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

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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. 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. 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.³

In January 2007, a manuscript of the *Suśrutasaṃhitā*, previously unknown to contemporary scholarship, was brought to international attention.⁴ MS Kathmandu KL 699 is a Nepalese palm-leaf manuscript covering about two thirds of the Sanskrit text. It is dated to 878 ce, making it one of the earliest dated manuscripts known from South Asia.⁵ The manuscript has been declared by UNESCO to be part of the Memory of the World.⁶

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.* eleventh century) and Dalhaṇa (*fl.* twelfth century). The version of the *Suśrutasamhitā* commented on by Dalhaṇa has formed the basis of modern

A selection of prominent contributions includes: Hoernle 1897; 1906*a,b*; 1907*a,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 1999–2001*a*; Valiathan 2007.

² HIML: IB, 311 ff.

³ HIML: IA, 203-389.

⁴ Dimitrov and Tamot 2007.

⁵ Harimoto 2011: 87–88.

⁶ UNESCO 2013.

printed editions, such as those of Yadavaśarman Trivikramātmaja Ācārya and others.⁷ Some of the changes in the text between the Nepalese version and what we might call the Dalhaṇa 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 *Uttaratantra* 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 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.⁸

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 *Uttaratantra*, and before the text was fixed as a result of the authority of the major commentators, Cakrapāṇidatta and Ḍalhaṇa.⁹ It is in this sense that we use the expression, "Ḍalhaṇa's version," when referring to the vulgate text of the *Suśrutasamhitā*.

The present study offers a critical edition and annotated translation of the sixteenth chapter of the Ślokasthāna, the first book of the Nepalese version of the Suśrutasaṃhitā.¹⁰ This chapter is important in the history of In-

⁷ Su 1915; Su 1938; P. V. Sharma 1999–2001*b*.

⁸ 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.

⁹ The roles of earlier commentators including Jejjaṭa, Gayadāsa and Candraṭa in closing the text and influencing Cakrapāṇidatta and Dalhaṇa remains an open research problem.

This book is called the *Sūtrasthāna* in later versions of the *Suśrutasaṃhitā*. Note that the *Suśrutasaṃhitā* itself used the name *Ślokasthāna* at several places, e.g., 6.42.61 (Su 1938: 721), 6.65.30 and 31 (Su 1938: 818), usually referring to identifiable passages in that part of the work. The name is also used in the *Ślokasthāna* itself, at 1.1.40 of the Nepalese version.

dian 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 this study addresses some of the challenges of editing the Nepalese manuscripts and the salient differences between the Nepalese version of the *Suśrutasaṃhitā* 1.16 and the text as known to Cakrapāṇidatta and Palhaṇa. The notes to the edition incorporate alternative readings mentioned by the commentators. The annotations to the translation discuss the following topics: instances where 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 Palhaṇa's version of the text. In short, this is a pilot study 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. 11 Cauterization too was described in the same ancient sources, to prevent wounds from bleeding. The Atharvaveda, in the early first millennium BCE, described the bones of the human body, showing early anatomical awareness in a religious context. 12 The Brāhmaṇa literature of the only slightly later contains more detailed descriptions of animal butchery in the context of religious sacrifice that involved the enumeration of internal organs and bones. 13 This exemplifies an early Sanskrit vocabulary for internal parts of bodies. However, this is not the same as anatomical dissection, whose methods and intentionality are quite different. As was pointed out long ago by Keith (1908), the enumeration of the bones in the Brāhmanas was derived from correspondences with the numbering of various verse forms, not from anatomical observation. With the Suśrutasamhitā we find ourselves in the presence of something quite different and more medically developed, in which the body was studied specifically for medical and

¹¹ Zysk 1985: 70-71.

¹² Translation by Hoernle (1907*b*: §43, §100). Further bibliography: HIML: IIB, 819.

¹³ Malamoud 1996; Saha 2015.

surgical purposes.¹⁴ The text gives us a historical window onto a school of professionalised medicine, including surgical practice, that 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* described 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. The author of the *Suśrutasaṃhitā* claimed that surgery is the most ancient and most efficacious of the eight branches of medical knowledge. 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. Majno, a practising surgeon, 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". The different types of mutilated ear lobe which the *Suśrutasaṃhitā* describes are not always easy to understand from the Sanskrit: the illustrations supplied in Majno's text help visualization.

Zysk 1986. The *Carakasaṃhitā* too has brief descriptions of surgical techniques, but the *Suśrutasaṃhitā* goes into greater detail.

Wilson 1823; Mukhopādhyāya 1913; Deshpande 2000; Wujastyk 2003; Valiathan 2007; Narayana and Thrigulla 2011 and many other studies.

¹⁶ Suśrutasaṃhitā 1.1.15–19 (Su 1938: 4).

¹⁷ The comprehensive study of ears in the history of Indian culture by Bollée (2010) oddly omits reference to *Suśrutasaṃhitā*'s surgery, although it mentions the text's description of ear diseases.

¹⁸ Majno 1975: 291.

¹⁹ Majno 1975: 290–291; reproduced with permission in Wujastyk 2003: 92–93.

Rhinoplasty

One of the best-known surgical techniques associated with *Suśrutasaṃhitā* is rhinoplasty, the repair or rebuilding of a severed nose. The history of this operation was discussed by Wujastyk (2003: 67–70, 99–100), and a translation of the Sanskrit passage from the vulgate edition of the *Suśrutasaṃhitā* was given.²⁰ This fascinating technique is certainly old in South Asia, having been witnessed by travellers from Marco Polo in the seventeenth century onwards.²¹ Many witnesses, including the most famous, Cruso and Findlay,²² described an operation that differs from *Suśrutasaṃhitā* 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 *Suśrutasaṃhitā* exactly in taking flesh from the cheek, not the forehead.²³

As noted by Meulenbeld, none of the extant commentators – Jejjaṭa, Gayadāsa, Cakrapāṇi or Ḍalhaṇa – explained the technique in any detail beyond short lexical glosses.²⁴ This suggests that the commentators did not in fact know the technique at first-hand.

The skin flap

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.²⁵ This ensures the blood flow essential to keeping the skin alive while it heals 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, Dalhaṇa

²⁰ See also HIML: IB, 327–328, note 186, for further literature and reflections.

²¹ Manucci 1907–8: ii.301.

²² Longmate 1794: 883, 891 f.

²³ Thorburn 1876: 352-3.

²⁴ HIML: IB, 328. Dalhaṇa also noted cryptically that a rather different version of the text, cast in रलोक metre, was also known to him from other sources (1.16.27–31 (Su 1938: 81a)). Dalhaṇa's variant bears a resemblance to the description of the operation given in printed editions of the *Aṣṭāṅgaḥṛdayasaṃhitā* (Utt.18.59–65 (Ah 1939: 841)).

²⁵ See Wujastyk 2003: 67-70.

clarified the meaning of the vulgate here by stating that when reading the expression "connected," one should understand "connected flesh".²⁶ He thus indicated that he understood the flesh to be connected to the face.²⁷ Thus, we cannot know definitively at present whether the connection of the flap was known to the redactors of the Nepalese version, although it seems likely. It was probably known to the redactors of the vulgate, and was certainly known to Dalhaṇa in the twelfth century.

Earlier in the chapter, in the context of ear-piercing and repair, the vulgate has a passage that is more explicit and conclusive. After listing the names and characteristics of different types of earlobe, the vulgate cites some summary verses from an unknown source.²⁸ The last of these verses says,

If no lobe exists, an expert may create an ear lobe by scarifying and then using living flesh still attached to the cheek from which it has been sliced.²⁹

The commentator Dalhana was even more explicit in his gloss on this passage:

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"Living" [flesh] means "together with blood".30
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Thus, <code>Dalhaṇa</code>'s comment gives us uniquivocal evidence for the concept of a living skin flap in the twelfth century, and it is almost certain that this is also what the text of the <code>Suśrutasaṃhitā</code> intended by the word "living." The one remaining historical problem is that these specific verses, <code>1.16.11-14</code>, are not present in the Nepalese version of the text. That suggests that they were part of a different tradition of practice with a verse literature that was integrated into the <code>Suśrutasaṃhitā</code> at the latest by the time of <code>Dalhaṇa</code> but perhaps after the Nepalese version.

If we can assume that the descriptions of ear-surgery and rhinoplasty were part of a single professional tradition of surgical method, then the above passage, in the context of ear-lobe repair, strongly supports the idea

²⁶ Suśrutasamhitā 1.16.28 (Su 1938: 81).

²⁷ See p. 53 below.

^{28 1.16.11-14 (}Su 1938: 78).

^{29 1.16.14 (}Su 1938: 78): गण्डादुत्पाट्य मांसेन सानुबन्धेन जीवता | कर्णपालीमापालेस्तु कुर्यान्निर्लिख्य शास्त्रवित् । Cf. the translation of the whole passage by Wujastyk (2003: 94).

^{30 1.16.14 (}Su 1938: 78): जीवेति शोणितसहितेनेत्यर्थः।

that rhinoplastic surgery too was conducted with attention to keeping a living skin flap.

By the late first millennium, had the rhinoplastic technique moved from the professional competence of physicians (वैद्य) to that of barber-surgeons (अम्बष्ठs and others)? Or perhaps the influence was in the other direction, and a technique known to practitioners elsewhere in South Asia in the first millennium was integrated into the text of *Suśrutasaṃhitā*. The rhinoplastic 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.

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 *Suśruta-saṃhitā*. 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 to say, in terms of stemmatic analysis they share a common ancestor or (hyparchetype), while at the same time, they bear no signs of significant contamination. This hypothesis was 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 Suśrutasamhitā 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; 2021*b*) 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 *Suśrutasamhitā*. This analysis demonstrated that the text of the Suśrutasamhitā 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 $Su\acute{s}rutasamhit\bar{a}$, MS Kathmandu NAK 1-1146,31 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.³² 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 Dalhaṇa 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 Dalhaṇa, 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.³³ 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

³¹ Rimal and Wujastyk 2022.

³² For a list of most of these manuscript copies of the *Suśrutasaṃhitā*, see NCC: vol. 39, pp. 373–375 and Wujastyk et al. 2020.

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

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.

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 Dalhana in the twelfth century and is reproduced in printed editions of the Suśrutasaṃhitā. 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 Uttaratantra, 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 *Suśrutasaṃhitā* and that, due to its regional character, has suffered relatively little contamination. We term this hyparchetype the "Nepalese version."

The Versions of Cakrapāṇidatta and Palhaṇa

The commentaries of Cakrapāṇidatta and Ḥalhaṇa, titled *Bhānumatī* and *Nibandhasaṅgraha* respectively, are based on similar but not identical versions of the *Suśrutasaṃhitā*, both of which are significantly different to the Nepalese version.³⁴ Ḥalhaṇa was aware of Cakrapāṇidatta's work and reit-

³⁴ See HIML: IA 374–379 on these authors. Meulenbeld already noted that "the text of the *Suśrutasaṃhitā* in the [1939] edition of the *Bhānumatī* differs at many places from the text of the [vulgate edition of 1938]" and gave examples from the *sūtrasthāna*

erated many of his predecessor's remarks, so the interpretation of the root text by these two commentators is, broadly speaking, consistent.³⁵ Dalhaṇa evidently also had several manuscripts of the *Suśrutasaṃhitā* available to him, since he frequently recorded their variant readings.³⁶

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. Acārya and N. Sarman's text of the Sūtrasthāna commented on by Cakrapānidatta (Su 1939) simply duplicated the text of that section from Y. T. Ācārya and N. R. Acārya's edition of Dalhana's commentary (Su 1938).³⁷ 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, Dalhana commented on four verses, 1.16.11—14 (Su 1938: 78), as part of his root text, that Cakrapānidatta cited separately only in his commentary (Su 1939: 128– 129). Cakrapāṇidatta introduced each verse with "some people say" (kecit pathanti). This clearly indicates that these verses were not in the version of the Suśrutasamhitā upon which Cakrapānidatta was commenting, but a century or so later they were part of the text before Dalhana. 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 *Suśrutasaṇhitā* known to Dalhaṇa. Although it is possible that a commentator may not have remarked on a verse because its

⁽HIML: IB, 496, note 76).

³⁵ HIML: IB, 499, n. 162.

³⁶ Cf. HIML: IA, 377. Meulenbeld drew attention to Dalhaṇa'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, Dalhaṇa noted that certain readings known to the earlier commentators Jejjaṭa and Gayadāsa were, "not to be found in current manuscripts" (sa ca vartamānapustakeṣu na dṛśyate).

³⁷ There are a few exceptions where Cakrapāṇidatta glossed a word or compound that is different to the one glossed by Dalhaṇa. For example, in SS.1.16.18, Cakrapāṇidatta glossed *rājasarṣapa* whereas Dalhaṇa glossed *gaurasarṣapa*, and the editors reflected this in the root texts of the *Bhānumatī* (Su 1939: 130) and *Nibandhasaṅgraha* (Su 1938: 79) respectively.

