A Translation of the New Edition of the Suśrutasaṃhitā

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Draft of 8th July 2021 © Jason Birch and Dominik Wujastyk

Abstract

The Suśruta Project is producing a new Sanskrit text edition of the Su-śrutasaṃhitā based on the early Nepalese manuscripts. As we gradually transcribe and edit the manuscripts, we are producing this new translation of the classic work.

Contents

The sources of the 1938 edition 6 Evaluation 7 The 1939 edition 8 For the Bhānumatī 8 For the Suśrutasaṃhitā 10 Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 Literature 29 Complications] 38 [Characteristics of the probe] 38	The manuscripts and editions used in the vulgate editions by Yā-	
The sources of the 1915 edition The sources of the 1931 edition The sources of the 1938 edition Evaluation The 1939 edition For the Bhānumatī For the Bhānumatī For the Suśrutasaṃhitā Evaluation The 1939 edition For the Suśrutasaṃhitā Evaluation Features of the manuscript transmission Palaeographical features Chart of characters Sūtrasthāna, adhyāya 1 Sūtrasthāna, adhyāya 2 Literature Sūtrasthāna, adhyāya 17 Sūtrasthāna, adhyāya 17 Sūtrasthāna, adhyāya 18 Kalpasthāna, adhyāya 1 Literature Manuscript notes Translation [Threats to the king] Uttaratantra, adhyāya 16 (17 in the vulgate) Literature Translation [Complications] [Characteristics of the probe] 38 [Characteristics of the probe]	davaśarman Trivikrama Ācārya	5
The sources of the 1931 edition The sources of the 1938 edition Evaluation The 1939 edition For the Bhānumatī For the Bhānumatī For the Suśrutasaṃhitā Evaluation Features of the manuscript transmission Palaeographical features Chart of characters Sūtrasthāna, adhyāya 1 Sūtrasthāna, adhyāya 2 Literature Sūtrasthāna, adhyāya 1 Literature Sūtrasthāna, adhyāya 1 Literature Manuscript notes Translation [Threats to the king] Uttaratantra, adhyāya 16 (17 in the vulgate) Literature Translation [Complications] [Complications] [Characteristics of the probe] 38 [Characteristics of the probe]	The sources of the 1915 edition	
The sources of the 1938 edition 66 Evaluation 7 The 1939 edition 8 For the Bhānumatī 8 For the Suśrutasaṃhitā 10 Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	The sources of the 1931 edition	
The 1939 edition 8 For the Bhānumatī 8 For the Suśrutasamhitā 10 Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	The sources of the 1938 edition	
The 1939 edition 8 For the Bhānumatī 8 For the Suśrutasamhitā 10 Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Evaluation	7
For the Bhānumatī For the Suśrutasaṃhitā Evaluation Features of the manuscript transmission Palaeographical features Chart of characters 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 Literature 20 Sūtrasthāna, adhyāya 17 Sūtrasthāna, adhyāya 28 Kalpasthāna, adhyāya 2 Literature 27 Manuscript notes Translation [Threats to the king] Literature 28 Uttaratantra, adhyāya 16 (17 in the vulgate) Literature Translation [Complications] [Characteristics of the probe] 38		
For the Suśrutasaṃhitā 10 Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 Sūtrasthāna, adhyāya 28 Kalpasthāna, adhyāya 28 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Literature 29 Translation 29 Literature 29 Complications] 28 [Characteristics of the probe] 38		8
Evaluation 10 Features of the manuscript transmission 12 Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		10
Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		10
Palaeographical features 12 Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Literature 29 Complications] 38 [Characteristics of the probe] 38	Features of the manuscript transmission	12
Chart of characters 12 Sūtrasthāna, adhyāya 1 13 Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Palaeographical features	12
Sūtrasthāna, adhyāya 2 20 Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Chart of characters	
Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Sūtrasthāna, adhyāya 1	13
Literature 20 Sūtrasthāna, adhyāya 17 21 Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Sūtrasthāna, adhyāya 2	20
Sūtrasthāna, adhyāya 28 26 Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		20
Kalpasthāna, adhyāya 1 27 Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Sūtrasthāna, adhyāya 17	21
Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Sūtrasthāna, adhyāya 28	26
Literature 27 Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38	Kalpasthāna, adhvāva 1	27
Manuscript notes 27 Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		
Translation 28 [Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		_
[Threats to the king] 28 Uttaratantra, adhyāya 16 (17 in the vulgate) 29 Literature 29 Translation 29 [Complications] 38 [Characteristics of the probe] 38		
Literature		
Literature	Uttaratantra, adhvāva 16 (17 in the vulgate)	20
Translation29[Complications]38[Characteristics of the probe]38		_
[Complications]		-
[Characteristics of the probe]		
		_
	[Complications]	39

Abbreviations	41
References	43
Glossary	50
Index of Manuscripts On digital critical editions	62 63
4	

The manuscripts and editions used in the vulgate editions by Yādavaśarman Trivikrama Ācārya

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.¹

The 1915 edition was based on three manuscripts. The 1931 edition used another seven plust two printed editions. For his final 1938 edition, Ācārya used a further three manuscripts.² 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 Gaṅgādharabhaṭṭaśarman, 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*.

The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāṭhaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachoḍalāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.
- 3 From the personal library of my great friend Sva. Vā. Vaidya Murārajīśarman. Extremely old. No commentary. Covers the śārīrasthāna.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the śārīra-sthāna.³

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

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

³ Not one of the three MSS of the śārīrasthāna described in H. D. Sharma 1939.

- 5 Pune, BORI library. With the *Nibandhasangraha*. Complete. With some damaged folia.
- 6 Bombay, Asiatic Society. Incomplete.4
- 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).⁵
- 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).⁶

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.
- 2 Bikaner, from the library of the Royal Palace, supplied by Pam. Candraśekharaśāstrin. Contains the commentary *Nyāy-acandrikāpañjikāvyākhyā* by Gayadāsa. Covers the *nidānasthāna*. This is almost certainly MS Bikaner Anup 4390.⁷
- 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*.

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."

⁵ Bhaṭṭācārya 1910-7.

⁶ sena-1886.

⁷ See Dominik Wujastyk, "MS Bīkāner AnupLib 4390." Pandit. http://panditproject.org/entity/108068/manuscript.

Manuscripts (●) and print editions (○)															
edition		1915		1931							1938				
sthāna	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
sū.	•							•	?		0	0(1-43)	•		•1
ni.	•			•				•	?		0		•	•	1
śā.	•					•		•	?		0		•		
ci.		•						•	?	•	0		•		● (1-9)
ka.	•							lacktriangle	?		0		•		
utt.			•					•	?		0				

Table 1: The sources of Yādavaśarman T. Ācārya's three vulgate editions.

Evaluation

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

While the descriptions provided by Ācārya of his source materials seems at first to be moderately comprehensive, Table 1 reveals the real paucity of textual basis for these editions. Apparently, fifteen manuscripts were consulted. However, we quickly find that two of the sources were other people's printed editions, and one of those covered less than a quarter of the work. That reduces the manuscript base to 13 manuscripts. Acārya 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 manuscripts. One of them, no. 6 of 1931, remains mysterious. Only a single manuscript covers the whole of the Suśrutasamhitā, 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 next, 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

⁸ This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.

