaṇa further mentions that others read *bhakṣyaviśeṣair vā* ('or by special treats') before *bālakṛīḍanakaiḥ*.

<sup>105</sup> The versions of 1.16.3 of Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) add

- boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl (*ārā*) on a thick one.<sup>106</sup>
- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.<sup>107</sup>
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or sharp pain in the ear.<sup>108</sup>
- 5 Having removed the wick (*varti*) in the hole because of the aggravation of humours or a culpable piercing,<sup>109</sup> one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor

Add reference in the fn for the article on samudāya

*āḍityakarāvabhāsite* to clarify that this naturally occurring cleft is illuminated by sunshine.

- 106 Ḍalhaṇa on 1.16.3 (Su 1938: 76) clarifies that the awl is a shoe-maker's knife for piercing leather. He also cites the authority of "the notes of Lakṣmaṇa" (*Lakṣmaṇaṭīp-panaka*) on the issue of the thickness of the needle. *The Notes of Lakṣmaṇa* is not known from any earlier or contemporary sources and was presumably a collection of glosses on the *Suśrutasaṃhitā* that was available in twelfth-century Bengal. See Meulenbeld (HIML: IA, 386, and the footnotes for further literature).
- 107 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079.
- 108 This passage is significantly augmented in 1.16.4 of Cakrapāṇidatta's version (Su 1939: 126) and 1.16.5 of Ḍalhaṇa's (Su 1938: 77) to outline the specific problems caused by piercing three ducts called *kālikā*, *marmikā* and *lohitikā*. In fact, the order of the problems mentioned in the Nepalese version has been retained in the other versions and divided between each duct. Cakrapāṇidatta's commentary on 1.16.4 (Su 1939: 126) cites several verses attributed to Bhoja on the problems caused by piercing these three ducts in the ear flap: '*Lohitikā*, *marmikā* and the black ones are the ducts situated in the earflaps. Listen in due order to the problems that arise when they are pierced. Paralysis of the nape of the neck and convulsions, or sharp pain arise from piercing *lohitikā*. Pain and lumps are thought to arise from piercing *marmikā*. Piercing *kālikā* gives rise to swelling, fever and burning.'
- 109 In addition to these reasons, 1.16.6 of Ḍalhaṇa's (Su 1938: 77) adds *kliṣṭajihmā-praśastasūcīvyadhāt* ('because of piercing with a painful, crooked and unrecommended needle') and *gāḍhataravartitvāt* ('because of a wick that is too thick'). Ḍalhaṇa was aware of the reading in the Nepalese version because he notes in his commentary on 1.16.6 (Su 1938: 77) that some read 'because of the accumulation of humours' rather than 'because of piercing with a painful, crooked and unrecommended needle or because of a wick that is too thick.' On the meaning of *samudāya*, see ?? and Meulenbeld 1992: 1–5.

- oil tree (*gandharvahasta*), thickened with honey and ghee. When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.<sup>110</sup>
  - 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.<sup>111</sup>
  - 8 A person's ear enlarged in this way can split in two, either as a result of the humours<sup>112</sup> or a blow. Listen to me about the joins (*sandhāna*) it can have.
  - 9 Here, there are, in brief, fifteen ways of mending the ear flap.<sup>113</sup> They are as follows: Rim-join (*nemīsandhānakaḥ*), Lotus-splittable (*utpalabhedyaka*), Dried Flesh (*vallūraka*), Fastening (*āsaṅgima*), Cheek-ear (*gaṇḍakarṇa*), Take away (*āhārya*), Ready-Split (*nirvedhima*), Multi-joins (*vyāyojima*), Door-hinge (*kapāṭasandhika*), Half door-hinge (*ardhakaṭasandhika*), Compressed (*saṁkṣipta*), Reduced-ear (*hīnakarṇa*), Creeper-ear (*vallīkarṇa*), Stick-ear (*yaṣṭīkarṇa*), and Crow's lip (*kākaṣṭha*).<sup>114</sup>

In this context, among these,

“Rim-join” (*nemīsandhānaka*): both flaps are wide, long, and equal.

“Lotus-splittable” (*utpalabhedyaka*): both flaps are round, long, and equal.