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स्वेदितोनमर्दितं कर्णं स्नेहेनैतेन योजयेत् ॥
         खेदितोन्मर्दितं कैर्ण स्नेहेनैतेन योजयेत्॥
                                                                                      अथानुपद्रवः सम्यग्बलवांश्च विवर्धते ॥ २० ॥
         अधानुपद्भवः सम्यग्वलवांश्च विवर्धते ॥ १९ ॥
                                                                                      अस्य तैलस्यावचारणमाह,—स्वेदितोन्मर्दितमित्यादि ॥२०॥
          ( यवाश्वगन्धायप्रवाह्मस्तिलेखोद्धतेनं हितम् ॥
                                                                                      यवाश्वगन्धायष्टाह्वैस्तिलैश्चोद्वर्तनं हितम् ॥
          शतावर्यश्वगन्धाम्यां पयस्पैरण्डजीवनैः ॥ २० ॥
          तैलं विपकं सक्षीरमभ्यङ्गात् पालिवर्धनम् ॥)
                                                                                      अभ्यक्तस्योद्धर्तनमाह,-यवेत्यादि ॥-
                                                                                      शतावर्यश्वगन्धाभ्यां पयस्पैरण्डजीवनैः ॥ २१ ॥
   कर्णवर्धनार्थं सम्मर्दनयोगिम्नहमाह—तवया गोधेस्यादि । प्रतुदा स्रद्वादयोऽजपान-
वक्तव्याः, विष्किरा लावाद्यः, भानूपा महिपादयः। राजसपेपः श्वेतसर्पपः, तस
                                                                                      तैलं विपकं सक्षीरमभ्यङ्गात् पालिवर्धनम् ॥
तैलम्, एवं हि स्नेहोऽयम्। पयश्चात्र पाकार्थं द्रवान्तरानुकेश्वतुर्गुणमेव । ये तु पयःस्थाने
                                                                                      कर्णपालिवित्रद्धार्थमपरं तैलमाह,-शतावर्यश्वगनधाभ्यामि-
सर्पिः पठिन्त, तम्मते जलसाध्योऽयम्; अन्य तु चतुःह्रोहेनेव पयःसाध्यं पठिन्तं।
सलकैः शर्कसेदः, जलशुको जलतृणासको भवति 'जलमुँका' इति प्रसिद्धः। प्रतीवापः
                                                                                   त्यादि । शतावर्यादिकल्केन स्नेहचतुर्थाशेन केवलक्षीरेण चतुर्गु-
                                                                                   णेन तैलमत्र पचनीयम् । पयस्या अर्कपुष्पी । जीवनैः काको-
कहकः । ये लत्र मधुरगणं पठन्ति पयस्यां च, तन्मते पयस्या सीरविदारी । तैलं विति
                                                                                   ल्यादिद्रव्यैः ॥ २१ ॥—
तैलमेव वा ॥ १८-२० ॥
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Figure 1: The text as it appears in Cakrapāṇi (left) and Dalhaṇa (right) (Su 1939: 130, Su 1938: 79).

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.

To give an example, there is a prose passage at Su.1.16.18 of the *Suśruta-saṃhitā* that Cakrapāṇidatta commented on in his *Bhānumatī* (Fig. 1, left).³⁸ It is followed by several verses also in the main text of the *Suśrutasaṃhitā* that elaborate on the content of the prose passage.³⁹ Dalhaṇa commented on these explanatory verses (Fig. 1, right), citing keywords that show they all formed part of the main text of the *Suśrutasaṃhitā* that was before him.⁴⁰ However, Cakrapāṇidatta's older commentary showed no awareness of the first few verses in this group, Su.1.16.19–21ab.⁴¹ 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 *Suśrutasamhitā* known to to him.⁴²

A similar instance of this occurs in the edition of the *Bhānumatī* at *Su-śrutasaṃhitā* 1.16.31 where the editors of the 1939 printed edition included a verse in parenthesis that was commented on by Dalhaṇa but not by Cakra-

³⁸ Su 1939: 130, i.e., athāpraduṣtasyābhivardhanārtham ... nidadhyāt/. It is numbered Su.1.16.19 in Dalhaṇa's Nibandhasaṅgraha (Su 1938: 79).

³⁹ Su.1.16.19–23 in Su 1939, i.e., svedito ..., yavāśva ..., tailam ..., teṣām ..., vaddha

^{40 1.16.19-23 (}Su 1938: 79-80).

⁴¹ Su 1939: 130-131.

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

(नाडीयोगं विनौष्ठस्य नासासन्धानवद्विधिम्॥ य प्यमेव जानीयात् स राझः केर्तुमर्हति ॥ ३१ ॥) इति सौश्रुते शल्यतन्त्रे सुत्रस्थाने कर्णस्यधवन्धविधिनीम पोडशोऽध्यायः॥ १६॥

Figure 2: *Suśrutasaṃhitā* 1.16.31 in the 1939 printed edition.

pāṇidatta (see Fig. 2).⁴³ 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*.⁴⁴ 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.

Cakrapāṇidatta and the Nepalese version

In fact, there is some evidence that the Nepalese version of the *Suśruta-saṃhitā* was more similar to Cakrapāṇidatta's version than to Ḍalhaṇa's. For example, *Suśrutasaṃhitā* 1.16.5 of the Nepalese version begins with the compound *doṣasamudayāt*.⁴⁵ Ḍalhaṇa's version, on the other hand, inserted two compounds, *kliṣṭajihmāpraśastasūcīvyadhāt* and *gāḍhataravartitvāt*, before this.⁴⁶ Cakrapāṇidatta began his comment on this passage by glossing *doṣasamudayāt*, which suggests that he was not aware of the compounds that Dalhana saw.⁴⁷

⁴³ The verse begins nāḍīyogaṃ vinauṣthasya. It is printed in the vulgate as 1.16.32 (Su 1938:81), with Dalhaṇa's commentary. It is printed in parentheses as 1.16.31 in the edition of the Bhānumatī (Su 1939:133).

The MS is described in IOLR: vol. 1.5, 928, #2647. The section on p. 29 below describes the sources that the editors used for the 1939 edition.

⁴⁵ Su 1939: 126.

⁴⁶ Suśrutasaṃhitā 1.16.6 (Su 1938: 77).

⁴⁷ Suśrutasamhitā 1.16.5 (Su 1939: 126–127).

If one looks beyond <code>Suśrutasaṃhitā</code> 1.16, there are instances where the Nepalese version and the root text as read by Cakrapāṇidatta have the same reading, but Palhaṇa mentions it as an alternative that is, "read by others." For example, <code>Suśrutasaṃhitā</code> 1.1.28 of the Nepalese version has <code>tatrāsmiñ</code> <code>chāstre</code>, which is also the reading commented on by Cakrapāṇidatta. However, Palhaṇa comments on <code>asmiñ</code> <code>chāstre</code> and states that "others read <code>tatrāsmiñ</code> <code>chāstre</code>". Another example is the reading of <code>ṣaṣṭyā</code> <code>vidhānaiḥ</code> in Palhaṇa's commentary on 1.1.8.1 (Su 1938: 3) that is not in his main text but that he ascribes to "some others." This reading is likely to be derived from the expression <code>ṣaṣṭyābhidhānaiḥ</code> in the main text of the Nepalese version, and to have been rewritten before Palhaṇa's time because it was hard to understand. ⁵⁰

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 already been pointed out in previous publications. Klebanov (2021a: 27 f) listed differences in the chapter sequence as they affect the overall organization and structuring themes and elements of the text. Others have explored variations in the frame story of the work as a whole.⁵¹ Klebanov also highlighted the interchangeable use of two names of the first book of the text, namely *Ślokasthāna* and *Sūtrasthāna* as well as another peculiarity of the Nepalese version, namely the additional verse or prose colophons found at the end of each book but also each decade of chapters of the work.⁵²

As the present 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.

Harimoto (2011: 101–104) provided an exemplary investigation of textual variants in the Nepalese version. His study looked at the classification

⁴⁸ Su 1939: 17.

⁴⁹ Suśrutasaṃhitā 1.1.22 (Su 1938: 5).

⁵⁰ See the discussion by Birch, Wujastyk, Klebanov, Rimal, et al. (2021: 4–5).

Wujastyk 2013; Klebanov 2021*a*: 28-32; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021; Birch, Wujastyk, Klebanov, Rimal, et al. 2021: 2-4.

⁵² Klebanov 2021a: 32-44.

of snakes in *Suśrutasaṃhitā* 5.4 and revealed that the Nepalese MSS preserve a text that is internally more consistent and coherent than the versions of the *Suśrutasaṃhitā* found in different printed sources.

Klebanov too has contributed some general remarks and examples of substantive differences between the Nepalese and vulgate texts and detailed two particular case studies.⁵³ The first case study dealt with the list of skin lesions associated with urinary disease (*pramehapiṭakā* in the Nepalese spelling). Their signs and pathogenesis are described in the Nidānasthāna and their treatment in the Cikitsāsthāna.⁵⁴ This list of skin lesions exemplifies a case where the text of the *Suśrutasaṃhitā* transmitted in the Nepalese MSS is internally more coherent than that commented on by Dalhaṇa. The incoherence of Dalhaṇa's version was already identified by an earlier commentator, Gayadāsa (fl. ca. 1000), who proposed a textual conjecture that corresponds to the reading of the Nepalese version.⁵⁵

The second case study by Klebanov (2021a) focussed on the variation in another list, that of the bodily winds (prāṇas, Suśrutasaṇhitā 3.4). This discussion too relied upon Gayadāsa's learned remarks. He commented on a version of the Suśrutasaṇhitā corresponding to the Nepalese MSS and reported an alternative reading and its interpretation preferred by another ancient commentator, Jejjaṭa. It is precisely Jejjaṭa's reading that is known to modern readers of the Suśrutasaṇhitā from the vulgate version of the text.

The present paper also provides an example of interpolation. This is a rare case in which we have a fairly good idea of where the inserted text came from, namely the medical theory associated with the *Carakasaṃhitā*.

On the whole, these observations indicate that many features of the Nepalese version of the *Suśrutasaṃhitā* are likely to go back to an early state of the work that was common to other versions of the compendium. However, other textual features, such as the text-structuring colophons concluding every tenth chapter, are likely to have occurred within a local Nepalese transmission of the text, and it is improbable that they are attested in the MSS from other regions. When evaluating the Nepalese readings historically, it is necessary to keep in mind that there is plentiful evidence that Dalhaṇa's version of the text also included extremely early read-

⁵³ Klebanov 2021*a*: 44–55.

^{54 2.6 (}Su 1938: 289–294) and 4.12 (Su 1938: 454–455) respectively.

MS Kathmandu KL 699 was copied a century or more before Gayadāsa's time, so its version cannot have been influenced by Gayadāsa's innovations or suggestions.

ings and variants, suggesting that some of the readings accepted by Dalhana were ancient, if not original. Each case has to be weighed.

The following detailed comparison of 1.16 of the Nepalese version with Palhaṇa'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 support.

Table 3 reveals the extent to which 1.16 of the Nepalese version was redacted to create the one known by Dalhaṇa. In this particular case, twenty-seven verses have been added. Eight of these verses (11–14, 21–22ab, 23cd–24, 32) are well-integrated with the existing material in so far as they reiterate and elaborate on the content of passages in the Nepalese version. A block of nineteen verses (26.1–19) at the end of this chapter in Ācārya's edition of the *Nibandhasaṅgraha* (Su 1938: 80) was known by Dalhaṇa. These verses cover additional diseases of the ear lobes, with their treatment and complications. Although Dalhaṇa conceded 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, and Dalhaṇa's comments prompted him to place them in parentheses. ⁵⁶ Be this as it may, this large block of verses is absent in the Nepalese version.

In Table 3, one can also see that verses 17 and 18 of the Nepalese version were transposed in the redaction of Dalhana's version, in which they are numbered 26 and 25 respectively. Although this only occurs once in 1.16, such transposing of verses and even their hemistiches is common in the redaction of other chapters of the *Suśrutasaṃhitā*.

Apart from the addition of verses, the redacting of the version known to Dalhana involved many small, yet sometimes significant, changes that are summarised below.⁵⁷

⁵⁶ Ācārya (Su 1938: 80) did not state that these verses were absent in some or all of his manuscripts, which he usually did in a footnote if this was the case. A broader survey of manuscripts would be helpful for establishing whether these verses were part of the transmission of the *Suśrutasaṃhitā* in India. For example, they are present in MS Hyderabad Osmania 137-3(b).

⁵⁷ The present study focusses on the commentary of Dalhana, but many of the same investigations could be made with regard to the surviving parts of the other early

Nepalese version	Dalhana's version
1	1
_	2
2-9	3-10
_	11–14
10-15	15–20
_	21–22ab
16	22cd–23ab
_	23cd-24
_	→ 25
17	26
- /	26.1-19
18 🖍	_
19–23	27-31
_	32

Figure 3: A Comparison of verses in 1.16 of the Nepalese and Dalhana's versions.

Changing Spelling, Sandhi and Syntax

Later commentators like Þalhaṇa often made efforts to standardise, simplify or improve the language of the Nepalese version. Such changes include the standardising of spelling,⁵⁸ sandhi,⁵⁹ and verbal forms,⁶⁰ as well as interventions to simplify and clarify syntax.⁶¹ These efforts often in-

commentaries. See the discussion below, p. 31.