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 5-333.9 But that manuscript covers the whole work, not just up to the ninth chapter of the *cikitsāsthāna* as Y. T. Ācārya and N. R. Ācārya stated.¹⁰ Perhaps the editors only received collations for this portion of the manuscript and did not know that it was a witness for the whole work.

The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman 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.¹¹ 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 \P for *mudrita*.¹²

⁹ SS 1938: 22; Hemarāja Śarman 1938: 56–57. Discussed by Klebanov (2021*a*: §1.1, 2.3). See also HIML: IIB, 25–41; Dominik Wujastyk 2003: 161–169.

¹⁰ SS 1938: 22.

¹¹ Y. T. Ācārya and N. Śarman 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

¹² 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.

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 वीर्घसम् । येन वाऽस्यर्थं स्त्रीषु व्यज्यते तद्वाजी-करणम् । तदुक्तं चरके—''येन नारीषु सामध्यं वाजिवह्नमते नरः । व्रजेचाप्यधिकं येन वाजीकरणमेव तत्'' (च.चि. अ. २, पा. ४) इति ॥ ५॥

अथास्य प्रत्येकाङ्गलक्षणसमासः—तत्र, शल्यं नाम विविधत्णकाष्टपाषाणपांशुलोहलोष्टास्थिवालनलपूर्यास्वावदुष्टवणान्तर्गर्भशाल्योद्धरणाथ षष्ट्या विधानैः, यन्त्रश्रास्थ्रसाराग्निप्रणिधानवणविनिश्चयार्थं चः शालाक्यं नामोध्वेजन्नगतानां श्रवणनयनवद्नन्नाणादिसंश्रितानां व्याधीनामुपश्मनार्थः, कायचिकित्सा नाम सेवाङ्मसंश्रितानां व्याधीनां ज्वररक्तपित्तशोषोन्मादापसारक्रष्टमेहातिसारादीनामुपश्मनार्थः, भूतविद्या नाम देवासुरगन्धवेयक्षरक्षःपितृपिशाचनागम्बाद्यपस्प्रचेतसां
शान्तिकर्मविष्ठहरणादिश्रहोपश्मनार्थः, कौमारभृत्यं नाम कुमारमरणधात्रीक्षीरदोपसंशोधनार्थं दुएस्तन्यग्रहसमुत्थिनां च व्याधीनामुपशमनार्थमः, अगदतन्त्रं नाम सप्कीटल्लामूषकादिद्प्रविषव्यक्षनार्थं
विविधविपसंशोगोपश्मनार्थं चः, रसायनतन्त्रं नाम वयःस्थापनमार्थुमेधावलकरणं रोगापहरणसमर्थं चः वाजीकरणतन्त्रं नामाहण्दुएक्षीणशुकरेतसामाप्यायनप्रसादोपचयजनननिसित्तं प्रहर्षणजननार्थं च ॥ ६॥

शस्याङ्गविशेषात्र् शातुं प्रतिलक्षणं संक्षेपेणाह्—अथास्यस्यादि । एकमेकमङ्गं प्रति लक्ष-णानां समासः संक्षेपः प्रत्यकाङ्गलक्षणसमासः । तृणादीनां, तथा दुष्टवणस्य, तथाऽन्त-र्गत(भेशस्य)स्य उद्धरणार्थमिति प्रत्येकमुद्धरणशब्दः संवध्यते । दुष्टवणस्यान्तस्तृणाद्या-हरणार्थमित्यन्ये । षष्ट्या विधानिरिति द्विवणीयोक्तैरपतर्पणावै रक्षाविधानान्तैः; इत्थंभूतलक्षणे तृतीया । जतु प्रीवामूलं, जतुण उद्धवमूद्ध्वेजतु । प्राणादीत्यादिप्रहणान्छिरःकपालादिप्रह-णम् । उत्तरतन्त्रे प्रतिपादितकमप्राप्त्या ज्वरानन्तरमतीसारः पठितः, तस्यान्ते पाठोऽतिसा-रस्य सर्वाङ्गीणदोपार्व्यवाद्, अन्येपामि तन्मध्यपाठेन सर्वाङ्गीणदोषार्व्यवप्रतिपादना-ध्यतिकमं वदन्ति । शान्तिकमं बिष्टहरणादिना प्रहाणां देवादीनामुपशमो यस्तदर्थः, यदि वा ग्रहृणं ग्रहो देवानामावेशस्तदुपशमार्थम् । दुष्टस्तन्यमहसमुत्यितानामिति दुष्टस्तन्यन

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

१ 'सर्वशरीरावस्थितार्नी क्यांचीनामुपश्चमकरणार्थ , ज्वरश्चोफग्रुक्मरक्तिपत्तोन्मादापसार-प्रमेहातीसारादीनां च' इति ता. । २ 'देवदानव' इति ता. । १ 'विनायकनागश्रहोप-सप्टचेतसां' इति ता. । ४ 'विषयवेगोपश्चमनार्थ' इति ता. । ५ 'श्चर्काप्यायन' इति ता. । ६ 'स्णादीनां श्वर्यान्तानां' इति मु. ७ 'अन्ये तु तस्यान्ते पाठेन' इति पा० । ८ 'श्वरणाद्व' इति मु. ।

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 हस्तिलिखित. 4

For the Suśrutasamhitā

- 1. A palm leaf manuscript from Hemarājaśarman's personal library. 15 The siglum was না for নাভ্যন্ন.
- 2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः. 16
- 3. Hārāṇacandra Cakravarti's published edition with his own commentary. The siglum was हा.

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*. 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 1).

Ācārya noted in his introduction that the manuscripts containing the Dalhaṇa's commentary all came together with the root-text of the *Suśrutasaṃhitā*, and thus the main *Suśrutasaṃhitā* text reflected the readings

¹³ At this time, manuscripts from Britain were routinely lent to scholars in India and vice versa.

¹⁴ MS London BL H. T. Colebrooke 908 (PanditProject #109978, consulted on July 03, 2021).

¹⁵ I.e., MS Kathmandu NAK 5-333.

¹⁶ SS 1938. It is noteworthy that Ācārya refers to his 1938 edition as representing "the Dalhaṇa recension."

¹⁷ Bhaṭṭācārya 1910-7.

¹⁸ HIML: IA, 374–375 and IB, 495–496.

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 know what the text that Cakrapāṇidatta had before him. But Ācārya noted that Cakrapāṇidatta had a text before him that had much in common with the text of the Nepalese manuscript.¹⁹

There is compelling evidence that Cakrapāṇidattas's *Bhānumatī* commentary once covered the whole text of the *Suśrutasaṇhitā*.²⁰ 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.²¹

¹⁹ Y. T. Ācārya and N. Śarman 1939: 3–4. See discussion by Klebanov (2021*b*:7).

²⁰ HIML: IA, 375.

²¹ Cordier 1903: 332.

Features of the manuscript transmission

Palaeographical features

- śrita for śrta.
- ś and s in KL 699.

Chart of characters

[[[Put a chart from QuickPalaeographer here.]]]