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- 110 The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.
  - 111 Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Ḍalhaṇa on 1.16.8 (Su 1938: 77) point out that the dilator can be made of wood, such as that of the prickly chaff flower (*apāmarga*), the neem tree (*nimba*) and the cotton plant (*kārpāsa*). Ḍalhaṇa adds that it can also be made of lead (*sīsaka*) and should have the shape of the datura flower (*dhattūrapuṣpa*).
  - 112 Ḍalhaṇa on 1.16.9 (Su 1938: 77) notes that the word *doṣa* here can refer to either a humour, such as wind (*vāta*), as we have understood it, or a disease generated from a humour.
  - 113 The Nepalese version uses the word *sandhāna* to refer to joining a split in an ear flap, which is consistent with the terminology in the verse cited above (8). However, 1.16.10 of Ḍalhaṇa's version (Su 1938: 77) uses the term *bandha* here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
  - 114 For an artist's impression of these different kinds of joins in the ear flap, see Majno 1975: 290 (reproduced as Figure 3.2 in Wujastyk 2003: 154).



“Dried flesh” (*vallūraka*): both flaps are short, round, and equal.

“Fastening” (*āsaṅgima*): one flap is longer on the inside.

“Cheek-ear” (*gaṇḍakarna*): one flap is longer on the outside.<sup>115</sup>

“Take-away” (*āhārya*): the flaps are missing, in fact, on both sides.

“Ready-split” (*nirvedhima*): the flaps are like a dais (*pīṭha*).

“Multi-joins” (*vyāyojima*): one flap is small, the other thick, one flap is equal, the other unequal.

“Door-hinge” (*kapāṭasandhika*): the flap on the inside is long, the other is small.

“Half door-hinge” (*ardhakapāṭasandhika*): the flap on the outside is long, the other is small.

“These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.”<sup>116</sup> The five from compressed (*saṃkṣipta*) on are incurable.<sup>117</sup> Among these, “compressed” has a dry ear canal and the other flap is small. “Reduced ear” has flaps that have no base and have wasted flesh on their edges. “Creeper-ear” has flaps that are thin and uneven. “Stick-ear” has lumpy (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdhā*) ducts (*sirā*). “Crow-lip” has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.<sup>118</sup>

115 For an artist’s impression of this join, see Majno 1975: 291 (reproduced as Figure 3.3 in Wujastyk 2003: 155).

116 Cakrapāṇidatta on 1.16.9–13 (Su 1939: 128–129) and Ḍalhaṇa on 1.16.10 (Su 1938: 77–78) provide examples of how the names of these joins describe their shapes. For example, the rim-join (*nemīsandhānaka*) is similar to the join of the rim of a wheel (*cakradhārā*).

117 Ḍalhaṇa on 1.16.10 (Su 1938: 77–78) mentions that some do not read the statement that only five are incurable, and they understand the causes of unsuccessful joins given below (i.e., heat, inflammation, suppuration and swelling) as also pertaining to the first ten when they do heal.

118 The version of 1.16.11–13 known to Ḍalhaṇa (Su 1938: 78) has four verses (*śloka*) at this point that are not in the Nepalese manuscripts. The additional verses iterate the types of joins required for ear flaps that are missing, elongated, thick, wide, etc.

- 10 A person wishing to perform any of these joins should therefore have supplies prepared according to the recommendations of the ‘Preparatory Supplies’ chapter.<sup>119</sup> And in this regard, he should particularly gather<sup>120</sup> decanted liquor (*surāmaṇḍa*), milk, water, fermented rice-water (*dhānyāmla*), and powdered earthenware crockery (*kapālacūrṇa*).<sup>121</sup>

Next, having made the woman or man tie up the ends of their hair, eat lightly and be firmly held by qualified attendants, one considers the joins (*bandha*) and then applies them by means of cutting (*chedya*), splitting (*bhedya*), scarification (*lekhya*), or piercing (*vyadhana*).<sup>122</sup> Next, he should examine the blood of the ear to know whether it is tainted (*duṣṭa*) or not. If it is tainted by wind, the ear should be bathed with fermented rice-water (*dhānyāmla*) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor (*surāmaṇḍa*) and water should be used, and then he should scarify it again.

Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Having seen that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with cotton (*picu*) and gauze (*prota*), and bind it up with a thread,

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All four verses were probably absent in the version of the *Suśrutasamhitā* known to Cakrapāṇidatta. He cites the verses separately in his commentary, the *Bhānumatī* (Su 1939: 128–129), introducing each one as ‘some people read’ (*ke cit paṭhanti*). However, in Trikamajī Ācārya’s edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Ḍalhaṇa (Su 1938), even in instances like this where Cakrapāṇidatta’s commentary indicates that he was reading a different version of the *Suśrutasamhitā*.

- 119 *Suśrutasamhitā* 1.5 (Su 1938: 18–23), probably verse 6 especially, that lists the equipment and medications that a surgeon should have ready.
- 120 The reading in the Nepalese manuscripts of *viśeṣataś cāgropaharaṇīyāt* has been emended to *viśeṣataś cātropaharet* to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of *agropaharaṇīyāt* in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.
- 121 The term *kapālacūrṇa* is unusual. Ḍalhaṇa (Su 1938: 79) defines it as the powder of fragments of fresh earthen pots and Cakrapāṇidatta (Su 1939: 129) as the powder of earthenware vessels.
- 122 There are syntactic difficulties in this sentence. We have adopted the reading in Ḍalhaṇa’s version (Su 1938: 78), which has *ca kṛtvā* following *supariḡhṛtaṃ*. It is likely that a verb, such as *kṛtvā*, dropped out of the Nepalese transmission.



- neither too tightly nor too loosely. Then, the earthenware powder should be sprinkled on, and medical advice (*ācārika*) given. And he should supplement with food as taught in the ‘Two Wound’ chapter.<sup>123</sup>
- 11 One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.
- 12 One should not make a join when the blood is too pure, too copious, or too thin.<sup>124</sup> For when the ear is tainted by wind, then it is obstructed by blood (*raktabaddha*), unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic (*pāka*) and red. When tainted by phlegm, it will be stiff (*stabdha*) and itchy. It has excessively copious suppuration (*srāva*) and is *śopha* (*puffed up*). It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.<sup>125</sup>
- 13 When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be inflamed (*saṃrambha*), burning, septic or painful. It may even split open again.
- 14 Now, massage for the healthy ear, in order to enlarge it. One should gather as much as one can the following: a monitor lizard (*godhā*), scavenging (*pratuda*) and seed-eating (*viṣkīra*) birds, and creatures that live in marshes or water,<sup>126</sup> fat, marrow, milk, and sesame oil, and white mustard oil.<sup>127</sup> Then cook the oil with an admixture (*prativāpa*) of the following: purple calotropis (*arka*), white calotropis (*alarka*), country mallow (*balā*), ‘strong Indian mallow’ (*atibalā*), country sarsaparilla (*anantā*), beggarweed (*vidāri*), liquorice (*madhuka*) and

123 *Suśrutasamhitā* 4.1 (Su 1938: 396–408).

124 1.16.17 of Ḍalhaṇa’s version (Su 1938: 79) reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to *nāśuddha-* for *nāśuddha-* in the Nepalese recension would yield the same meaning as the Ḍalhaṇa’s version.

125 In his edition of *Suśrutasamhitā*, Ācārya (Su 1938: 79 n. 1) includes in parentheses the following treatment for these conditions, which according to a footnote is not found in the palm-leaf manuscript he used: ‘One should sprinkle it with raw sesame oil for three days and one should renew the cotton bandage after three days’ (*āmatailena trirātraṃ pariṣecayet trirātrāc ca picuṃ parivartayet*).

126 For such classifications, see Zimmermann (1999) and Smith (1994).

127 1.16.19 of Ḍalhaṇa’s version (Su 1938: 79) includes ghee (*sarpis*). However, Ḍalhaṇa’s remarks on 1.16.19 and Cakrapāṇidatta’s on 1.16.18 (Su 1939: 130) indicate that they knew a version of this recipe (perhaps, similar to the Nepalese) that does not have ghee. Ḍalhaṇa also notes that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta says some read that it is made with four oils and milk.