⁵⁸ For example, $patt\bar{a}nga$ (SS.1.16.21) $\rightarrow patanga$ (1.16.29, Su 1938: 81). For more information on this, see the relevant footnote to the translation.

⁵⁹ or example, °hastena rju (SS.1.16.2) \rightarrow °hastena rju (1.16.3, Su 1938:76).

⁶⁰ For example, *unnāmayitvā* (SS.1.16.21) → *prānnamya* (1.16.29, Su 1938: 81); *avacūrṇayīta* (SS.1.16.21) → *upaharet* (1.16.29, Su 1938: 81).

⁶¹ For example, śoṇitabahutvanivedanāyāṃ cānyadeśaviddham iti jānīyāt | nirupadravatā taddeśaviddhalingam | (SS.1.16.3) → śoṇitabahutvena vedanayā cānyadeśaviddham iti jānīyāt | nirupadravatayā taddeśaviddham iti | (1.16.4, Su 1938:76); āmatailapariṣekeṇopacaret (SS.1.16.6) → āmatailena pariṣecayet (1.16.7, Su 1938:77); suparigṛhītaṃ (SS.1.16.10) → suparigṛhītaṃ ca kṛtvā (1.16.15, Su 1938:78); anena (SS.1.16.15) → snehenaitena (1.16.20,

volved splitting compounds.⁶² In some instances, these changes improved the grammar,⁶³ or altered the meaning.⁶⁴ However, some prefixes of verbal forms,⁶⁵ case endings,⁶⁶ and indeclinables were changed for less apparent reasons.⁶⁷ There is also a tendency to replace uncommon words with generic ones,⁶⁸ add indeclinables,⁶⁹ omit the verb to be at the end of sentences,⁷⁰ and introduce verses after a prose passage with the phrase *bhavati cātra*.⁷¹

Changing Technical Terms

There is evidence of standardising and altering technical terminology in versions of the *Suśrutasaṃhitā* subsequent the Nepalese one. Two examples of this in *Suśrutasaṃhitā* 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.⁷² However, the use of the term *sandhāna* was retained in verses, perhaps because

Su 1938: 79).

⁶² For example, yadṛcchāviddhāyāṃ sirāyām (SS.1.16.4) → yadṛcchayā viddhāsu sirāsu (1.16.5, Su 1938:76); dhānyāmlakapālacūrṇaṃ (SS.1.16.10) → dhānyāmlaṃ kapālacūrṇaṃ (1.16.20, Su 1938:78).

⁶³ For example, surāmaṇḍakṣīram (SS.1.16.10) → surāmaṇḍaṃ kṣīram (1.16.15, Su 1938: 78).

⁶⁴ For example, $k\bar{s}\bar{i}n\bar{a}lpam\bar{a}msah$ (SS.1.16.12) $\rightarrow k\bar{s}\bar{i}no$ 'lpam $\bar{a}msah$ (1.16.17, Su 1938: 79).

⁶⁵ For example, samvarddhitaḥ (SS.1.16.8) → vivarddhitaḥ (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).

⁶⁶ For example, $m\bar{a}se$ (SS.1.16.2) $\rightarrow m\bar{a}si$ (1.16.3, Su 1938: 76).

⁶⁷ For example, api (SS.1.16.13) $\rightarrow v\bar{a}$ (1.16.18, Su 1938:79); ca (SS.1.16.16) $\rightarrow tu$ (1.16.23, Su 1938:79); tu (SS.1.16.18) $\rightarrow ca$ (1.16.25, Su 1938:80).

⁶⁸ For example, mrak = ayet (SS.1.16.15) $\rightarrow yojayet$ (1.16.20, Su 1938: 79); nahyet (SS.1.16.21) $\rightarrow baddhv\bar{a}$ (1.16.29, Su 1938: 81).

⁶⁹ For example, [absent] (SS.1.16.6) \rightarrow *ca* (1.16.7, Su 1938:77); [absent] (SS.1.16.10) \rightarrow *tatra* (1.16.15, Su 1938:78); [absent] (SS.1.16.12) \rightarrow *api* (1.16.17, Su 1938:79).

⁷⁰ The words *bhavati* or *bhavanti* are omitted four times in Dalhana's version (1.16.10 (twice), 1.16.17 and 1.16.18, Su 1938: 77, 79).

⁷¹ For example, [absent] (SS.1.16.11) \rightarrow bhavati cātra (1.16.16, Su 1938: 79).

⁷² For example, pañcadaśasandhānākṛtayaḥ (SS.1.16.9) → pañcadaśabandhākṛtayaḥ, (cf. 1.16.10 (Su 1938:77)); daśakarṇasandhivikalpāḥ (SS.1.16.9) → karṇabandhavikalpāḥ (cf. 1.16.10 (Su 1938:77))

of the metrical challenges of making such a change. Also, the names of joins which incorporate *sandhāna* and *sandhi* remained the same.⁷³

The Nepalese version 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 (SS.1.16.20 and 23). Modern dictionaries define *vadhra* as a leathern strap or a slice of bacon,⁷⁴ the latter of which is more indicative of its meaning in the Nepalese version. This word was written out of subsequent versions,⁷⁵ 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 *Aṣṭāṅgaḥṛdayasaṇiḥitā* in the context of rhinoplasty, so it likely to be the correct reading in the Nepalese version.⁷⁶

Augmenting the Text

Apart from adding whole passages and verses (as seen in Table 3), redactors of subsequent versions augmented the text by expanding existing compounds and inserting new compounds and words. Within the microcosm of 1.16, adjectives and adverbs were inserted to clarify statements, and phrases added to elaborate on diseases and treatments. In particular, the characteristics and number of symptoms of a disease, as well as their reasons for arising, tend to increase in subsequent versions. For example, the Nepalese version (SS.1.16.5) said that the wick in a newly pierced ear should be removed because of aggravated humours or a culpable piercing whereas the version known to Dalhana (1.16.6 (Su 1938: 77)) included two further reasons, namely, because of piercing with a painful, crooked and

⁷³ These names are *nemīsandhānaka*, *kapāṭasandhika*, and *ardhakapāṭasandhika* in SS.1.16.9 (cf. 1.16.10 (Su 1938: 77)).

⁷⁴ Apte: 1385; MW: 917.

⁷⁵ *vadhram* (SS.1.16.20) → *baddham* (SS.1.16.28, Su 1938:81) and *tadvadhraśeṣaṃ* (SS.1.16.23) → *tad ardhaśeṣaṃ* (SS.1.16.31, Su 1938:81).

⁷⁶ Utt.18.62 (Ah 1939: 841). The word is old, occurring, also in the form *vardhra*, from the *Atharvaveda* onwards (Mayrhofer 1986–2001: vol. 2, pp. 521–522).

⁷⁷ For example, *chidre* (1.16.2, Su 1938:76) \rightarrow *chidra ādityakarāvabhāsite* (1.16.3, Su 1938:76); [absent] (1.16.2) \rightarrow *śanaiḥ śanaiḥ* (1.16.3); [absent] (SS.1.16.3) \rightarrow *āśu* (1.16.5, Su 1938:77).

⁷⁸ For example, $dh\bar{a}tryanke$ (SS.1.16.2) $\rightarrow dh\bar{a}tryanke$ $kum\bar{a}radhar\bar{a}nke$ $v\bar{a}$ (1.16.3); [absent] (SS.1.16.2) $\rightarrow b\bar{a}lakr\bar{a}danakaih$ pralobhya (1.16.3); [absent] (SS.1.16.3) $\rightarrow picuvartim$ $prave \acute{s}ayet$ (1.16.5).

The Transmission of the Work

unrecommended needle or because of a wick that is too thick. Some of the split ear flaps in <code>Dalhaṇa</code>'s version have additional characteristics, a list of four symptoms associated with incurable joins in the Nepalese version (SS.1.16.19) was increased to six in <code>Dalhaṇa</code>'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 <code>Dalhaṇa</code> (1.16.5, <code>Su 1938:76-77</code>) classifies these symptoms according to three ducts called $k\bar{a}lik\bar{a}$, marmarik \bar{a} and lohitik \bar{a} , which results in some repetition of the symptoms mentioned.

Transposing Words, Verses and Passages

A close comparison of the Nepalese version with the vulgate reveals changes in the order of words, sentences and verses. Examples of such transpositions occur in SS.1.16. In most cases, the changes in word order are insignificant and may be result of different preferences in syntax or even scribal eye-brain-hand miscommunication.⁸¹ 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 Dalhaṇa's. It seems that this transposition may have

⁷⁹ For example, pīṭhopamapālir nirvedhimaḥ (1.16.9, Su 1938:77) → pīṭhopamapālir ubhayataḥ kṣīṇaputrikāśrito nirvedhimaḥ (1.16.10, Su 1938:77); itarālpapāliḥ saṃkṣiptaḥ (SS.1.16.9) → utsannapālir itarālpapāliḥ saṃkṣiptaḥ (1.16.10); tanuviṣamapāliḥ (SS.1.16.9) → tanuviṣamālpapāliḥ (1.16.10).

⁸⁰ In Dalhaṇa'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 Dalhaṇa.

⁸¹ 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 nātiśithilaṃ sūtreṇāvabadhya (SS.1.16.9) → sūtreṇānavagāḍhaman atiśithilaṃ ca baddhvā (1.16.10, Su 1938:77); pūrvan dakṣiṇaṃ kumārasya vāman kanyāyāḥ | pratanuṃ sūcyā bahalam ārayā (SS.1.16.2) → pratanukaṃ sūcyā bahalam ārayā | pūrvaṃ dakṣiṇaṃ kumārasya vāman kanyāyāḥ (1.16.3, Su 1938:76).

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 Dalhaṇa's version (Su 1938: 76), which contains a statement that the physician should insert a wick of cotton after the ear has been pierced. 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 Dalhaṇa's version elucidates the role of the wick in the procedure of piercing the ear.

A similar clarification occurs in 1.16.18 of Dalhaṇa'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 Dalhaṇa's version, the treatment is reiterated at 1.16.18.

In Dalhaṇa'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 Dalhaṇa's version (1.16.7, Su 1938:77) the recipe was rewritten to include sesame seeds. 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. Dalhaṇa's version (1.16.7, Su 1938:77) of the admixture has five additional ingredients, namely, prickly chaff-flower

⁸² For example, [absent] (SS.1.16.2) \rightarrow picuvartim praveśayet (1.16.3, Su 1938:76).

⁸³ yavamadhukamañjiṣṭhāgandharvahastamūlair madhughṛtapragāḍhair ālepayet (SS.1.16.5) → madhukairaṇḍamūlamañjiṣṭhāyavatilakalkair madhughṛtapragāḍhair ālepayet (1.16.7, Su 1938: 77).

The Transmission of the Work

(apāmārga), Withania (aśvagandhā), giant potato (kṣīraśuklā), the 'sweet' savour (madhuravarga)⁸⁴ and 'milk flower' (payasyā \rightarrow vidāri⁸⁵). It also has beggarweed (vidārigandhā) instead of milk flower (vidāri).⁸⁶ 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.

⁸⁴ The items which exemplify the 'sweet' savour (*madhuravarga*) are enumerated at SS.1.42.11.

⁸⁵ 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 = Ipmoea mauritiana, Jacq.).

⁸⁶ arkālarkabalātibalānantāvidārīmadhukajalaśūkaprativāpan tailam pācayitvā (SS.1.16.14) → arkālarkabalātibalānantāpāmārgāśvagandhāvidārigandhākṣīraśuklājalaśūkamadhuravargapayasyāprativāpaṃ tailam vā pācayitvā (1.16.19, Su 1938: 79).

The Printed Editions

The careful survey of printed editions of the *Suśrutasaṃhitā* by Meulenbeld lists no fewer than 44 entries.⁸⁷ 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.⁸⁸

The vulgate

The great ayurvedic scholar Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Suśrutasaṃhitā* with the commentary of Dalhaṇa, 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.⁸⁹ 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.⁹⁰ These sources are described as follow, with an overview in Table 1.

The sources of the 1915 edition

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

⁸⁷ HIML: IIB, 311-314.

⁸⁸ Zysk 1984: E.g., HIML: IIB, 314-315.

⁸⁹ See also the study of these editions by Klebanov (2021a: §1.2) and Wujastyk (2013: 143–144).

⁹⁰ The following account is paraphrased from Y. T. Ācārya and N. R. Ācārya's own account of their sources (Su 1938: 22).

The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāṭhaka. With the *Nibandhasangraha*. 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 Murārajīśarman. Extremely old. No commentary. Covers the śārīrasthāna.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the śārīra-sthāna.⁹¹
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.
- 6 Bombay, Asiatic Society. Incomplete.92
- 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).⁹³
- 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 Niśikāntasena. This is the 1886 Calcutta edition numbered "g" by Meulenbeld (HIML: IB, 311).⁹⁴

The sources of the 1938 edition

1 Gwalior, from the library of my great friend Pam. Rāmeśvaraśāstrin Śukla. Covers the *sūtra*, *nidāna*, *śārīra*, *cikitsā and kalpasthāna*s.

⁹¹ Not one of the three MSS of the śārīrasthāna described in H. D. Sharma 1939.