Sūtrasthāna, adhyāya 1

- 1 Now I shall narrate the chapter on the origin of this knowledge.²²
- 2 Now, as is well-known, Aupadhenava, Vaitaraṇa, Aurabhra, Puṣkalāvata, Karavīra, Gopurarakṣita, Bhoja, Suśruta and others addressed Lord Divodāsa, king of Kāśi, the best of the immortals, who was in his ashram surrounded by an entourage of sages.²³
- "O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanā-bhighāta*), feeling helpless in spite of having friends, because of diseases arising from the body, the mind and external sources.
- 4 "To quell the illnesses of those who seek happiness and for our own purpose of prolonging life, we desire the science of life (āyurveda) that is being taught. Welfare, both in this world and in the next, depends upon it. Therefore, we have come to the Lord in pupillage."
- 5 The Lord said to them:
 - "Welcome to you! My children, all of you are beyond reproach and worthy to be taught.
- 6 "As is well known, Ayurveda is the name of what is said to be the subsidiary part of the Atharvaveda. Before creating people, Svayambhū composed it in hundreds of thousands of verses and a thousand chapters and, after observing the short lifespan and low intelligence of people, he presented it again in eight parts.²⁴
- "Surgery, treatment of body parts above the clavicle, general medicine, knowledge of spirits, care of children, and the disciplines of antidotes,

²² Dalhaṇa understood the word "knowledge (veda)" as specifically "medical knowledge." He said that the word "longevity" (āyur) had been elided. After this opening statement, later manuscripts and commentaries include the attribution, "as the venerable Dhanvantari stated." The absence of this statement in the early Nepalese MSS is highly noteworthy because it removes the outer narrative frame of the Suśrutasaṃhitā (Dominik Wujastyk 2013: 148; Klebanov 2021a: § 3.1.2). On the figure of Dhanvatari in medical literature, see HIML: IA 358–361.

²³ On these persons, see HIML: IA 361–363, 369 ff. The authority Bhoja does not appear in the list as published in the vulgate edition (\$\frac{S}\$1931:1), and was not included in HIML amongst "authorities mentioned in the \$Suśrutasaṃhitā." Meulenbeld gathered textual evidence about Bhoja at HIML: IA 690–691. Klebanov (2021b) has discussed these authors in the context of an anonymous commentary on the \$Suśrutasaṃhitā\$ that cites them.

²⁴ Svayambhū is another name for Brahmā, the creator.

- rejuvenation and aphrodisiacs.
- 8 "Now, a collection of the characteristics of each component of Āyurveda.
- 9 "Among them, [the component] called surgery has the goal of extracting various grasses, wood, stone, dust, iron (?), soil, bone, hair, nails, discharge of pus, malignant wounds and foreign bodies inside the womb, and of determining the application of surgical instruments, knives, caustics and fire by means of sixty definitions.
- "[The component] named the doctrine of treating body parts above the clavicles has the aim of curing diseases situated above clavicles that is, diseases located in ears, eyes, mouth, nose and so on.
- "[The component] called general medicine has the goal of curing illnesses established in the whole body and [diseases] such as fever, tumour, swelling, hemorrhagic disorders, insanity, epilepsy, urinary diseases, diarrhoea and the like.
- "[The component] called knowledge of spirits is for appeasing demons by pacification rites and making food offerings for those whose minds have been possessed by gods, their enemies,²⁵ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, ²⁶ Nāgas and evil spirits that possess children.
- "[The component] called care of children is for bearing children and purifying defects in a wet-nurse's milk, and curing diseases that have arisen from bad breast milk and demons.
- "[The component] called the discipline of toxicology is for [knowing] the signs of poison from snake and insect bites and for neutralising various combinations of poisons.²⁷
- "[The component] called the discipline of rejuvenation is maintaining youth, bringing about a long life and mental vigour and for curing diseases.
- 16 "[The component] called the discipline of aphrodisiacs brings about

²⁵ Dānavas. The insertion marks ($k\bar{a}kapadas$) below the text at this point appears to be by the original scribe.

²⁶ The vulgate doesn't have *vināyaka*s but does add *asura*s, probably under the influence of Palhaṇa. Cite Paul Courtright, Ganesha book.

²⁷ The scribal insertion marks (crosses) above the line at this point in MS K appear to be in a later hand and their referent is lost in the damaged part of the folio. Although MSS N and H include spiders ($l\bar{u}t\bar{a}$) and creepy-crawlies ($sar\bar{i}srpa$) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents ($m\bar{u}sika$).

- the increase, purity, accumulation and production of semen for those whose semen is minimal, bad, depleted, and dry [respectively] and for inducing an erection.
- "Thus, this Āyurveda is taught with eight components."
 "Among these [components], tell us which is for whom."
- 18 They said, "After you have conveyed the knowledge of surgery, teach us everything."
- 19 He said, "so be it."
- They then said, "Having considered the view of all of us, when we are unanimous, Suśruta will question you. We too will learn what is being taught to him."
- 21 He said, "so be it.
- "Now, as is well-known, the aim of Āyurveda is eliminating the disease of one who have been assailed by disease and protecting the healthy; āyurveda is [that knowledge] in which they find a long life, or that by which long life is known. Learn its best component (i.e., surgery), which is being taught in accordance with tradition, perception, inference and analogy.
- "For this component is first, the most important, because it is referred to first; it cures wounds and joins together the most important thing, Yajña's head. For, just as it has been said of old, 'the head that had been cut off by Rudra was joined again by the two Aśvins.'
- "And also, of the eight disciplines of \bar{A} yurveda, [surgery] alone is the best because of the quick action of its procedures ($kriy\bar{a}$), its application of blunt instruments, knives, caustics and fire, and it is common to all disciplines.
- "Therefore, [surgery] is eternal, meritorious, leads to heaven, brings renown, bestows a long life, and affords a livelihood.
- 26 "Brahmā said this, 'Prajāpati learned it. From him, the Aśvins. From the Aśvins, Indra. From Indra, I. In this world, I will transmit to those who desire it for the benefit of people.'

[There a verse about this.].²⁸

For, I (i.e., Brahmā) am Dhanvantari, the first god, the remover of old age, pain and death of mortals.

Having understood surgery, the best of the great knowledge systems, I

²⁸ This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

arrived on earth again to teach it here.

In this context, as far as this discipline is concerned, a human being (puru
otin a) is called an amalgam of the five elements and the embodied soul. This is where procedures (kriy
otan) apply. This is the locus. Why?

Because of the duality of the world, the world is twofold: the stationary and the moving. Its nature ($\bar{a}tmaka$) is twofold, depending on the preponderance of Agni and Soma.²⁹ Alternatively, it can be considered as being fivefold. The multitude of beings in it are fourfold: they are termed "sweat-born, stone-born, caul-born and egg-born".³⁰ Where they are concerned, the human being is the main thing; others are his support. Therefore, the human being (puruṣa) is the locus.

Diseases are said to be the conjunction of the person and suffering ($du\dot{p}$ -kha). There are four of them: invasive, bodily, mental and inherent. The invasive ones are caused by an injury. The bodily ones are based on food, caused by irregularities (vai:amya) in wind, bile, phlegm and blood. 31

The mental $(m\bar{a}nasa)$ ones, caused by desire $(icch\bar{a})$ and hatred (dveṣa), include: anger (krodha), grief $(\bar{a}śoka)$, misery (dainya), overexcitement (harṣa), lust $(k\bar{a}ma)$, depression $(viṣ\bar{a}da)$, envy $(\bar{v}rṣy\bar{a})$, jealousy $(as\bar{u}y\bar{a})$, malice $(m\bar{a}tsarya)$, and greed (lobha).