- hornwort (*jalaśūka* → *jalanīlikā*<sup>128</sup>).<sup>129</sup> This should then be deposited in a well-protected spot.
- 15 The wise man who has been sweated should rub the massaged (*ma-  
rdita*) ear with it. Then it will be free of complications, and will enlarge properly and be strong.<sup>130</sup>
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (*apāṅga*), but not outside it.<sup>131</sup>
- 17 In this tradition, experts know countless repairs to ears. So a physician who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them.<sup>132</sup>
- 18 If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.<sup>133</sup>
- 19 Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.

128 *Ceratophyllum demersum*, L. This name is not certain. In fact, Ḍalhaṇa on 1.16.19 (Su 1938: 79) notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

129 The version of 1.16.19 known to Ḍalhaṇa (Su 1938: 79) adds several ingredients to this admixture, including *apāmārga*, *aśvagandhā*, *kṣīraśuklā*, *madhuravarga* and *payasyā*. Also, it has *vidārigandhā* instead of *vidāri*. When commenting on 1.16.19, Ḍalhaṇa (Su 1938: 79) notes that some do not read *madhuravarga* and *payasyā*. Therefore, there were probably other versions of this recipe with fewer ingredients, as seen in the Nepalese version.

130 For these aims (i.e., healing and enlarging the ear), the text known to Ḍalhaṇa (Su 1938: 79) has an additional verse and a half describing an ointment for rubbing the ear (*udvartana*) and sesame oil (*taila*) cooked with various medicines for massage. Cakrapāṇidatta (Su 1939: 131) does not comment on these verses, nor verse 15 of the Nepalese version, and so the version of the *Suśrutasaṃhitā* known to him may not have included them.

131 Ḍalhaṇa's version of 1.16.23 adds another hemistich that states more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.

132 After verse 17, the 1938 edition of Ācārya (Su 1938: 80) has in parentheses nineteen verses on diseases of the ear lobes, treatments and complications. It is possible that these verses were in some of the witnesses used by Ācārya to construct the text as they occur in other manuscripts, such as MS Hyderabad Osmania 137-3 (b). However, Cakrapāṇidatta (Su 1939: 132) and Ḍalhaṇa (Su 1938: 80) state that some read about the diseases of the ear lobes in this chapter whereas others read about them in the chapter on various treatments (*miśrakacikitsa*) (SS 5.25), which does indeed begin with a discussion of the disease *paripoṭa*. Ḍalhaṇa goes on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

133 The order of verses 17 and 18 are reversed in Ḍalhaṇa's version (Su 1938: 80).

- 20 Next, having cut a slice of flesh (*vadhra*)<sup>134</sup> with the same measurements off the cheek, the end of the nose is then scarified.<sup>135</sup> Then the diligent (*apramatta*) physician, should quickly put it back together so that it is well joined (*sādhubaddha*).
- 21 Having carefully observed that it has been well sown up, two tubes should be fixed in place.<sup>136</sup> Then, having lifted them up,<sup>137</sup> the powder of sappanwood (*pattāṅga*),<sup>138</sup> liquorice and Indian barberry.<sup>139</sup> should be applied to it.
- 22 The wound should be covered properly with cotton (*picu*) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.<sup>140</sup>
- 23 And once healed and really come together, what is left of that slice of flesh (*vadhra*) should then be trimmed. If it is reduced (*hīna*), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.<sup>141</sup>

añjana

134 The version of 1.16.28b known to Ḍalhaṇa (Su 1938: 81) reads “bound, connected (*bad-dham*)” instead of slice of flesh (*vadhra*). This is a critical variant from the surgical point of view. If the slice remains connected, it will have a continuing blood supply. This is one of the effective techniques that so astonished surgeons witnessing a similar operation in Pune in the eighteenth century (see Wujastyk 2003: 67–70).

135 Or 1.16.20 could be mean, ‘... off the cheek, it is fixed to the end of the nose, which has been scarified.’ Unfortunately, the Sanskrit of the Nepalese version is not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek. However, Ḍalhaṇa (Su 1938: 81) clarifies the meaning of the vulgate here by stating that one should supply the word ‘flesh’ when reading ‘connected,’ thus indicating that he understood the flesh to be connected to the face.