⁹² 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."

⁹³ Bhaṭṭācārya 1910–7.

⁹⁴ Sena et al. 1886-93.

Table 1: The sources of Yādavaśarman T. Ācārya's three editions: manuscript coverage (\bullet) and print coverage (\circ) .

edition		1915	;	1931						1938					
source	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
sthāna															
$s\bar{u}.$	•								?		0	0†	•		
ni.				•					?		0		•	lacktriangle	
śā.									?		0		•		
ci.									?		0		•		$ullet^{\dagger\dagger}$
ka.									?		0				
utt.									?		0				

[†] Covers chapters 1–43 only. † Covers chapters 1–9 only.

- 2 Bikaner, from the library of the Royal Palace, supplied by Pam. Candraśekharaśāstrin. Contains the commentary *Nyāyacandrikāpañjikāvyākhyā* by Gayadāsa. Covers the *nidānasthāna*. This is almost certainly MS Bikaner Anup 4390.95
- 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 Jośī 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 *Suśrutasaṃhitā*. Although many of these manuscripts cover only parts of the whole work, they amount to approximately twenty times the evidence that was used by Ācārya for his vulgate editions.

⁹⁵ See Dominik Wujastyk, "MS Bīkāner AnupLib 4390." Pandit. http://panditproject.org/entity/108068/manuscript.

⁹⁶ This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.

The Printed Editions

While the descriptions provided by Acārya of his source materials seems at first to be moderately comprehensive, Table 1 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, Acārya'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 5-333.⁹⁷ The editors of the vulgate, Y. T. Ācārya and N. R. Ācārya, stated that this manuscript covered up to the ninth chapter of the *cikitsāsthāna*, but in fact it covers the whole work.⁹⁸ 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.

⁹⁷ Su 1938: 22; Hemarāja Śarman 1938: 56–57. Discussed by Klebanov (2021*a*: §1.1, 2.3). See also HIML: IIB, 25–41; Wujastyk 2003: 161–169.

⁹⁸ Su 1938: 22.

The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman coedited an edition of the *sūtrasthāna* of the *Suśrutasaṃhitā* that was published by the Swami Laxmi Ram ayurvedic centre in Jaipur, and printed at the famous Nirṇayasāgara Press in Mumbai (see Fig. 4).⁹⁹ 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 मुद्रित.¹⁰⁰
- 2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune. This manuscript covered the *Bhānumatī* b up to the end of the *sūtrasthāna*. The siglum was ह for हस्तलिखित. 102

For the Suśrutasamhitā

- 1. A palm leaf manuscript from Hemarājaśarman's personal library. 103
 The siglum was না for নাভ্যন্ন.
- 2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः. 104
- 3. Hārāṇacandra Cakravarti's published edition with his own commentary. 105 The siglum was हा.
- 99 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 (2021*b*:7). On the Swami Laxmi Ram centre, see Hofer 2007
- 100 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 CSCL accession number 97 in Bengali script may be this manuscript.
- 101 At this time, manuscripts from Britain were routinely lent to scholars in India and vice versa.
- 102 Wujastyk 2021; MS London BL H. T. Colebrooke 908 (PanditProject #109978, consulted on July 03, 2021).
- 103 I.e., MS Kathmandu NAK 5-333.
- 104 Su 1938. It is noteworthy that Ācārya refers to his 1938 edition as representing "the Dalhaṇa recension."
- 105 Bhaṭṭācārya 1910-7.

. १ अध्यायः]

सुश्रुतसंहिता

११

चरके—''लाभोपायो हि शस्तानां रसावीनां रसायनम्'' (च.चि. अ. १ पा. १)। पारिशेष्याद्वाजीकरणतन्त्रम् । अवाजिनं वाजीकुवैन्ति येन तद्वाजीकरणम् । 'अन्येषामिष दृश्यते' (पा. अ. ६।३।१३७) इति वीर्घलम् । येन वाऽत्यर्थं स्त्रीषु व्यज्यते तद्वाजी-करणम् । तद्वकं चरके—''येन नारीषु सामर्थ्यं वाजिवल्लमते नरः । वजेचाप्यधिकं येन वाजीकरणमेव तत्'' (च. चि. अ. २, पा. ४) इति ॥ ५॥

अथास्य प्रत्येकाङ्गलक्षणसमासः—तत्र, शल्यं नाम विविधत्णकाष्टपाषाणपांशुलोहलोष्टास्थिवालनलपूयास्रावदुष्टवणान्तर्गर्भशल्योद्धरणाथ षष्ट्या विधानः, यन्त्रशलक्षाराग्निप्रणिधानवणविनिश्चयार्थं चः शालाक्यं नामोध्वेजन्नगतानां श्रवणनयनवद्नन्नाणादिसंश्रितानां व्याधीनामुपशमनार्थः, कायचिकित्सा नाम संवाङ्मसंश्रितानां व्याधीनां ज्वररक्तपित्तशोषोन्मादापसारक्रप्रमेहातिसारादीनामुपशमनार्थः, भूतविद्या नाम देवासुरगन्धवेयक्षरक्षःपितृपिशाचनागत्रहाद्यपस्प्रचेतसां
शान्तिकर्मविहरणादिश्रहोपशमनार्थः, कौमारश्रुत्यं नाम कुमारमरणधात्रीक्षीरदोपसंशोधनार्थं दुएस्तन्यग्रहसमुत्थिनां च व्याधीनामुपशमनार्थम्, अगदतन्त्रं नाम सप्कीटल्लामूषकादिद्प्रविषव्यक्षनार्थे
विविधविर्पसंयोगोपशमनार्थं चः रसायनतन्त्रं नाम वयःस्थापनमार्थमेधावलकरणं रोगापहरणसमर्थं चः वाजीकरणतन्त्रं नामाहपदुप्क्षीणशुकरेतसामाप्यायनप्रसादोपचयजनननिमित्तं प्रहर्षणजननार्थं च ॥ ६॥

शस्याङ्गविशेषात्र् शातुं प्रतिरुक्षणं संक्षेषेणाह—अथासेखादि । एकमेकमङ्गं प्रति रुक्ष-णानां समासः संक्षेपः प्रत्येकाङ्गरुक्षणसमासः । तृणादीनां, तथा दुष्टवणस्य, तथाऽन्त-र्गत(भेशस्य)स्य उद्धरणार्थमिति प्रत्येकमुद्धरणशब्दः संवध्यते । दुष्टवणस्यान्तस्तृणाद्या-हरणार्थमित्यन्ये । षष्ट्या विधानैरिति द्विवणीयोक्तैरपत्पणाचै रक्षाविधानान्तैः; इत्थंभूतन्नक्षणे तृतीया । जत्रु प्रीवामूलं, जत्रुण उद्धवमूर्वेजन्तु । प्राणादीसादिप्रहणान्छिरःकपालादिप्रह-णम् । उत्तरतन्त्रे प्रतिपादितकमप्रात्या ज्वरानन्तरमतीसारः पठितः, तस्यान्ते पाठोऽतिसा-रस्य सर्वाङ्गीणदोपारन्धलात् , अन्येपामपि तन्मध्यपाठेन सर्वाङ्गीणदोषारन्धलप्रतिपादना-ध्यतिकमं वदन्ति । शान्तिकमं चिष्ठहरणादिना प्रहाणां देवादीनामुपशमो यस्तदर्थः; यदि वा ग्रहणं ग्रहो देवानामावेशस्तद्वपशमार्थम् । दुष्टस्तन्यम्रहसमुत्यितानामिति दुष्टस्तन्यन

Figure 4: A page of the 1939 *Bhānumatī* edition, showing the variant readings in the footnotes.

१ 'सर्वशरीरावस्थितानी व्याधीना मुपशमकरणार्थ , ज्वरशोक्ष ग्रुवसरक्तिपत्तोनमादापस्थार-प्रमेदातीसारादीनां च' इति सा.। १ 'देवदानव' इति सा.। १ 'विनायकनागश्रदोप-सृष्टचेतसां' इति सा.। ४ 'विषयेगोपश्रमनार्थ' इति सा.। ५ 'श्रुकाप्यायन' इति सा.। ६ 'सृणादीनां श्रुव्यान्तानां' इति सु. ७ 'अन्ये तु तस्यान्ते पाठेन' इति पा०। ८ 'श्रदणाद्' इति सु.।

Evaluation

The main innovation of this publication was to present the only surviving part of the commentary on the *Suśrutasaṃhitā* by the great eleventh-century medical scholar Cakrapāṇidatta, namely the *Bhānumatī*.¹⁰⁶ 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 Dalhaṇa. This was the first *Suśrutasaṃhitā* 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 4).

Ācārya noted in his introduction that the manuscripts containing Dalhaṇa's commentary all came together with the root-text of the *Suśrutasaṃhitā*, and thus the main *Suśrutasaṃhitā* text reflected the readings chosen by Dalhaṇa. 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 Dalhaṇa. In many of these cases it was hard to infer what readings 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.¹⁰⁷

There is compelling evidence that Cakrapāṇidattas's *Bhānumatī* commentary once covered the whole text of the *Suśrutasaṇhitā*.¹⁰⁸ 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.¹⁰⁹

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106 HIML: IA, 374–375 and IB, 495–496.
107 Su 1939: 3–4. See discussion by Klebanov (2021b: 7).
108 HIML: IA, 375.
109 Cordier 1903: 332.
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The Manuscripts



Figure 5:

The Manuscripts

Our edition is based on the textual evidence of three manuscripts. All three were produced in the Kathmandu Valley, Nepal and preserved in libraries there. Klebanov (2021a: §2.1) provided a comprehensive description of the individual manuscripts, quotes and translates their colophons and thoroughly examines various problems involved in their interpretation. 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 Shamsher (KL) library in Kathmandu, accession number KL 699. It was microfilmed and catalogued by the NGMPP/NGMCP as C 80-7.¹¹⁰ The MS comprises 152 palm-leaf folios that originally belonged to several different codicological units written by different scribes.¹¹¹ 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.¹¹² The MS is incomplete and contains a large part of the *Suśrutasaṃhitā* as well as the *Sauśrutanighaṇṭu*.¹¹³ The date stated in the colophon at the end of the compendium is verified for Sunday, April 13, 878 ce. However, some controversy is involved in interpreting the exact roles of two persons mentioned in the same concluding

¹¹⁰ See http://catalogue-old.ngmcp.uni-hamburg.de/mediawiki/index.php/C_80-7_Suśrutasaṃhitā (accessed on October 22, 2021).

¹¹¹ Bhattarai (2020: 46) and Klebanov (2021a: 11) agree that four to five scribes were involved in the manuscript's production.

¹¹² 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).

¹¹³ See Klebanov (2021a: 11) for a detailed description of the content.

remarks, someone called Śrī Harṣacandra and Vaidya Vasuvarman. Klebanov (2021*a*: 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 Harsacandra.¹¹⁴

Siglum N: This MS is kept at the National Archives Kathmandu (NAK), under accession number 1-1079 季. It was microfilmed twice by the NGMPP as A 45-5(1) and A 1267-11(2). 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 <code>Suśrutasaṃhitā</code> and breaks off abruptly in the second chapter of the śārīrasthāna, the actual MS, as a codicological unit, appears complete, that is, no leaf seems to be missing from the originally unitary artefact. Based on paleographic considerations, the MS can be dated tentatively to the twelfth or thirteenth century.

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. The manuscript 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

¹¹⁴ See Klebanov (2021*a*: 13–17) for a translation and a study of the colophon, as well as an exposition of different positions related to its interpretation.

¹¹⁵ See http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/A_45-5_ (Suśrutasamhitā) (accessed on October 22, 2021)/

¹¹⁶ See http://ngmcp.fdm.uni-hamburg.de/mediawiki/index.php/B_29-19_Suśrutasaṃhitā (accessed on October 22, 2021).

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text of the *Suśrutasaṃhitā* as well as the *Sauśrutanighaṇṭu*. The final colophon identifies the scribe of the MS as Vaidya Amarasiṃhaka, 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 sixteenth 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, 1543 ce.

In future publications, palaeographical features of these witnesses will be described.

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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. 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 Li's manuscript collation platform Saktumiva. An electronic edition of the vulgate of the *Suśrutasaṃhitā*, that was transcribed, without the commentaries, by Tsutomu Yamashita and Yasutaka Muroya on the basis of Ācārya's 1931 and 1938 Bombay editions has also been included in the collation. 118

Saktumiva's collation function standardises punctuation and orthographic variants according to filters which can be turned off or on. These filters enable the editors to ignore ব্যন্ত, numbers and पुष्पिका in the

¹¹⁷ These guidelines are at https://saktumiva.org/wiki/tei,accessed 20/10/2021.

¹¹⁸ This electronic edition is also available on the SARIT website; https://sarit.indology.info/susrutasamhita.xml?view=div, accessed 20/8/2021.

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transcripts, as well as orthographic variants, such as ब and ब, certain germinated consonants, and विसर्ग 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 Dalhaṇa were read, and variant readings reported by these commentators were included in notes to the edition. Also, various reference books were consulted, such as Nadkarni (1954) and V. Jośī and N. H. Jośī (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 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 software tools used in the project have been described on the project website.¹¹⁹

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. 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. 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 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.