The inherent (*svābhāvika*) ones are hunger, thirst, old age, death, sleep and those of the temperament (*prakṛti*).

These too are located (adhiṣṭhāna) in the mind and body.

Scarification (lekhana), nourishment (brmhana), purification (samso-dhana), pacification (samsamana), diet ($\bar{a}h\bar{a}ra$) and regimen ($\bar{a}c\bar{a}ra$), properly employed, bring about their cure.

Furthermore, food is the root $(m\bar{u}la)$ of living beings as well as of strength (bala), complexion (varna) and vital energy (ojas). It depends on $(\bar{a}yatta)$ the six flavours (rasa). Flavours, furthermore, have substances as their substrate $(\bar{a}\acute{s}rayin)$. And substances are remedies $(oṣadh\bar{\iota}-)$.³² There are two types: stationary $(sth\bar{a}vara)$ and moving

²⁹ See Dominik Wujastyk 2004.

³⁰ This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasamhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

³¹ Note that four humoral substances are assumed here.

³² Pāṇini 6.3.132 provides that the final vowel of the noun oṣadhi may be lengthened $(\to oṣadh\bar{\iota})$ under certain conditions. These conditions require that the word be used

- (jaṅgama).
- Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vṛkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).³³ Amongst these, the "fruit trees" have fruit but no flowers.³⁴ The "flowering trees" have flowers and fruit. The "herbs" die when the fruit is ripe. "Shrubs" put out shoots.
- As is well known, moving remedies are also of four types: those born in in a caul (<code>jarāyuja</code>), those born from eggs (<code>aṇḍaja</code>), those born of sweat (<code>svedaja</code>), and shoots (<code>udbhid</code>). Amongst these, those born in a caul include animals (<code>paśu</code>), humans, and wild animals (<code>vyāla</code>). Birds, creepycrawlies (<code>sarīsṛpa</code>) and snakes are "born of eggs." Worms (<code>kṛmi</code>), small insects (<code>kunta</code>) and ants (<code>pipīlika</code>) and others are born of sweat.³⁵ Shoots include red velvet mites (<code>indragopa</code>) and frogs (<code>maṇḍūka</code>).³⁶|
- In this context, among the stationary remedies, skin (tvak), leaves (patra), flowers (puṣpa), fruits (phala), roots ($m\bar{u}la$), bulbs (kanda), sap ($kṣ\bar{t}ra$), resin ($niry\bar{a}sa$), essence ($s\bar{a}ra$), oil (sneha), and juice extract (svarasa)³⁷ are useful; among the moving remedies pelt (carman), hair, nails, and blood (rudhira) and so forth.
- 34 And earthen products (*pārthiva*) include gold and silver.³⁸
- The items created by time $(k\bar{a}lakrta)$ are clusters (samplava) as far as wind and no wind $(niv\bar{a}ta)$, heat and shade, darkness and light and the cold, hot and rainy seasons $(vars\bar{a})$ are concerned. The divisions of time are the blink of the eye (nimesa), a trice $(k\bar{a}sth\bar{a})$, minutes $(kal\bar{a})$,
 - in a Vedic mantra and not in the nominative. Neither condition is met in this passage, yet the author uses the form $oṣadh\bar{\iota}$. This form is in fact not uncommon in medical literature as well as in epics, purāṇas, smṛtis, and other parts of Sanskrit literature.
- 33 Ca.sū.1.71–72 also describes these four types of medicinal plant in similar terms but with slightly differing names: *oṣadhi* is a plant that ends after fruiting, *vīrudh* is a plant that branches out, *vanaspati* is a tree with fruit, and *vānaspatya* is a tree with fruit and flowers.
- 34 The MSS agree in reading *phalavantyaḥ* "having flowers" which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, 1.92.27 Viṣṇudharmottarapurāṇa: 56r).
- 35 The word *kunta*, though marked as "lexical" in most dictionaries, is in fact found in literature, commonly as a compound with *pipīlika*; the compound sometimes seems to be understood a type of ant (*tatpuruṣa* compound) rather than as a pair of insects (*dvandva* compound).
- 36 On *indragopa*, see Lienhard 1978.
- 37 On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Dalhana on SS 4.10.12 (SS 1938²: 450).
- 38 The flow of concepts in the treatise seems to be interrupted here.

- three-quarters of an hour ($muh\bar{u}rta$), a day and night ($ahor\bar{a}tra$), a fort-night (pakṣa), a month ($m\bar{a}sa$), a season (rtu), a half-year (ayana), a year (samvatsara), and yuga (yuga).³⁹
- These naturally cause accumulation (*sañcaya*), irritation (*prakopa*), pacification (*upaśama*) and alleviation (*pratīkāra*) of the humours (*doṣa*). And they have practical purposes (*prayojanavat*).

[There are verses about this:]40

- This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.⁴¹
- There are two kinds of invasive diseases. Some certainly⁴² affect (ni√pat) the mind, others the body. Their treatment (kriyā) is of two kinds too.
- For those that affect the body there is physical (śārīravad) therapy, whereas for those that affect the mind there is the collection (varga) of desirable sensory experiences like sound that bring comfort (sukha).
- 40 Along these lines (*evam*), this brief explanation of the four factors (*catuṣtaya*) is given:
 - human being (puruṣa),
 - disease (vyadhi),
 - remedies (oṣadhi),
 - the time for therapies (kriyākāla).

In this context,

• from the mention of the word "human," the collection of substances that arise from it, such as the elements, and the particulars (*vikalpa*) of its major and minor parts (*aṅga*) such as skin (*tvak*), flesh (*māṃsa*), ducts (*sirā*), sinews (*snāyu*), bones (*asthi*) and joints (*sandhi*) are meant.

³⁹ These units are presented at SS 1.6.5 (SS 1938 2 : 24) and discussed by Hayashi (2017: § 59).

⁴⁰ See footnote 28.

⁴¹ On the topic of the "group of four," the commentator Dalhana considers them to be "food, behaviour, earthen products and items created by time." He refers to the author of the lost commentary entitled $Pa\tilde{n}jik\bar{a}$, and to Jejjaṭa (HIML: IA, 372–3, 192). In his view, these early commentators do not agree that the fourfold grouping (*caturvarga*) refers to the quartet of stationary (*sthāvara*), moving (*jaṅgama*), earthen products (*pārthiva*) and items created by time (*kālakṛta*) (SS 1938²: 9a).

⁴² The text uses an archaic interjection here, ha.

- From the mention of "diseases," all diseases caused by wind, bile, phlegm, congested humours (sannipāta), external factors (āgantu) and inherent factors (svabhāva) are intended (vyākhyāta).
- From the mention of "remedies," there is the teaching of substances, tastes, potencies, post-digestive tastes.
- From the mention of "procedures (*kriyā*)," therapies (*karman*) such as oiling and excision (*chedya*) are taught.
- From the mention of the word "time," every single teaching about the times for procedures is meant.

[There is a verse about this:]⁴³

- This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.⁴⁴
- There are one hundred and twenty chapters in five sections (*adhyāya*). In that regard, having divided them, according to their subject matter, into the Ślokasthāna, the Nidāna, the Śārīra, the Cikitsita and the Kalpa, we shall mention this in the Uttaratantra. 46

[There is a verse about this:]47

Someone who reads this eternal proclamation of the King of Kāśī, that was declared by Svayambhu, will have good karma on earth, will be respected by kings and upon death will achieve the world of Śakra.