136 Ḍalhaṇa notes that the two tubes should be made of reed (*nala*) or the stalk of the leaf of castor oil plant (*eraṇḍapatranāla*) (on 1.16.21 (Su 1938: 81)). They should not be made of lead or betel nut because the weight will cause them to slip down.

137 The Sanskrit term *unnāmayitvā* in 1.16.21 is non-Pāṇinian.

138 *Caesalpinia sappan*, L. For *pattāṅga* there are manuscript variants *pattrāṅga* (MS Kathmandu NAK 5-333) and *pattāṅga* (MS Kathmandu NAK 1-1079). Also, MS Kathmandu KL 699 (f. 14r:1) has *pattrāṅga* in a verse in 1.14 (cf. 1.14.36 (Su 1938: 66)). The text known to Ḍalhaṇa has *pataṅga* (1.16.29 (Su 1938: 81)) and this term is propagated in modern dictionaries.

139 *Berberis aristata*, DC. Ḍalhaṇa understands it as elixir salve (*rasāñjana*) (Su 1938: 81).

140 The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

141 Ḍalhaṇa accepts a verse following this, which points out that the procedure for joining

the nose is similar to that of joining the lips without fusing the ducts ([Su 1938](#): 81). He notes that earlier teachers did not think this statement on the nose and lips was made by sages, but includes it because it was accepted by Jejjāṭa, Gayadāsa and others. However, Cakrapāṇidatta does not comment on this additional verse, which suggests that either he did not know of it or was not inclined to accept it ([Su 1939](#): 133).

## Abbreviations

- Ah 1939 Kumṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमदरुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदरसायनाह्वया टीकया च समुल्लसितम् = *The Astāṅgahṛidaya* (6th edn., Mumbayyām: Nirṇayasāgara Press), [ark:/13960/t3tt6967d](https://nirṇayasāgara.org/ark:/13960/t3tt6967d).
- Anup *Anup Sanskrit Library* (n.d.).
- Apte Apte, Vaman Shivaram (1992), *The Practical Sanskrit-English Dictionary* (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Reprinted from Gode and Karve 1957-9.
- AS *Asiatic Society* (n.d.).
- As 1980 Āṭhavale, Ananta Dāmodara (1980) (ed.), *Aṣṭāṅgasan̄grahaḥ. Śrīmad Vṛddhāvāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ* (Pune: Maheśa Ananta Āṭhavale, Śrīmad Ātreya Prakāśanam), [ark:/13960/t9773bb9z](https://nirṇayasāgara.org/ark:/13960/t9773bb9z).
- Bhela 1921 Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), [ark:/13960/t3sv3157j](https://nirṇayasāgara.org/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), *Bhela-saṃhitā. Text with English Translation, Commentary and Critical Notes* (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
- BL *British Library* (n.d.).
- Ca. 1941 Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirṇaya Sagara Press), [URL](https://nirṇayasāgara.org/), accessed 01/01/2018.
- HIML Meulenbeld, Gerrit Jan (1999-2002), *A History of Indian Medical Literature*, 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.

- IOLR Eggeling, Julius et al. (1887–1935), *Catalogue of the Sanskrit Manuscripts in the Library of the India Office* (London: Secretary of State for India).
- KL *Kaiser Library* (n.d.).
- MW Monier-Williams, Monier, Leumann, E., Cappeller, C., et al. (1899), *A Sanskrit–English Dictionary Etymologically and Philologically Arranged, New Edition* (Oxford: Clarendon Press); 1970 reprint.
- NAK *National Archives of Kathmandu* (n.d.).
- 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.
- NGMCP NGMCP (2014), ‘Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue’, Universität Hamburg and Deutsche Forschungsgemeinschaft, [URL](#).
- NK 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](#).
- RORI *Rajasthan Oriental Research Institute* (n.d.).
- Su 1889 Bhaṭṭācāryya, Jīvānanda Vidyāsāgara (1889) (ed.), सुश्रुतः. सूत्र-निदान-शरीर-चिकित्सा-कल्पोत्तर-तन्त्र-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), [ark : / 13960 / t1nh6j09c](#); HIML: IB, 311, edition b.
- Su 1915 Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhita of Sushruta, the Nibandhasangraha Commentary*