¹¹⁹ http://sushrutaproject.org, consulted 15 September 2022.

¹²⁰ 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.

¹²¹ See section 'Features of the Manuscript Transmission' for further discussion of this.

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 *Suśrutasaṃ-hitā* 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, ॰वाचन धात्र्०), although the *anusvāra* is sometimes used (1.16.15, उदकं धान्याम्ल॰). In most cases, the consonant following a रेफ is doubled, but this is not always the case. 122 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 दण्ड at the end of a sentence or verse. Whether these anusvāras should be changed to the consonant म् is a moot question because there is no Pāṇinian concept of 'end-of-sentence' and his rules on sandhi are contingent on the close contact of sounds (saṇhitā). However, it is reasonable to assume that at the end of a verse, paragraph or sentence the speakers would have paused for breath or thought, so sandhi should be applied, in which case a final anusvāra or class nasal of the following consonant is changed to म्. Nonetheless, this remains an assumption about how the text would be pronounced. Therefore, in a critical edition, inserting daṇḍas and changing anusvāras to म् before them

¹²² Examples of the germination of consonants are कर्ण्ण (1.16.1 ff), मुहूर्त्त (1.16.2), पूर्व्च (1.16.2), गन्धर्व्च (1.16.5), ॰मूलैर् म्मधु॰ (1.16.5), वर्त्ति (1.16.6) and पुनर् व्विध्येत् (1.16.6). Examples where it does not occur in 1.16 are ॰आर्थम् (1.16.8,19), कुर्यात् (1.16.16, 32), ॰पालिर् व्ह्रर॰ (1.16.10); ॰पालिर् व्यायोजिमः (1.16.10) and दीर्घैक॰ (1.16.10).

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are subjective decisions by the editors. The scribal use of <code>dandas</code> and <code>anus-vāras</code> in the Nepalese manuscripts can be seen in the digital edition if one switches off the filters for ignoring <code>dandas</code> and final <code>anusvāra</code> variants.