⁴³ See footnote 28.

⁴⁴ This is the number of chapters in the first five sections of the work, namely the *Sūtra-, Nidāna-, Śārīra-, Cikitsā-* and *Kalpa-sthānas*. These have 46, 16, 10, 40 and 8 chapters respectively. The *Uttaratantra* has 66 chapters.

⁴⁵ On viṃśa in the sense of "greater by 20" see P.5.2.46 śadantaviṃśateś ca.

⁴⁶ The end of this sentence reads oddly. The vulgate edition adds an object: "[we shall mention] the remaining topics [in the Uttara]" which smooths out the difficulty, but this is supported in none of the Nepalese MSS. At the start of the Uttaratantra (SS 1938: 1.3–4ab) there is indeed a statement that picks up the point about there being 120 chapters.

⁴⁷ See footnote 28.

Sūtrasthāna, adhyāya 2

Literature

HIML: IA, 204; Preisendanz 2007; Dagmar Wujastyk 2012: 82–83, et passim.

1

Sūtrasthāna, adhyāya 17

- 1 Now we shall expound the method for the piercing of the ear.
- 2 One may pierce a child's ears for the purpose of preserving and decorating.
 - During the first half of the sixth or seventh lunar month, during a renowned day, half day, hour and constellation the child who has received a benediction (krtamangala), blessings pronounced (svastivacana) should be placed on the lap of a wet-nurse.⁴⁸ For a boy, do the right one 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.
- If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.⁴⁹
- In this context, if an ignorant person accidentally pierces a duct (sirā) there will be fever, burning, swelling (śvayathu), pain, lumps (granthi), paralysis of the nape of the neck (manyāstambhā), convulsions (apatānaka), headache or pain in the ear.
- Having removed the wick (*varti*) in it, one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahasta*), thickened with honey and ghee. When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.⁵⁰
- 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.
- An person's ear enlarged in this way can split in two, either as a result of the humours or as a result of a blow.

Listen to me about the joins (sandhāna) it can have.

⁴⁸ The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. The vulgate records a reading in which the words are united in a compound that reads more naturally.

⁴⁹ From here on, witness K is missing a folio, so the text is contstructed on the basis of witnesses N and H.

⁵⁰ The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.

Here, there are, in brief, fifteen ways of mending the ear. They are as follows: Rim-join, Lotus-splittable, Dried Flesh, Fastening, Cheek-ear, Take away, Ready-Split, Multi-joins, Door-hinge, Half door-hinge, Compressed (saṃkṣipta), Reduced-ear, Creeper-ear, Stick-ear, and Crow's lip.

In this context, among these,

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

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

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

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

"Cheek-ear" (gaṇḍakarṇa): one flap is longer on the outside. 51

"Take-away" ($\bar{a}h\bar{a}rya$): the flaps are missing, in fact, on both sides.

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

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

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

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

'These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.⁵² The five below are not so successful:

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)

⁵¹ See fig. ??.

⁵² This is an odd assertion, given the strangeness of the names.

ducts (*sirā*). "Crow-lip" has a flap without flesh with compressed (*saṃ-kṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.

A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the 'Preparatory Supplies' chapter.⁵³ And in particular, he should gather decanted liquor (*surāmaṇḍa*), milk, water, fermented rice-water (*dhānyāmla*), and powdered earthenware crockery (*kapālacūrṇa*).

Next, he should prepare the woman or man who have had the ends of their hair tied up, have eaten lightly, and are firmly supported by qualified attendants.

Then, he should ready the bindings (bandha) and carry out the procedure with cutting (chedya), splitting (bhedya), scarification (lekhya), or piercing (vyadhana), examine the blood of the ear to know whether it is tainted (duṣṭa) or not. Then if it is tainted by wind, the ear should be bathed with fermented rice-water (dhānyāmla) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor (surāmaṇḍa) and water should be used, and then he should scarify it again.

Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Next, after anointing it with honey and ghee, each ear should be bandaged with cotton (picu) and gauze (prota), and bound up with a thread, neither too tightly nor too loosely. Then the earthenware powder should be sprinkled on, and medical advice ($\bar{a}c\bar{a}rika$) should be given. And he should supplement with food as taught in the 'Two Wound' chapter.⁵⁴

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 copi-

⁵³ SS.1.5.

⁵⁴ SS.4.1.

⁵⁵ The vulgate reads "impure" for the Nepalese "too pure," which would appear to make better medical sense. Emending the text to nāśuddha- for nātiśuddha- in the Nepalese recension would yield the same meaning as the vulgate.

- ous suppuration ($sr\bar{a}va$) and is sopha (puffed~up). It has it has a small amount of wasted ($ks\bar{\iota}na$) flesh and it will not grow.⁵⁶
- When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be angry (saṃrambha), burning, septic or painful. It may even be split open again.
- Now, massage for the healthy ear, in order to enlarge it. One should gather as much as one can of the following: a monitor lizard ($godh\bar{a}^{57}$), scavenging (pratuda) and seed-eating (viskira) birds, and creatures that live in marshes or water,⁵⁸ fat, marrow, milk, and sesame oil, and white mustard oil. Then cook the oil with an admixture (prativāpa) of the following: purple calotropis ($arka^{59}$), white calotropis ($alarka^{60}$), country mallow ($bal\bar{a}^{61}$), 'strong Indian mallow' ($atibal\bar{a}^{62}$), country sarsaparilla ($anant\bar{a}^{63}$) beggarweed ($vid\bar{a}ri^{64}$), liquorice (madhuka), hornwort ($jalas\bar{u}ka \rightarrow jalan\bar{\imath}lik\bar{a}^{65}$), '66 items having the 'sweet' savour (madhuravarga), 67 and 'milk flower' ($payasy\bar{a} \rightarrow vid\bar{a}r\bar{\imath}^{68}$). This should then be deposited in a well-protected spot.
- The wise man who been sweated should rub the massaged (mardita) ear with it. Then it will be free of complications, and will enlarge properly and be strong.
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole $(ap\bar{a}nga)$, but not outside it.
- In this tradition, experts know countless repairs to ears. So a physician who is very intent (suniviṣṭa) on working in this way may repair

⁵⁶ This passage exemplifies numerous small changes

⁵⁷ Varanus bengalensis, Schneider (Daniel 1983:58)

⁵⁸ For such classifications, see zimm-jung and smit-clas.

⁵⁹ Calotropis gigantea, (L.) R. Br. (ADPS 52, AVS 1.341, NK #427, Potter 57, ID 306)

⁶⁰ Calotropis procera, (Ait.) R. Br. (NK #428, GIMP 46b, ID 306)

⁶¹ Sida cordifolia, L. (ADPS 71, NK #2297)

⁶² Abutilon indicum, (L.) Sweet; Sida rhombifolia, L.? (NK #11, IGP ,4 1080; NK #2300)

⁶³ Hemidesmus indicus, (L.) R. Br. (ADPS 434, AVS 3.141–5, NK #1210)

⁶⁴ Desmodium gangeticum (L.) DC (Dymock 1.428, GJM 602, cf. NK #1192; ADPS 382, 414 and IMP 2.319, 4.366 are confusing)

⁶⁵ Ceratophyllum demersum, L. (IMP 2371, AVS 2.56, IGP 232)

⁶⁶ This name is not certain: in fact, the commentator Dalhana notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

⁶⁷ The items which exemplify the 'sweet' savour (*madhuravarga*) are enumerated at SS.1.42.11.