- of *Shri Dalhaṇāchārya* (Mumbayyām: Nirṇayasāgaramudrā-  
yantrālaye), [ark : / 13960 / t3sv0mt50](http://13960/t3sv0mt50), accessed 29/07/2020;  
HIML: IB, 312 edition \*v.
- Su 1931 Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुत-  
संहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया  
समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-  
कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा  
संशोधिता = *The Sushrutasaṃhitā of Sushruta with the Niban-  
dhasangraha Commentary of Shree Dalhaṇāchārya* (2nd edn.,  
Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrā-  
yantrālaye), [ark : / 13960 / t9j41sg94](http://13960/t9j41sg94), accessed 09/06/2020;  
HIML: IB, 312 edition \*v.
- Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa  
Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्य-  
व्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यप-  
ञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता  
(3rd edn., Bombay: Nirṇayasāgara Press), [ark : / 13960 /  
t09x0sk1h](http://13960/t09x0sk1h); HIML: IB, 313, edition cc ('the vulgate').
- Su 1938<sup>2</sup> Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa  
Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता,  
श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्री-  
गयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता  
(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  
भानुमतीव्याख्याया समेतम् = *Sushrut-saṃhitā (sūtra Sthān) with  
Bhānumatī Commentary by Chakrapāṇi Datta with Introduction  
by Gaṇanāth Sen* (Śrīsvāmī Lakṣmīrāma Nidhi Grantha-  
mālā = Shri Swāmī Lakshmi Rām Trust Series, 1; [Jaipur]:  
Śyāmasundara Śarman), [ark : / 13960 / t54g0d12m](http://13960/t54g0d12m); Printed at  
the Nirṇayasāgara Press, Bombay.
- Su 1945 Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāy-  
aṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता  
(मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलितः = *the Suśrutasaṃhitā*



- of *Suśruta with Various Readings, Notes and Appendix etc.* (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), [URL](#).
- TMSSML *Tanjore Maharaja Serfoji Saraswati Mahal Library* (n.d.).
- Viṣṇudh. Śarman, Madhusūdāna and Śarman, Mādhavaprasāda (1912) (eds.), *विष्णुधर्मोत्तरपुराणम्* = [*Viṣṇudharmottarapurāṇa*] (Mumbai: Khemarāja Śrīkrṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), [ark : / 13960 / t6qz6fr23](#); Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

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## Todo list

■ You say, “Both Cakrapāṇidatta and Ḍalhaṇa introduced these verses and cited the opening words of the first verse before glossing specific terms.” but that’s not right. Bhānumatī shows no awareness of verses 19-21ab. Cakra doesn’t say “svedito...”. . .	12
■ Took out: “Cakrapāṇidatta did not introduce, cite or comment on the same verses as Ḍalhaṇa (Su.1.16.20–22ab, Su 1938: 79).” . . .	12
■ This is a complicated sentence. It might be better to use semi-colons, e.g., [...] sequence; [...] frame story; [...] of the text; [...] . . . . .	13
■ You could save repetition by placing this sentence before ‘The discussion of the textual variant in the second case study [...] and change this sentence to ‘The discussion of the textual variant in the list of vital energies also recurses [...] . . . . .	14
■ do you mean to say that Gayadāsa has text-external evidence? That how it sounds. Perhaps, omit the phrase. . . . .	14
■ this study? . . . . .	14
■ new paragraph? . . . . .	14
■ the referent of this is not so clear. ‘this alternative reading’? . . . .	14
■ [...] suggesting that some of the readings accepted by Ḍ were ancient, if not original. (?) . . . . .	15
■ Perhaps, Dr Madhu could add a comment on whether these additional ingredients would change the effects of the treatment in any significant way? . . . . .	21
■ refs? . . . . .	34
■ Add reference in the fn for the article on samudāya . . . . .	37
■ añjana . . . . .	43