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

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

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[1938 ED. 16.4] śoṇitabahutve 'tivedanāyāṃ cānyadeśaviddham A: °bahutvena A: vedanayā
iti jānīyāt | nirupadravatā taddeśaviddhaliṅgam ||3||* A: [ADD] iti ||
```

Figure 6: The digital edition of SS.1.16.3

For example, as seen in Figure 6, the apparatus for the words बहुत्वे ऽति-वेदनायां is on the right side of the display. This entry means that the editors have chosen to read बहुत्वे ऽतिवेदनायां, which is the reading of K, whereas

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A has ॰बहुत्वेन निवेदनया, N ॰बहुत्वेति वेदनाश् and H ॰बहुत्विनवेदनायाच्. The final च् in the reading of H is italicised because it has been marked by the transcriber as unclear.

A positive apparatus is available if you highlight with the cursor one or more words, and even entire passages or verses, and click on the collapsed menu icon. As seen in Figure 7, the positive apparatus of ॰बहुत्वनिवेदनायां appears in a pop-up window in which the lemma and variants are aligned according to letters, and the variations are highlighted in yellow.



śoṇitabahutvanivedanāyāñ cānyadeśaviddham iti jānīyāt | nirupadravatā tadde: liṅgam ||3||

Figure 7: The witnesses to a selected passage of SS.1.16.3

In both the negative and positive apparatuses of the digital edition, you must infer conjectures and corrections by the editors. Testimonia and notes are in the apparatus on the right side of the "provisional edition" text. They give an opportunity for the editors to provide scholarly commentary of various kinds, but the editors cannot write comments directly into the textual apparatus itself, since it is constructed live each time the text is displayed.

Critical Edition of Sūtrasthāna 16

अथातः कर्णाव्यधविधिं व्याख्यास्यामः ।।१।।

रक्षाभूषणनिमित्तम् बालस्य कर्ण्णौ व्यथयेत् । तौ षष्ठे मासे सप्तमे वा शुक्कपक्षे प्रशस्तेषु तिथिकरणमुद्धर्त्तनक्षत्रेषु कृतमङ्गलस्विस्तिवाचनं धात्र्यङ्के कुमारम् उपवेश्याभिसान्त्वयमानो भिषग् वामहस्तेनाकृष्य कर्ण्णन् दैवकृते छिद्रे दक्षिणहस्तेन ऋजु विध्येत् । दक्षिणं कुमारस्य वामङ् कन्यायाः । प्रतनुं सूच्या बहलम् आरया ।।२।।

शोणितबहुत्वे ऽतिवेदनायां चान्यदेशविद्धम् इति जानीयात् । निरुपद्रवता तदेशविद्धलिङ्गम् ।।३।।

तत्र यदच्छाविद्धायां सिरायाम् अज्ञेन ज्वरदाहश्वयथुवेदनाग्रन्थिमन्यास्तम्भापतानकशिरोग्रहकर्ण्णशूलानि भवन्ति ।।४।।

🧓 दोषसमुदयाद् अप्रशस्तव्यधाद् वा तत्र वर्त्तिम् अपहृत्य

१--७ अथातः--०विद्धलिङ्गम्] MSS K, H, and N ८ तत्र] MSS H and N. From here to the end of 1.16, MS K is missing a folio.

१ व्याख्यास्यामः] व्या K. २ सप्तमे] om. N. ३ ०मङ्गलस्विस्तिवाचनं A; ०मङ्गलं स्विस्तिवाचनं K, H, N. ३ धात्र्यङ्के A । धात्र्यङ्के A । अ कुमारम् A कुमारकम् A । ५ ऋजु A जुम् A । ५ प्रतनुं A प्रतनुं A । ५ ०श्वयथुर् A । ०श्वयथ्ये

१ कर्णाव्यधिविधे] कर्णव्यधवन्धिविधम् अध्यायं A. १ व्याख्यास्यामः] add. यथोवाच भगवान् धन्वन्तिरः ||A|. २ व्यध्येत्] विध्येते A. २ मासे] मासि A. ३ धात्र्यङ्के] add. कुमारधराङ्के वा A. ४ उपवेश्याभिसान्त्वयमानो] उपवेश्य बालकीडनकैः प्रलोभ्याभिसान्त्वयन् A. ४ कर्णान्] कर्णं A. ४ छिद्रे] छिद्र A. ४ छिद्रे] add. आिद्त्यिकरावभासिते शनैः शनैर् A. ५ ऋजु] र्जु A ५ विध्येत्] add. प्रतनुकं सूच्या बहलम् आरया A. ५ कन्यायाः] कुमार्याः A. ५ आरया] add. ततः पिचुवर्तिं प्रवेशयेत् ||A|. ६ बहुत्वे] बहुत्वेन A. ६ ऽतिवेदनायां] वेदनया A. ६ ० दवता] ० दवतया A. ७ ० विद्धलिङ्गम्] ० विद्धम् इति A. ८ तत्र] तत्राञ्चेन A. ८ यदच्छाविद्धायां] यदच्छया विद्धास् A. ८ सिरायाम्] सिरासु A. ८ सिरायाम्] add. कालिकाममिरिकालोहितिकास्पूदवा भवन्ति || तत्र कालिकायां A. ९ ज्वरं ०] ज्वरो ९ ०दाह०] दाहः ९ ०श्वयथु० एम्,] श्वयथुर् A. ९ ०वेदना०] add. च भवित ममिरिकायां वेदना ज्वरो A. ९ ०ग्रन्थि०] ग्रन्थयश् A. ९ ०ग्रन्थि०] add. च लोहितिकायां A. ९ भवन्ति] add. तेषु यथास्वं प्रतिकुर्वीत् ||| छिष्ठिजिद्धाप्रशस्तस्यूचीव्यधाद् गाढतरवर्तित्वाद् A. १० वा] add. यत्र संरम्भो वेदना वा भवित A. १० अपहत्य] उपहत्याशु A.

[ै]The compound कृतमङ्गलस्वस्तिवाचनं is an emendation based on the similar text at Su.śā.3.2.25. The ātmanepada participle is a permitted form, although the vulgate has the parasmaipada. Palhaṇa records the alternative reading भक्ष्यविशेषेर् वा before बालकीडनकैः प्रलोभ्य in the vulgate.

यवमधुकमञ्जिष्ठागन्धर्व्वहस्तमूलैर् म्मधुघृतप्रगाढैर् आलेपयेत् । सुरूढञ् चैनम् पुनर् व्विध्येत् ।।५।।^३

सम्यग्विद्धम् आमतैलपरिषेकेणोपचरेत् । त्र्यहात् त्र्यहाद् वर्त्तिं स्थूलतरीङ्⁸ कुर्व्वीत परिषेकञ् च तम् एव ।।६।।

👝 अथ व्यपगतदोषोपद्रवे कर्ण्णे ऽलंप्रवर्द्धनार्थं लघुप्रवर्द्धनकम् आमुञ्चेत् 🖂 🖂

एवं सम्वर्धितः कर्ण्णश् छिद्यते तु द्विधा नृणाम् । दोषतो वाभिघाताद् वा सन्धानान् तस्य मे शृणु ।।८।।

तत्र समासेन पञ्चद्शसन्धानाकृतयो भवन्ति । तद् यथा । नेमीसन्धानकः । उत्पलभेद्यकः । वल्लूरकः । आसङ्गिमः । गण्डकर्णणः । आहार्यः । निर्व्वेधिमः । व्यायोजिमः । कपाटसन्धिकः । अर्द्धकपाटसन्धिकः । सङ्क्षिप्तः । हीनकर्णणः । वल्लीकर्णणः । यष्टीकर्णणः । काकौष्टः । इति । तेषु तत्र पृथुलायतसमोभयपालिर् नेमीसन्धानकः । वृत्तायतसमोभयपालिर् उत्पलभेद्यकः । हस्ववृत्तसमोभयपालिर् वल्लुरकर्णकः। अभ्यन्तरदीर्घैकपालिर् आसङ्गिमः । बाह्यदीर्घैकपालिर् गगण्डकर्ण्यकः

१ ०गन्धर्व्वहस्तमूलैर्] ०गन्दर्वहस्तम्लै N. ३ ०परिषेकेणोप०] ०परिषेकणोप० H. ३ ०तरीङ्] ०तरीं N ५ लघुप्रवर्द्धनकम्] लू प्रवर्धनकाम्] N; प्रवर्धनका<u>मा</u> मैंऽ H. ५ आमुश्चेत्] एम्,; मुश्चेत् N H. ६ नृणाम्] नृणा N. ७] A; दोषटो N H. ८ ०सन्धाना०] ०सन्धा० N. १० अर्द्धकपाटसन्धिकः] om. N. ११ काकौष्टः] काकौष्टभः H. ११ इति] ति H. ११ ०यतसमो०] A; ०यसमो० H; ०तसमो H. १२ ०भेद्यकः] ०भेदः H. १३ वाह्य H0 यत्समो H1 वाह्य H3 वाह्य H4 वाह्य H5 वाह्य H6 यत्समो H7 वाह्य H7 वाह्य H8 वाह्य H9 वाह्य

१ यवमधुक०] मधुकैरण्डमूल० A. १ ०मिश्रिष्ठागन्धर्व्यहस्तमूलैर्] ०मिश्रिष्ठायवितलकल्कैर् A. १ आलेपयेत्] add. तावद् यावत् सुरूढ इति ||A|. २ व्विध्येत्] add. विधानं तु पूर्वोक्तम् एव ||A|. ३ सम्यग्०] तत्र सम्यग्० A. ३ आमतैलपिरेषेकेणोपचरेत्] आमतैलेन पिरेषेचयेत् A. ३ त्र्यहाद्] add. च A. ३ ०तरीङ्] ०तरां A. ३ कुर्व्वीत्] द्यात् A. ५ ऽलंप्रवर्द्धनार्थं] ओम्. A. ५ लघुप्रवर्द्धनकम्] लघुव० A. ५ आमुश्चेत्] कुर्यात् ||A|. ६ सम्विद्धितः] विविधितः A. ७ सन्धानान्] सन्धानं A. ८ ०दशसन्धानाकृतयो] ०दशकर्णबन्धाकृतयः A. ८ भवन्ति] om. A. ८ नेमी०] नेमि० A. १० ०सन्धिकः | अर्द्ध०] ०सन्धिकः A. ११ वहरि० वहरिकः A. ११ तत्र] a0 a1 होमि० a2 १२ नेमी०] नेमि० a3 १३ वहरि० वहरिकः a4.

^३Dalhaṇa (1.16.6) stated that some do not read सुरूढञ् चैनम् पुनर् विध्येत्.

The unusual form स्थूलतरीं is supported by both manuscripts and we have retained it in spite of only meagre evidence for the form in epic Sanskrit.

^{&#}x27;Cakrapāṇi (1.16.9–13) and Dalhaṇa (1.16.10) pointed out that others read पञ्चद्शकर्णकृतयः (instead of पञ्चद्शसन्धानाकृतयः). Dalhaṇa (1.16.10) also mentioned that some read समुन्नतसमोभयपालिः (instead of वृत्तायतसमोभयपालिः) and others do not read संक्षिप्तादयः पञ्चासाध्याः.

| अपालिर् उभयतो ऽप्य आहार्यः | पीठोपमपालिर् निर्व्वेधिमः | अणुस्थूलसमिवषमपालिर् व्यायोजिमः | अभ्यन्तरदीर्धेकपालिर् इतराल्पपालिः कपाटसिन्धिकः | बाह्यदीर्धेकपालिर् इतराल्पपालिश् चार्ष्वकपाटसिन्धिकः | तत्रैते दशकण्णंसिन्धिविकल्पा बन्ध्या भवन्ति | तेषान् नामिभर् एवाकृतयः प्रायेण व्याख्याताः | संक्षिप्तादयः पञ्चासाध्याः | तत्र शुष्कशष्कुलिर् इतराल्पपालिः संक्षिप्तः | अनिधिष्ठानपालिः पर्यन्तयोश् च क्षीणमांसो हीनकर्णः | तनुविषमपालिर् वल्लीकर्णः | ग्रन्थितमांसः स्तब्धिसराततसूक्ष्मपालिर् यष्टीकर्णः | निम्मांससंक्षिप्ताग्राल्पशोणितपालिः काकौष्ठ इति | बद्धेष्व अपि दाहपाकस्रावशोफयुक्ता न सिद्धिम् उपयान्ति । । ९।। १

अतो ऽन्यतमस्य बन्धञ् चिकीर्षुः अग्रोपहरणीयोक्तोपसम्भृतसम्भारः विशेषतश् चात्रोपहरेत्° सुरामण्डक्षीरम् उदकं धान्यास्रकपालचूर्ण्णञ् चेति । ततो ऽङ्गनां पुरुषम्

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१ उभयतो ऽप्य] उभयतो प्य N. २ अणुस्थूल०] अशुस्थूल० H ३ कपाट०] कवाटा० H. ३ चार्छ्कपाट० एम्.] वार्छ्कवाट० H; चार्छ्कवाप० N. ६ पर्यन्तयोश् च] om. N. ७ ग्रन्थितमांसः] ०ग्रन्थितमान्सः N H. \checkmark निर्मांस०] A; निमास० N; निम्मांन्स० H. \checkmark ०स्राव०] ०श्राव० H. \checkmark ०शोफ०] ०सोफ० N. ११ अतो] ततो N. ११ ०पहरणीयो०] ०पसंहरणीयो० N. १२ चात्रोपहरेत] A; चाग्रोपहरणीयात N H. १२ पुरुषम्] पुरुषम् N.

१ पीठोपमपालिर्] add. उभयतः क्षीणपुत्रिकाश्रितो A. २ अणुस्थूल०] स्थूलाणु० A. ३ चाई०] अर्घ० A. ३ तत्रैते] तत्र A. ४ दशकण्णंसिन्धिविकल्पा] दशैते कर्णवन्धिविकल्पाः A. ४ वन्ध्या भवन्ति] साध्याः A. ४ तेषान्] तेषां A. ४ नामिभ्] स्वनामिभ् A. ५ शुष्कशष्कुलिर्] add. उत्सन्नपालिर् A. ६ च] om. A. ६ ०षमपालिर्] ०षमाल्पपालिर् A. ७ ग्रन्थितमांसः] ग्रथितमांसः A. ७ ०सिराततस्क्ष्म०] ०सिरासंततस्क्ष्म० A. ८ काकौष्ठ काकौष्ठक A. ८ अपि] add. तु शोफ A. ८ ०दाह०] add. ०राग० A. ८ ०पाक०] add. ०पिडका० A. ८ ०शोफ०] om. A. १० inserted passage] भवन्ति चात्र । यस्य पालिद्वयम् अपि कर्णस्य न भवेद् इह । कर्णपीठं समे मध्ये तस्य विद्धा विवर्धयेत् ।। बाह्यायाम् इह दीर्घायां सन्धिर् आभ्यन्तरो भवेत् । आभ्यन्तरायां दीर्घायां बाह्यसन्धिर् उदाहृतः ।। एकैव तु भवेत् पालिः स्थूला पृथ्वी स्थिरा च या । तां द्विधा पाटियत्वा तु छित्त्वा चोपिर सन्ध्येत् ।। गण्डाद् उत्पाट्य मांसेन सानुबन्धेन जीवता । कर्णपालीम् आपालेस् तु कुर्यान् निर्लिख्य शास्त्रवित् ।। A. ११ ऽन्यतमस्य] ऽन्यतमं A. ११ ०सम्भारः] ०सम्भारं A. १२ सुरामण्डक्षीरम्] सुरामण्डक्षीरम्] सुरामण्डं क्षीरम् A. १२ धान्यास्रकपाल०] धान्यास्रं कपाल० A.

^६The vulgate passage inserted between 9 and 10 (from भवन्ति चात्र to शास्त्रवित्) was probably also absent in the version of the *Suśrutasaṃhitā* commented on by Cakrapāṇi, who cited it in his commentary as being "read by some" in regard to the joins (सन्धान) that they describe.

[°]विशेषतश् चाम्रोपहरणीयात् of the MSS has been emended to विशेषतश् चान्नोपहरेत् to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of अम्रोपहरणीयात् in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.

वा ग्रथितकेशान्तं लघुभुक्तवन्तम् आप्तैः सुपरिगृहीतं च कृत्वा बन्धान् उपधार्य छेद्यभेद्यलेख्यव्यधनैर् उपपाद्य कर्ण्णशोणितम् अवेक्ष्यैतद् दुष्टम् अदुष्टम् वेति ततो वातदुष्टे धान्यास्रोदकाभ्यां पित्तदुष्टे शीतोदकपयोभ्यां श्लेष्मदुष्टे सुरामण्डोदकाभ्यां प्रक्षाल्य कर्ण्णम् पुनर् अविलखेत् । अनुन्नतम् अदीनम् अविषमञ् च कर्ण्णसन्धिन् निवेश्य स्थितरक्तं सन्दर्श्य मधुघृतेनाभ्यज्य पिचुस्रोतयोर् अन्यतरेणावगुण्ठ्य नातिगाढन् नातिशिथिलं सूत्रेणावबध्य कपालचूण्णेनावकीर्याचारिकम् उपदिशेत् । द्विव्रणीयोक्तेन चान्नेनोपचरेत् ।।१०।।

> विघट्टनन् दिवास्वप्नं व्यायामम् अतिभोजनम् । व्यवायम् अग्निसन्तापम् वाक्श्रमञ् च विवर्ज्जयेत् ।।११।।

• नातिशुद्धरक्तम् अतिप्रवृत्तरक्तं क्षीणरक्तं वा सन्दध्यात् । स हि वातदुष्टे रक्तबद्धो ऽरूढो परिपुटनवान् भवति । पित्तदुष्टे गाढपाकरागवान् । श्लेष्मदुष्टे स्तब्धकर्णणः कण्डूमान् अतिप्रवृत्तस्रावः शोफवान् क्षीणाल्पमांसो न वृद्धिम् उपैति ।।१२।।

स यदा रूढो निरुपद्रवः कर्ण्णो भवति तदैनं रानैः रानैर् अभिवर्द्वयेत् । अन्यथा संरम्भदाहपाकवेदनावान् भवति । पुनर् अपि छिद्येत ।।१२।।

१ च कृत्वा] A; om. N H. १ उपधार्य] उपपाद्य H. २ ०शोणितम् अवेक्ष्येतद् I] ०शोणितत अवेक्ष्येतद् I. २ अदृष्टम्] अदृष्टश् I. २ विति I I से चिति I I से धान्याष्ठी० I धान्याष्ठी० I श श्रीतोद्क० I शितोद्क० I श अवित्रिखेत I I १ ०सियं I I 4 ०गुण्ठ्य I ०गुण्ठ्य I 4 ०गाढ्य I १ १ ०गाढ्य I

१ बन्धान्] बन्धम् A. २ ०व्यधनैर्] add. उपपन्नैर् A. २ अवेक्ष्यैतद्] अवेक्ष्य A. २ ततो] तत्र A. ३ धान्याम्लोदका०] धान्याम्लोप्यांदका० A. ३ ०मण्डोदका०] ०मण्डोप्यांदका० A. ४ कर्ण्णम्] कर्णों A. ४ अविलखेत् | अनुन्नतम्] अविलख्यानुन्नतम् A. ४ ०सिन्धन्] ०सिन्धं A. ५ निवेश्य] सिन्न्विश्य A. ५ सन्दर्श्य] सन्दर्श्यात् A. ५ सन्दर्श्य] A. ५ सन्दर्श्य] विधानेनोपचरेत् A. ८ ं inserted passage] भवित चात्र | A. ८ विधहनन्] विधहनं A. १० नाति०] न चाशु० A. १० रक्तबद्धो ऽरूढो एम्,] रक्ते रूढो ऽपि A. ११ भवित] om. A. ११ गाढपाकरागवान्] दाहपाकरागवेदनावान् A. ११ स्तब्धः A. १२ ०वृत्तस्रावः शोफवान्] ०वृत्तरक्ते श्यावशोफवान् A. १२ क्षीणाल्प०] क्षीणो ऽल्प० A. १३ inserted passage] आमतैलेन त्रिरात्रं परिषेचयेत् त्रिरात्राच् च पिचुं परिवर्तयेत् | A. १३ रूढो] सुरूढो A. १३ कर्ण्णों] सवर्णों A. १३ अन्यथा] अतो ऽन्यथा A. १४ ०पाकवेदनावान्] ०पाकरागवेदनावान् A. १४ भवित] om. A. १४ अपि] om. A. १४ छियेत] छियते वा A.

अथाप्रदृष्टस्याभिवर्द्धनार्थम् अभ्यङ्गः । गोधाप्रतुद्विष्किरानूपौद्कवसामज्ञापयस्तैलं गौरसर्षपजञ् च यथालाभं संभृत्यार्कालकेबलातिबलानन्ताविदारीमधुकजलशूकप्रतिवापन् तैलम् पाचित्वा स्वनुगुप्तन् निद्ध्यात् ।।१४।।^८

> स्वेदितो मर्दितङ् कर्ण्णम् अनेन म्रक्षयेद् बुधः । ततो ऽनुपद्रवः सम्यग् बलवांश् च विवर्द्धते ।।१५।।९

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ये तु कर्ण्णा न वर्द्धन्ते स्नेहस्वेदोपपादिताः । तेषाम् अपाङ्गे त्व् अबहिः कुर्यात् प्रछानम् एव च ।।१६।।^{१०}

अमिताः कर्ण्णबन्धास् तु विज्ञेयाः कुशलैर् इह ।

१ अथाप्र०] अथास्याप्र० A. १ अभ्यङ्गः] add. तद् यथा A. १ ०मज्ञापयस्तैलं] ०मज्ञानौ पयः सिर्पेस् तैलं A. ३ ०विदारीमधुकजलञ्जूक०] ०विदारिगन्धाक्षीरशुक्काजलञ्जूकमधुरवर्ग-पयस्या० ३ ०प्रतिवापन्] ०प्रतिवापं A. ३ तैलम्] add. वा A. ४ ०गुप्तन्] ०गुप्तं A. ५ स्वेदितो मिर्दितङ्] स्वेदितोन्मिर्दितं A. ५ अनेन प्रक्षयेद् बुधः] स्रेहेनैतेन योजयेत् A. ७ inserted passage] यवाश्वगन्धायधाह्नैस् तिलैश् चोद्वर्तनं हितम् । शतावर्यश्वगन्धाभ्यां पयस्यैर् अण्डजीवनैः ।। तैलं विपक्ं सक्षीरम् अभ्यङ्गात् पालिवर्धनम् । A. ७ स्रोहस्वेदोप०] स्वेदस्रोहोप० A. ८ अपाङ्गे त्व अबिहः] अपाङ्गदेशे तु A. ८ च] तु A. ९ inserted passage] बाह्यच्छेदं न कुर्वीत व्यापदः स्युस् ततो ध्रुवाः ।। बद्धमात्रं तु यः कर्णं सहसैवाभिवर्धयेत् । आमकोशी समाध्मातः क्षिप्रम् एव विमुच्यते ।। A.