⁶⁸ 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.)

(yojayed) them.

- 18 If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.
- 19 Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- Next, having cut a slice of flesh (*vadhra*) with the same measurements off the cheek, the end of the nose is then scarified.⁶⁹

 Then the diligent (*apramatta*) physician, should quickly put it back together (*pratisandhā*-) so that it is well joined (*sādhubaddha*).

Having carefully observed that it has been well sown up, two tubes should be fixed in place. Then, having lifted them up,⁷¹ the powder of sappanwood ($patt\bar{a}nga^{72}$),⁷³ liquorice ($yast\bar{t}madhuka^{74}$), and Indian barberry ($a\tilde{n}jana^{75}$) should be applied to it.

The wound should be covered properly with cotton (picu) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.⁷⁶

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

añjana

⁶⁹ The vulgate reads bound, connected (*baddham*) for 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 (wuja-roots3).

⁷⁰ Or '... off the cheek, it is fixed to the end of the nose, which has been scarified'. The Sanskrit text is unfortunately not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek.

⁷¹ The Sanskrit here, *unnāmayitvā* is non-Pāṇinian.

⁷² Caesalpinia sappan, L. (AVS 1.323, IMP 2.847f.)

⁷³ For pattāṅga there are manuscript variants *pattrāṅga* (MS H) and *pattaṅga* (N). We read with H and K (f. 14r:1) on Y. T. Ācārya and N. R. Ācārya (SS 1938²: 1.14.36). The vulgate reads *pataṅga* and this reading is propagated in modern dictionaries.

⁷⁴ Glycyrrhiza glabra, L. (AVS 3.84, NK #1136)

⁷⁵ Berberis aristata, DC. (Dymock 1.65, NK #685, GJM 562, IGP 141)

⁷⁶ The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

Sūtrasthāna, adhyāya 28

Thus, living creatures and their strength, complexion (*varṇa*) and energy (*ojas*) are rooted in food. That (food) depends on the six flavours (*rasa*). Thus, the flavours depend on substance (*dravya*), and substances depend on medicinal herbs. There are two kinds of them (herbs): stationary and mobile.⁷⁷

⁷⁷ SS 1.1.28 (SS 1938²:7), tr. P. V. Sharma 1999–2001: I, 21.

Kalpasthāna, adhyāya 1

Literature

Survey of this chapter and the existing research on it to 2002: HIML:IA, 289–290.

Translations of this chapter since 2000 have appeared by Dominik Wujastyk (2003: 131–139) and P. V. Sharma (1999–2001: 3, 1–15).

Manuscript notes

 MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,⁷⁸ dated to 1165 ce noted in Bendall's chart of Nepalese letter-numerals Bendall 1883: Lithograph V, after p. 225

⁷⁸ Scan at cudl.lib.cam.ac.uk/view/MS-ADD-01693/1.

Translation

- 1–2 And now I shall explain the procedures for safeguarding food and drink, as were declared by the Venerable Dhanvantari.⁷⁹
 - 3 Divodāsa, the king of the earth, was the foremost supporter of religious discipline and virtue. His instruction was unblemished and he taught his students, of whom Suśruta was the leader.⁸⁰

[Threats to the king]

4 Evil-hearted enemies who have plucked up their courage, may seek to harm the king, who knows nothing of it. He may be assailed with poisons by or by his own people who have been subverted, wishing to pour the poison of their anger into any vulnerability they can find.⁸¹

⁷⁹ MS H adds in the margin अथ खलु वत्स सुश्रुतः "Now begins Vatsa Suśruta." Vatsa can be a term of endearment, "sonny," or the name of an ancient lineage, but not one usually associated with Suśruta. The mention of Dhanvantari here is the only time in the Nepalese recension that this authority is cited as the source of Ayurvedic teaching. See the discussion by Klebanov (2021a: 28–32), who concludes that the earliest recoverable recension of the Suśrutasaṃhitā may have had the phrase only at this point and not elsewhere in the work.

⁸⁰ This is a quite different statement from the vulgate (SS 1938: 559) that has Dhanvantari as the teacher, and calls him the Lord of Kāśī (kāśipati). Dalhaṇa followed the vulgate but explicitly noted the reading before us with small differences: दिवोदासः क्षितिपतिस्तपोध्यमेश्रताकरः "Divodāsa, the king of the earth, was a mine of traditions about discipline and virtue."

⁸¹ Verses about the use of Venemous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. Dominik Wujastyk 2003: 81 f., 132

Uttaratantra, adhyāya 16 (17 in the vulgate)

Literature

Survey of this chapter and the existing research on it to 2002: HIML: IA, 305–306.

History of couching in India: Scott 1817; Breton 1826; Jack 1884; Hendley 1895; Elliot 1918; Parshwanath Shastri 1940; Deshpande 1999; 2000; Dagmar Wujastyk 2019; Leffler et al. 2020, wuja-root3.

Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*dṛṣṭi*).
- There are three curable $(s\bar{a}dhya)$, three incurable $(as\bar{a}dhya)$, and six mitigatible $(y\bar{a}pya)$ diseases located in peoples eyes. Among these, three are curable $(s\bar{a}dhya)$. Amongst these three, the remedy $(prat\bar{\imath}k\bar{a}ra)$ has been stated for the one called "seeing smoke $(dh\bar{\imath}madarsin)$ ".⁸²
- 3–5ab When the eye is inflamed (*vidagdha*) by bile and when it is inflamed by phlegm, one should apply the method for removing bile and phlegm, using nasal medicines (*nasya*), irrigation (*seka*), application of collyrium (*añjana*), liniment (*ālepa*), and medicines cooked in a crucible (*puṭapāka*), together with a balm (*tarpaṇa*), ⁸³ but not cutting with a blade (*śastrakṣata*). ⁸⁴

One should drink ghee (sarpis) prepared with the three fruits ($triphal\bar{a}$) and in the first [case where the problem is bile], and prepared with turpeth (traivrta) in the latter [case, of phlegm].

And ghee prepared with tilvaka (*tailvaka*) is wholesome in both cases, or else aged ghee on its own.

5cd–7ab In a collyrium, these four compounds (*yoga*) are beneficial in both cases:

• ochre (*gairika*), Sind salt (*saindhava*), long pepper (*kṛṣṇā*) and the black soot (*maṣī*) from cow's teeth;

maṣī burned charcoal. Find

where is cutting with a knife related to removing bile or

⁸² This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (SS 1938²: 609 and 614) respectively). The latter part of this verse is hard to construe and the text here may have been altered at an early period.

⁸³ These therapies are described in SS.6.18 (SS 1938^2 : 633–640).

⁸⁴ Dalhaṇa interprets this as blood-letting ($sir\bar{a}vedha$), which is discussed in SS.1.14 (SS 1938²).