^{&#}x27;Dalhaṇa (1.16.18) noted that some read राजसर्षपजं in the place of गौरसर्षपजं. This reading appears to have been accepted by Cakrapāṇi (1.16.18–20), who glosses राजसर्षपज as श्वेतसर्षप. Cakrapāṇi also said that some read sarpis in the place of पयस. In the compound beginning with अर्क, Dalhaṇa noted that some read अर्कपुष्पी.

^{&#}x27;N has a काकपाद after अने, but the missing letter (one would expect `न') has not been supplied in a margin or elsewhere.

^{1º}Dalhaṇa (1.16.23) noted that some read तेषाम् अपाङ्गच्छेद्यं हि कार्यम् आभ्यन्तरं भवेत्,

यो यथा सुनिविष्टः स्यात् तत् तथा योजयेदु भिषक् ।।१७।। ११

जातरोमा सुवर्त्मा च शिष्टसिन्धः समः स्थिरः । सुरूढो ऽवेदनो यस् तु तं कण्णं वर्द्धयेच् छनैः ।।१८।।

विश्लेषितायाम् अथ नासिकायां वक्ष्यामि सन्धानविधिं यथावत् । नासाप्रमाणं पृथिवीरुहाणां पत्रं गृहीत्वा त्व अवलम्बि तस्य ।।१९।।^{१२}

तेन प्रमाणेन हि गण्डपार्श्वाद् उत्कृत्य वध्नं त्व् अथ नासिकाग्रम् । विलिख्य चाशु प्रतिसन्द्धीत

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१ योजयेद्] योजये N. २ सुवर्त्मा] सुपर्मा N; सुवर्म्मा H. २ ०सिन्धः] ०सिन्धम् N. ३ तु एम्.] तत् N H. ४ नासिकायां] नासिकायां N. ६ ०प्रमाणं] ०प्रमाणं N. ६ ०वीरुहाणां] ०वीरुहाणम् N. ७ पत्रं] पत्र N. ९ वप्रं] वन्प्र H.

१ सुनिविष्टः] सुविशिष्टः A. १ स्यात्] तं A. १ योजयेदु भिषक्] विनियोजयेत् A. १ inserted passage] (कर्णपाल्यामयान् नृणां पुनर् वक्ष्यामि सुश्रुत ! ।। कर्णपाल्यां प्रकुपिता वातपित्तकफास् त्रयः ।। १ ।। द्विधा वा ऽप्य् अथ संसुष्टाः कुर्वन्ति विविधा रुजः । विस्फोटः स्तब्धता शोफः पाल्यां दोषे तु वातिके दाहविस्फोटजननं शोफः पाकश् च पैत्तिके । कण्डुः सश्वयथुः स्तम्भो गुरुत्वं च कफात्मके ।। ३ ।। यथादोषं च संशोध्य कुर्यात् तेषां चिकित्सितम् । स्वेदाभ्यङ्गपरीषेकैः प्रलेपासुग्विमोक्षणैः ।। ४।। मुद्धीं क्रियां बृंहणीयैर् यथास्वं भोजनैस् तथा। य एवं वेत्ति दोषाणां चिकित्सां कर्तुम् अर्हति ।। ५।। अत ऊर्घ्वं नामिलङ्गेर् वक्ष्ये पाल्याम् उपद्रवान् ।। अत्पाटकश् चोत्पुटकः श्यावः कण्डूयुतो भृशम् ।। ६ ।। अवमन्थः सकण्डूको ग्रन्थिको जम्बुलस् तथा ।। स्रावी च दाहवांश् चैव शृण्व् एषां क्रमशः क्रियाम् ।। ७ ।। अपामार्गः सर्जरसः पाटलालकुचत्वचौ 🔢 उत्पाटके प्रलेपः स्यात् तैलम् एभिश् च पाचयेत् 🖂 ८ 🖂 शम्पाकशिग्रुपूर्तीकान् गोदामेदो ऽथ तद्वसाम् 🖂 वाराहं गव्यम् ऐणेयं पित्तं सर्पिश् च संसृजेत् ।। ९ ।। लेपम् उत्पुटके दुद्यात् तैलम् एभिश् च साधितम् ।। गौरीं सुगन्धां सश्यामाम् अनन्तां तण्डुलीयकम् १० २यावे प्रलेपनं दद्यात् तैलम् एभिश् च साधितम् 🗆 पाठां रसाञ्जनं क्षौद्रं तथा स्यादु उष्णकाञ्जिकम् ११ दद्याल् लेपं सकण्डुके तैलम् एभिश् च साधितम् ।। व्रणीभूतस्य देयं स्यादु इदं तैलं विजानता ।। १२ ।। मधुकक्षीरकाकोलीजीवकादौर् विपाचितम् ।। गोधावराहसर्पाणां वसाः स्युः कृतबृंहणे ।। १३ ।। प्रलेपनम् इदं दद्यादु अवसिच्यावमन्थके ।। प्रपौण्डरीकं मधुकं समङ्गां धवम् एव च ।। १४ ।। तैलम् एभिश् च संपक्वं शृणु कण्डमतः क्रियाम् ।। सहदेवा विश्वदेवा अजाक्षीरं ससैन्धवम् एतैर् आलेपनं दद्यात् तैलम् एभिश् च साधितम् ।। १५ ।। ग्रन्थिकं गुटिकां पूर्वं स्नावयेदु अवपाट्य तु ।। ततः सैन्धवचूर्णं तु घृष्ट्वा लेपं प्रदापयेत् ।। १६ ।। लिखित्वा तत्स्रृतं घृष्ट्वा चूर्णेर् लोघस्य जम्बुले ।। क्षीरेण प्रतिसार्येनं शुद्धं संरोपयेत् ततः ।। १७ ।। मधुपर्णी मधूकं च म मधुकं मधुना सह ।। लेपः स्नाविणि दातव्यस् तैलम् एभिश् च साधितम् १८ पञ्चवल्कैः समधुकैः पिष्टैस् तैश् च घृतान्वितैः ।। जीवकाद्यैः ससर्पिष्कैरु दृद्धमानं प्रलेपयेत् ।। १९ ।।) A. 🔫 यस्] च A. 🖇 विश्लेषितायाम्] विश्लेषितायास् त्व A. ४ नासिकायां] नासिकाया A. ९ वध्रं] बद्धं A.

^{११}Dalhaṇa (1.16.26) stated that some read सुनिविष्टः (the reading of the Nepalese version) instead of सुविशिष्टः.

तं साधुबद्धम् भिषग् अप्रमत्तः ।।२०।।

सुसीवितं सम्यग् अतो यथावन् नाडीद्वयेनाभिसमीक्ष्य नह्येत् । उन्नामयित्वा त्व् अवचूर्ण्णयीत पत्ताङ्गयष्टीमधुकाञ्जनैश् च ।।२१।।

संछाद्य सम्यक् पिचुना व्रणन् तु तैलेन सिञ्चेद् असकृत् तिलानाम् । घृतञ् च पाय्यः स नरः सुजीर्णो स्निग्धो विरेच्यः स्वयथोपदेशम् ।।२२।।

रूढज् च सन्धानम् उपागतं वै तद्वध्रशेषं तु पुनर् निकृन्तेत् । हीनम् पुनर् वर्द्धयितुं यतेत समज् च कुर्याद् अतिवृद्धमांसम् ।।२३।। इति ओम् ।।

१५

१०

१ ०बद्धम्] ०वद्ध० N. २ सुसीवितं एम्.] सुसीवित N; सुशीवितं H. २--५ सुसीवितं...।।२१।।] om. K. ५ पत्ताङ्ग० एम्.] पत्ताङ्ग० H; पत्तङ्ग० N. ६ व्रणन् तु] व्रण तुन् N. ९ विरेच्यः] A; विरेच्य N H. ९ ०देशम्] ०देशः N. १० सन्धानम्] सन्धाम् N. १० उपागतं] उपागतश् H. १० वै] चै H. ११ ०शेषं] ०सेषन् N. १२ यतेत] यतेतः N. १३ ०मांसम्] ०मान्सम् N. १४ ओम्] om. N. १०--१४ रूढ्य्..ओम्] om. K.

१ तं] तत् A. १ ०बद्धम्] ०बन्धेर् A. २ सुसीवितं एम्,] सुसंहितं A. ३ नह्येत्] बद्धा A. ४ उन्नामियत्वा] प्रोन्नम्य चैनाम् A. ४ अवचूर्णणेयीत] अवचूर्णयेत् तु ५ पत्ताङ्ग० एम्,] पतङ्ग० A. ६ व्रणन् तु] सितेन A. ९ स्वयथो०] स यथो० A. १० वै] स्यात् A. ११ तद्वध्र०] तद् अर्घ० A १२ हीनम्] हीनां A. १३ समञ्] समां A. १३ ०मांसम्] ०मांसाम् A. १४ ओम्] om. A. १५ inserted passage] नाडीयोगं विनौष्ठस्य नासासन्धानवद् विधिम् । य एवम् एव जानीयात् स राज्ञः कर्तुम् अर्हिति ।। A.

Translation of Sūtrasthāna 16

- 1 Now we shall expound the method for piercing the ear. 123
- One may pierce a child's ears for the purpose of preserving and decorating. During the bright fortnight, when the child is in the sixth or seventh month, on renowned days, half days, hours and constellations, the physician, with a calming presence, sits the boy, who has received a benediction and the recitation of a blessing, 124 on the lap of a wetnurse. 125 Then, he should pull the ear with his left hand and pierce straight through with his right hand at a naturally-occurring cleft. 126
- 123 The topic of piercing the ear (kaṛṇavyadha) is not discussed in the Carakasaṃhitā (HIML: IB, 326, n. 175), but it is mentioned in some texts that followed the Suśrutasaṃhitā, such as the Kaśāpyasaṃhitā (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the Aṣṭāṅgaḥṛdayasaṃhitā 1.26.26 (Ah 1939: 321). In the versions of the text known to Dalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125), the heading of this chapter is "the method of piercing and joining the ear" (कर्णव्यधनस्विधि), instead of the Nepalese version's "the method of piercing the ear" (कर्णव्यधनिधि). The topic of joining the ear (कर्णबन्ध) 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 of the text. For a discussion of the frame story in the Nepalese version, see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021. Dalhaṇa (Su 1938:76) and Cakrapāṇidatta (Su 1939:125) state that only the ears of healthy people should be pierced, and they quote the lost authority 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). Some texts use the adjective कर्ण-वेधनी rather than ॰व्यधनी.
- 124 The causative form व्यथ्येत् is known in Classical Sanskrit (Whitney 1885: 166). The compound कृतमङ्गलस्वस्तिवाचनं "who has received a benediction and the recitation of a blessing" is an emendation based on the similar text at 3.2.25 (Su 1938: 346). Cf. also 3.10.8, 24 (Su 1938: 388, 390) that have slightly different formulations.
- 125 The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Dalhaṇa (Su 1938: 76) have the additional compound कुमारधराङ्के ("on the lap of one who holds the child") after धात्र्यङ्के. The gender of कुमारधर is made clear by Dalhaṇa's gloss "a man who holds the child." Also, both versions add बालक्रीडनकैः प्रलोभ्य ("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 Dalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Dalhaṇa further mentions that others read भक्ष्यविशेषेर् वा ("or by special treats") before बालक्रीडनकैः, but we see no trace of these small kindnesses in our witnesses.
- 126 The versions of 1.16.3 of Cakrapānidatta (Su 1939: 126) and Dalhana (Su 1938: 76) add

- For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl $(\bar{a}r\bar{a})$ on a thick one. 127
- One may know that it was pierced in the wrong place if there is excess blood or too much pain. The absence of side-effects is a sign that it has been pierced in the right place.¹²⁸
- In this context, if an ignorant person randomly 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. 129
- 5 Having removed the wick (*vartti*) because of the accumulation of humours or an unsatisfactory piercing at that location, ¹³⁰ he should smear

that this naturally-occurring cleft is illuminated by a ray of sunshine (आदित्यकरावभा-सिते).

- The syntax of this slightly long sentence is unusual in beginning with the dual object तौ "the two (ears)" at the start of the sentence, which is remote from the main verb. The other singular accusatives referring to the ear being pierced are governed by absolutives.
- 127 Dalhaṇa 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" (Lakṣmaṇa-ṭippaṇaka) 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 to Dalhaṇa in twelfth-century Bengal. See Meulenbeld (HIML: IA, 386).
- 128 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.
- 129 This passage is significantly augmented in Cakrapāṇidatta's and Dalhaṇa's versions, to outline the specific problems caused by piercing three ducts called कालिका, मर्मिका and लोहितिका (1.16.4 (Su 1939: 126) and 1.16.5 (Su 1938: 77) respectively). 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: 'लोहितिका, मर्मिका 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 लोहितिका. Pain and lumps are thought to arise from piercing मर्मिका. Piercing कालिका gives rise to swelling, fever and burning.'
- 130 In addition to these reasons, 1.16.6 of Dalhana at 1.16.6 (Su 1938: 77), added "because of piercing with a painful, crooked and unsatisfactory needle" (क्लिप्टजिह्माप्रशस्तसूचीव्यात्) and "because of a wick that is too thick" (गाडतरवर्तित्वात्). Dalhana was aware of the reading in the Nepalese version because in his commentary on 1.16.6 (Su 1938: 77) he noted that some read "because of the accummulation of humours" rather than "be-

- it with barley, liquorice, Indian madder $(ma\tilde{n}jis\underline{t}h\bar{a})$, and the root of the castor oil tree (gandharvahasta), thickened with honey and ghee. And when it has healed well, he should pierce it again.¹³¹
- 6 He should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should make a thicker wick (*varti*) and do the very same sprinkling.
- 7 Once the ear is free from humours or side-effects, one should put in a light dilator (*pravardhanaka*) in order to enlarge it enough.¹³²
- 8 A person's ear enlarged in this way can split in two, either as a result of the humours¹³³ or a blow.
 - Listen to me about the ways of joining (sandhāna) it can have.
- 9 Here, there are, in brief, fifteen ways of mending the ear flap. 134 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 (ardhakapāṭasandhika), Compressed (saṃkṣipta), Reduced-ear (hīna-karṇa), Creeper-ear (vallīkarṇa), Stick-ear (yaṣṭīkarṇa), and Crow's lip (kākauṣṭha). 135
 - cause of piercing with a painful, crooked and unsatisfactory needle or because of a wick that is too thick." On the concept of humoral accumulation (*samudāya*), see the important analysis by Meulenbeld (1992).
- 131 The description of the drug is ambigious: the word "root" could be taken with each plant, or just with the last. The vulgate reads just "castor oil root" so we assume that is the traditional interpretation.
- 132 Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Palhaṇa on 1.16.8 (Su 1938: 77) pointed 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). Palhaṇa added that it can also be made of lead (sīsaka) and should have the shape of the datura flower (dhattūrapuṣpa). The manuscripts have variant readings for लघुप्रवर्धनकम् आमुञ्जेत् at this point that include a scribal emendation, none of which construe plausibly. It is possible that the unusual verb form आ+√मूच् puzzled the scribes and caused the implausible scribal readings and emendations.
- 133 Dalhaṇa on 1.16.9 (Su 1938: 77) notes that the word दोष here can refer to either a humour, such as wind $(v\bar{a}ta)$, as we have understood it, or a disease generated from a humour.
- 134 The Nepalese version uses the word सन्धान 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 Dalhaṇa's version (Su 1938: 77) uses the term बन्ध here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
- 135 For an artist's impression of these different kinds of joins in the ear flap, see Majno

In this context, among these,

"Rim-join" (नेमीसन्धानक): both flaps are wide, long, and equal.

"Lotus-splittable" (उत्पलभेद्यक): both flaps are round, long, and equal.

"Dried flesh" (वल्लरक): both flaps are short, round, and equal.