- Cow's flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manahśilā*);
- stalk (vrnta) from a wood apple (kapittha) with honey (madhu);85
- or the the fruits of the velvet bean (*svayamgupta*).
- 8 The physician should make a collyrium with ground up metal (*ku-pyaka*), ⁸⁶ Asoka tree (*aśoka*), Sal tree (*śālā*), mango (*amra*), beautyberry (*priyaṃgu*), Indian lotus (*nalina*), blue lotus (*utpala*), together with hareṇu (*hareṇu*), emblic (*āmalaka*), myrobalan (*pathyā*), long pepper (*pippali*). It should be combined with ghee and honey (*kṣaudra*).
- 9–10 Also, when bile and phlegm have developed, the physician should apply harenu (harenu) with the expressed juice (svarasa) of the flowers from mango (amra) and Jambu (jambū) trees.

 Then this collyrium, matured (vipakva) with ghee and honey (kṣaudra), should then be applied.
- Filaments ($ki\tilde{n}jalka$) of Indian lotus (nalina) and blue lotus (utpala), with ochre (gairika), and the juice of cow-dung ($go\acute{s}akrt$) are a collyrium in the form of a pill ($gu\acute{q}ik\bar{a}$). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, scramberry (*tālīśa*), together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for an eye afflicted with bile.
 - Alternatively, wise physician should first grind together elixir-salve (\hat{sita}) and stibnite $(sauv\bar{i}raka)$, infused $(bh\bar{a}vita)$ with the blood of birds and animals (rasa). Then he mixes it with the bile of a tortoise or with extract of rohu carp (rauhita). It should always be used with powdered collyrium to quell the bile.
 - Thus, a collyrium of white teak ($k\bar{a}r\acute{s}mar\bar{\iota}$) flowers, liquorice (madhuka), tree turmeric ($d\bar{a}rv\bar{\iota}$), lodh tree (lodhra) and elixir salve ($ras\bar{a}\tilde{n}jana$) is always good as a collyrium in this case.
 - Alternatively, for those who cannot see during the day, this pill $(gudik\bar{a})$, with sandalwood, is recommended: salt $(nad\bar{\imath}ja)$, conch shell and the

⁸⁵ wood apple (*kapittha*) in this verse is ablative singular or accusative plural, neither of which construe obviously.

⁸⁶ A metal other than gold or silver, according to V. Jośī and N. H. Jośī 1968: 1.217. Perhaps lead, which is used in making contemporary collyrium.

⁸⁷ This is Dalhaṇa's preferred interpretation of rasa "juice" in this context. He also notes that some take elixir-salve (\hat{sita}) to be camphor.

- three spices, collyrium, realgar (manahśil \bar{a}), the two turmerics (rajana)⁸⁸ and liver extract (yakrdrasa).⁸⁹
- One should grind up kohl (*srotoja*), ⁹⁰ and Sind salt (*saindhava*) and long pepper and also harenu (*harenu*). Such wicks with goats urine are good in a collyrium for night blindness (*kṣaṇadāndhya*).
- 17–18ab Alternatively, in such a case, grind together Indian sarsaparilla ($k\bar{a}l\bar{a}$ - $nus\bar{a}riva$)⁹¹ long pepper, dried ginger ($n\bar{a}gara$) and honey, the leaf of the scramberry ($t\bar{a}l\bar{i}sapatra$), the two turmerics (rajana), a conch shell and liver extract (yakrdrasa). Then shade-dried wicks take away illness (ruj).
- 18cd–19ab Wicks made of red arsenic ($mana h sil \bar{a}$), chebulic myrobalan ($abhay \bar{a}$), the three spices (vyo sa). Indian sarsaparilla (sariva), cuttlefish bone (samudraphena), combined with goat's milk are good.
- One should cook a honey collyrium (*kṣaudrāñjana*) either in the juices of cow's urine (*gomūtra*), and bile, spirits (*madirā*), liver (*yakṛt*), and emblic (*dhātrī*) or else in the juice of the liver (*yakṛt*) of something different, or else with the extract of the three fruits (*triphalā*). One of these should be mixed with cow urine, ghee and cuttle fish (*arṇavamala*)⁹² with long pepper, honey and box myrtle (*kaṭphala*). It is placed in sea salt and stored in a bamboo tube.
 - One should cook the liver of a sheep, the ghee of a goat, with long pepper and Sindh salt, honey and the juice of emblics. Then one should store it properly in a catechu box. Prepared thus, the honey collyrium is good.
 - Alternatively, a collyrium that is harenu (harenu) mixed with long pepper ($m\bar{a}gadh\bar{\iota}$), the bone and the marrow of a goat, cardamom ($el\bar{a}$) and

⁸⁸ Turmeric (Curcuma longa *Linn*.) and tree turmeric (Berberis aristata DC). The term *rajana* is unusual; the normal term is *rajanī*. *Rajana* occurs in *Suśrutanighaṇṭu* 158 in the sense of Ferula asafoetida, Linn.

⁸⁹ This verse appears as no. 27 in the vulgate.

⁹⁰ Glossed by Palhaṇa as a kind of collyrium. Cf. Nadkarni 1954: 2.M13 and P. V. Sharma 1982: 197–198

⁹¹ There are two forms of *sārivā* mentioned widely in Āyurvedic literature, the white and the black. Ideas on the identity of the black form are particularly fluid. See Sivarajan and Balachandran (1994: 434–438) for a clear discussion.

⁹² At SS 6.12.31, Dalhaṇa glossed arṇavamala as cuttlefish bone (samudraphena). It may be worth considering whether the unusual term arṇavamala "ocean-filth" might refer to ambergris.

- liver, together with liver extract, is good for eyes afflicted by phlegm.⁹³
- Over a fire, one should cook the liver (yakṛt) of a monitor lizard (godhā) prepared with entrails (antra) and stuffed with long pepper (māgadhi). As is well known, liver (yakṛt) which is used (niṣevita) with collyrium certainly destroys night blindness.
- 25 After preparing both a spleen (*plīhan*) and a liver on a spit, one should eat them both with ghee and oil.⁹⁴
- As is well known, there are six diseases that can be alleviated (*yāpya*); in those cases (*tatra*) one should release the blood by bloodletting. And for the sake of wellbeing one should also purge using aged ghee combined (*upahita*) with purgative aids (*aṅga*).
 - When an eye-disease is caused by wind (pavanodbhava) they say that castor oil (pañcāṅgulataila) mixed with milk is good. In the case of diseases of blood (śonita) and bile (pitta), one should drink ghee with the three fruits; it is particularly cleansing. In the case of phlegm, a purgative by means of turpeth (trivṛt) is recommended. In the case of all three humours, sandal (sugandhi) in oil is prepared with it (turpeth).
 - 28 In cases of partial blindness (*timira*), aged ghee is recommended. It is good if it is kept in an iron vessel.
- 28cd–29ab One should know that ghee with the three mylobalans is always good, and it is made with what is called periploca of the woods (meṣaviṣāṇa). A man who is suffering from partial blindess should lick the finely-

⁹³ On the identities of <code>elā</code> and <code>hareṇu</code> Watt (1908: 511 ff) described the former as "true" or "lesser" or "Malabar" cardamom, Elettaria cardamomum, Maton & White, in contrast to the "greater" cardamom is Amomum subulatum (that he discusses on p. 65) that is commonly used as an inferior substitute for E. cardamomum. Singh and Chunekar (1972: 467 f) provided an interesting discussion of <code>hareṇu</code>, noting that the term refers to two substances, first the <code>satīna</code> pulse (Pisum sativum, Linn.), and second an unknown fruit such as perhaps a Vitex. They noted, "None of the text commentators have attempted to disclose the nature of its source plant," although Dalhaṇa described it as aromatic and identical to <code>reṇukā</code> (SS.ci.2.75).