"Fastening" (आसङ्गिम): one flap is longer on the inside.

"Cheek-ear" (गण्डकर्ण): one flap is longer on the outside. 136

"Take-away" (आहार्य): the flaps are missing, in fact, on both sides.

"Ready-split" (निर्वेधिम): the flaps are like a dais (pīṭha).

"Multi-joins" (व्यायोजिम): one flap is small, the other thick, one flap is equal, the other unequal.

"Door-hinge" (कपाटसन्धिक): the flap on the inside is long, the other is small.

"Half door-hinge" (अर्धकपाटसन्धिक): 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. The five from compressed (*saṃkṣipta*) on are incurable. 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 (*stabdha*) ducts (*sirā*). "Crow-lip" has a flap without

^{1975: 290 (}reproduced as Figure 3.2 in Wujastyk 2003: 154).

¹³⁶ For an artist's impression of this join, see Majno 1975: 291 (reproduced as Figure 3.3 in Wujastyk 2003: 155).

¹³⁷ Cakrapāṇidatta on 1.16.9–13 (Su 1939: 128–129) and Dalhaṇa 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 (nemīṣandhānaka) is similar to the join of the rim of a wheel (cakradhārā).

¹³⁸ Dalhana 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.

- flesh with compressed (saṃkṣipta) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating ($sr\bar{a}va$), or swollen.¹³⁹
- A person wishing to perform a join of any of these should therefore have supplies specially prepared according to the recommendations of the "Preparatory Supplies" chapter. And in this regard, he should particularly gather decanted liquor (surāmaṇḍa), milk, water, fermented rice-water (dhānyāmla), and powdered earthenware crockery (kapāla-cūrṇa). 142

Next, having made the woman or man tie up the ends of their hair, eat lightly and be firmly held by qualified attendants, the physician considers the joins (*bandha*) and then applies them by means of cutting (*chedya*), splitting (*bhedya*), scarification (*lekhya*), or piercing (*vyadhana*).¹⁴³ 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

¹³⁹ The version of 1.16.11–13 known to Dalhaṇa (Su 1938:78) has four verses (श्लोक) 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. All four verses were probably absent in the version of the *Suśrutasaṃhitā* known to Cakrapāṇidatta. He cites the verses separately in his commentary, the *Bhānumatī* (Su 1939: 128–129), introducing each one as 'some people read' (के चित् पठन्ति). However, in Trikamajī Ācārya's edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Dalhaṇa (Su 1938), even in instances like this where Cakrapāṇidatta's commentary indicates that he was reading a different version of the *Suśrutasaṃhitā*. See further the discussion on p. 7 above.

¹⁴⁰ *Suśrutasaṃhitā* 1.5 (Su 1938: 18–23), probably verse 6 especially that lists the equipment and medications that a surgeon should have ready.

¹⁴¹ The reading in the Nepalese manuscripts of विशेषतश् चाग्रोपहरणीयात् has been emended to विशेषतश् चात्रोपहरेत् to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of अग्रोपहरणीयात् in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.

¹⁴² The term कपालचूर्ण is unusual. Palhaṇa (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.

¹⁴³ There are syntactic difficulties in this sentence. We have adopted the reading in Dalhaṇa's version (Su 1938: 78), which has च कृत्वा following सुपरिगृहीतं. It is likely that a verb, such as कृत्वा, dropped out of the Nepalese transmission.

11

used, and then he should scarify it again.

After arranging the join in the ear so that it is neither proud, depressed, nor uneven, and observing that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with cotton (picu) and gauze (plota), and bind it up with a thread, neither too tightly nor too loosely. Then, the physician should sprinkle earthenware powder on it and provide medical advice ($\bar{a}c\bar{a}rika$). And he should supplement with food as taught in the "Two Wound" chapter.¹⁴⁴

One should avoid rubbing, sleeping during the day, exercise, overeating,

sex, getting hot by a fire, or the effort of speaking.

- One should not make a join when the blood is too pure, too copious, or too thin. For when the ear is tainted by wind, then it is obstructed by blood (raktabaddha), unhealed and will peel. When tainted with choler, is becomes pinched ($g\bar{a}dha$), septic ($p\bar{a}ka$) and red. When tainted by phlegm, it will be stiff (stabdha) and itchy. It has excessively copious suppuration ($sr\bar{a}va$) and is sopha ($puffed\ up$). It has it has a small amount of wasted ($ks\bar{i}na$) flesh and it will not grow.
- 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.
- 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 (*viṣkira*) birds, and creatures that live in marshes or water, fat, marrow, milk, and sesame oil, and white mustard oil. Then cook the oil with an admixture

¹⁴⁴ Suśrutasamhitā 4.1 (Su 1938: 396–408).

^{145 1.16.17} of Dalhaṇa's version (Su 1938: 79) reads "impure" for the Nepalese "too pure," which would appear to make better medical sense. Emending the text to नाशुद्ध- for नातिशुद्ध- in the Nepalese recension would yield the same meaning as the Dalhaṇa's version

¹⁴⁶ In his edition of Suśrutasaṃhitā, 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' (आमतैलेन त्रिरात्रं परिषेचयेत् त्रिरात्राच् च पिचुं परिवर्तयेत्).

¹⁴⁷ For such classifications, see Zimmermann (1999) and Smith (1994).

¹⁴⁸ Dalhaṇa's version of 1.16.19 (Su 1938: i)ncludes ghee (*sarpis*). However, Dalhaṇa's remarks on this passage and Cakrapāṇidatta's on 1.16.18 (Su 1939: 130) indicate that

 $(prativ\bar{a}pa)$ of the following: purple calotropis (arka), white calotropis (alarka), country mallow $(bal\bar{a})$, 'strong Indian mallow' $(atibal\bar{a})$, country sarsaparilla $(anant\bar{a})$, beggarweed $(vid\bar{a}ri)$, liquorice (madhuka) and hornwort (जलशूक \rightarrow जलनीलिका 149). 150 This should then be deposited in a well-protected spot.

- The wise man who has been sweated should rub the massaged (mardita) ear with it.
 - Then it will be free of complications, and will enlarge properly and be strong.¹⁵¹
- Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (apāṅga), but not outside it.¹⁵²
- 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.¹⁵³

they knew a version of this recipe, perhaps similar to the Nepalese one, that did not include ghee (). Dalhana also noted that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta said that some say it is made with four oils and milk.

- 149 Ceratophyllum demersum, L. This name is not certain. In fact, Dalhana on 1.16.19 (Su 1938:79) notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.
- 150 The version of 1.16.19 known to Dalhaṇa (Su 1938: 79) adds several ingredients to this admixture, including अपामार्ग, अश्वगन्धा, क्षीरशुक्का, मधुरवर्ग and पयस्या. Also, it has विदारि-गन्धा instead of विदारि. When commenting on 1.16.19, Dalhaṇa (Su 1938: 79) notes that some do not read मधुरवर्ग and पयस्या. Therefore, there were probably other versions of this recipe with fewer ingredients, as seen in the Nepalese version.
- 151 For these aims (i.e., healing and enlarging the ear), the text known to Dalhaṇa (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.
- 152 Dalhaṇa's version of 1.16.23 (Su 1938: 79–80) adds another hemistich that states more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.
- 153 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

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- 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.¹⁵⁴
- Now I shall describe the proper method of making a repair when a nose is severed. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- Next, having cut a slice of flesh (vadhra)¹⁵⁵ with the same measurements off the cheek, the end of the nose is then scarified.¹⁵⁶ Then the undistracted (apramatta) physician, should quickly put it back together so that it is well joined (sādhubaddha).
- Having carefully observed that it has been sewn up properly, he should then fasten it along with two tubes. Having caused it to be raised, the powder of sappanwood (pattāṅga), if liquorice and Indian barberry. Should be sprinkled on it.
- The wound should be covered properly with cotton (picu) and should be moistened repeatedly with sesame oil. Ghee should be given to

- 156 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, Dalhana (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.
- 157 Palhaṇa noted 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.
- 158 The Sanskrit term उन्नामियत्वा in 1.16.21 is non-Pāṇinian.
- 159 Caesalpinia sappan, L. For पत्ताङ्ग there are manuscript variants पत्ताङ्ग (MS Kathmandu NAK 5-333) and पत्तङ्ग (MS Kathmandu NAK 1-1079). Also, MS Kathmandu KL 699 (f. 14r:1) has पताङ्ग in a verse in 1.14 (cf. 1.14.36 (Su 1938:66)). The text known to Dalhaṇa has पतङ्ग (1.16.29 (Su 1938:81)) and this term is propagated in modern dictionaries.
- 160 Berberis aristata, DC. Dalhana understands it as elixir salve (rasāñjana) (Su 1938: 81).

with a discussion of the disease परिपोट. Dalhana goes on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

¹⁵⁴ The order of verses 17 and 18 are reversed in Dalhana's version (Su 1938: 80).

¹⁵⁵ The version of 1.16.28b known to Dalhana (Su 1938: 81) reads "bound, connected (*baddham*)" 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).

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the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him. 161

And once healed and really come together, what is left of that slice of flesh (vadhra) should then be trimmed. 162 If it is reduced (hīna), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth. 163

¹⁶¹ The expression स्वयथोपदेश is ungrammatical but supported in all available witnesses.

¹⁶² The vulgate transmission has lost the word ৰঘ্ন and replaced it with अर्ध "half," which makes little sense in this surgical context.

¹⁶³ Dalhaṇa accepted a verse following this, 1.16.32 (Su 1938: 81), which points out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts. He noted that earlier teachers did not think this statement on the nose and lips was made by sages, but he included it because it was accepted by Jejjaṭa, Gayadāsa and others, although they did not comment on it because it was easy to understand. Cakrapāṇidatta also did not comment on this additional verse (Su 1939: 133).

Abbreviations

Ah 1939 Kumte, Annā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar,

Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमद-रुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदर-सायनाह्वया टीकया च समुल्लसितम् = The Astāngahṛidaya (6th edn., Muṃbayyām: Nirṇayasāgara Press), ark:/13960/t3tt6967d.

Anup Sanskrit Library (n.d.).

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.).

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13960/t9773bb9z.

Bhela 1921 Mookerjee, Ashutosh and Ananta Krishna Shastri, Ved-

antabisharad (1921) (eds.), *The Bhela Samhita. Sanskrit Text* (Calcutta: University of Calcutta), ark:/13960/t3sv3157j; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880:63–4, P. P. S.

Sastri 1933: #11085).

Bhela 2000 Krishnamurthy, K. H. (2000), 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 पुनर्व-

सुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता च-रकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirnaya Sagara Press), URL, accessed

01/01/2018.

HIML Meulenbeld, Gerrit Jan (1999–2002), A History of Indian

Medical Literature, 5 vols. (Groningen: E. Forsten), ISBN:

9069801248.

ABBREVIATIONS

IOLR Eggeling, Julius et al. (1887–1935), Catalogue of the Sanskrit

Manuscripts in the Library of the India Office (London: Secret-

ary 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 Sanskrit Series)

sity 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-शारीर-चिकित्सा-कल्पोत्तर-तन्त्र-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), ark:/13960/t1nh6j09c; HIML:IB,

311, edition b.

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ABBREVIATIONS

of Shri Dalhaṇāchārya (Mumbayyāṃ: Nirṇayasāgaramudrā-yantrālaye), ark:/13960/t3sv0mt50, accessed 29/07/2020; HIML:IB, 312 edition *v.

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- Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्य-व्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यप- ञ्जिकाव्याख्यया च समुष्ठसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), ark :/ 13960 / t09x0sk1h; HIML: IB, 313, edition cc ('the vulgate').
- Su 1938² Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition (Su 1938).
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