⁹⁴ We read the locative as if an instrumental; if the locative were intended then it would be the spit that would be coated with oil and ghee.

⁹⁵ Palhaṇa says that the unexpressed topic of this recipe is partial blindness (timira).

⁹⁶ Blood-bile (*śonita-pitta*, *rakta-pitta*) is a widely-recognized disease in ayurveda, but the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

⁹⁷ The expression "the fragrant one in oil (*tailasugandhi*)" is puzzling. The word *sugandhi* has different referents in the *Nighaṇṭu* literature but is not common as a noun in the extant literature. "Sandal" is just one of its possible meanings.

ground three fruits mixed with ghee off his hand (sapāṇa).98

from wind and blood.

- 29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragāḍha*) in honey.
 - The very best oil, well-cooked with a decoction of cow-dung, is good in cases of partial blindness, taken as an errhine.

 In cases caused by bile, ghee by itself is good, as is oil when it arises
 - And in the case of wind one should apply turpeth (trivrt) based on strong mallow ($atibal\bar{a}$), and country mallow ($bal\bar{a}$) in an errhine (nasya). 99
 - Ghee which has been extracted from milk cooked with the meat of aquatic creatures and those from marshlands should be prescribed.
 - †An enclosed roasting (puṭākhya) with Sindh salt and the product of the meat of a carnivore (kravyabhuj) and a deer (eṇa), is combined with honey and ghee. 100
 - Fat $(vas\bar{a})$ from a horse, a vulture, a snake, and a cock $(t\bar{a}mrac\bar{u}da)$, combined with mahua $(madh\bar{u}ka)$ is always good in a collyrium. †
 - 33 Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.¹⁰²
 For thirty days, this collyrium is put in the mouth of a black snake that
 - 98 "Off his hand" translates the adverbial *sapāṇam*, an unusual word. Dalhaṇa reproduces a reading close to the Nepalese recention but says that Jejjaṭa rejects it and so he also does (SS 1938: 627).
 - 99 "Based on" translates -āśrita "depending on" which does not construe easily here. The vulgate has śṛta "cooked" which makes easier sense but is not supported by the Nepalese MSS.
 - 100 Dalhaṇa notes (SS 1938²: 628a) that puṭāhvaya (see verse 35 below) is a synonym for puṭapāka, and that the process is described in the Kriyākalpa chapter, i.e., SS.6.18.33–38 (SS 1938²: 635). On the puṭa process in the Suśrutasaṃhitā, which is earlier and different than that of rasaśāstra literature, see the discussion by Dagmar Wujastyk (2019: 83):
 - The term 'enclosed roasting' (puṭapāka) does occur in the Suśrutasaṃhitā in the context of eye treatments, but designates a method of obtaining juice from substances by wrapping them in leaves pasted with earth and cooking the bolus on charcoal to finally extract a juice.
 - 101 This verse contain irresolvable difficulties. There are no significant variants in the Nepalese MS transmission, but the text is ungrammatical. The vulgate reads substantially differently but we have nevertheless made some emendations in line with it and read the verse as two sentences.
 - 102 Dalhaṇa specifies that the juices are meat soups of various animals (SS 1938²: 628).

- is covered with kuśa grass (kuśa).
- Next, a collyrium that is milk containing long pepper ($m\bar{a}gadh\bar{\iota}$), lye ($k\bar{s}\bar{a}raka$) and Sindh salt (saindhava) that has been repeatedly prepared with the mouth of a black snake, is good in the case of bloodshot blindness ($r\bar{a}gin\ timira$).¹⁰³
- They say that ghee may be produced from that and combined with sweet herbs is good as an errhine for eye-diseases caused by bile. And here, a balm (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*putāhvaya*).¹⁰⁴
- And realgar ($mana h sil \bar{a}$) mixed with elixir salve ($ras \bar{a} \tilde{n} jana$) and honey is a liquid collyrium ($drav \bar{a} \tilde{n} jana$) which is, in this case, combined with mahua ($madh \bar{u} ka$). ¹⁰⁵
 - Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the "same collyrium (*samāñjana*)". 106
- Conch mixed with equal parts of sheep's horn and stibnite $(a\tilde{n}jana)$ removes the impurity of the glassy opacity $(k\bar{a}ca)$ because of the application of collyrium $(a\tilde{n}jana)$.
 - The extracts (rasa) produced from aflame of the forest ($pal\bar{a}\acute{s}a$), Rohīta tree ($roh\bar{\imath}ta$), 108 mahua ($madh\bar{\imath}ka$), ground with the supernatant layer (agra) of the spirits (madira) is applied.
- Alternatively, one should cook an errhine with cuscus grass ($u\acute{s}\bar{\imath}ra$), lodh tree (lodhra), the three fruits ($triphal\bar{a}$), beauty berry (priyangu) to pacify eye diseases caused by phlegm.¹⁰⁹
 - One should apply smoke of the bark of embelia (vidanga), velvet leaf

¹⁰³Dalhana describes this blindness as a type of $k\bar{a}ca$ disease caused by wind (SS 1938: 628). The expression "bloodshot blindness" is an attempt to capture the idea of a blind eye that is dyed or coloured (not colour-blindness). This verse is quite different from the vulgate and also syntactically challenging.

¹⁰⁴The expression taken hot (puṭāhvaya) is a guess.

¹⁰⁵The expression liquid collyrium ($drav\bar{a}\tilde{n}jana$) is only known from Palhaṇa's comments on SS.6.17.11ab (SS 1938²: 626). The recipe in the present collyrium is different from that discussed by Dalhana.

¹⁰⁶The expression "same collyrium (samāñjana)" is a hapax legomenon glossed inexplicably by Dalhaṇa as "a collyrium with an equal amount of fermented barley" (tulyasauvīrāñjana) (SS 1938²: 628).

¹⁰⁷The ablative "from collyrium" is hard to construe, but Dalhana uses this term and phrase in his commentary on SS 6.17.41ab (SS 1938²: 629).

¹⁰⁸Probably Soymida febrifuga A. Juss.

¹⁰⁹ \bar{p} alhaṇa invokes a general rule ($paribh\bar{a}s\bar{a}$) to indicate that this mixture should be cooked with sesame oil.

- $(p\bar{a}th\bar{a})$, white siris $(kinih\bar{\iota})$, and desert date $(i\dot{n}gud\bar{\iota})$; and cuscus grass $(u\bar{s}\bar{\imath}ra)$ alone.
- 39 A ghee that is cooked ($bh\bar{a}vita$) from a decoction of a non-flowering tree (vanaspati)¹¹⁰ as well as turmeric ($haridr\bar{a}$) and spikenard (nalada) is good in a balm (tarpaṇa).
 - Alternatively, one may have an enclosed roasting (puṭapāka) done with arid-land animals (jāngala)¹¹¹ and a plentiful amount of long pepper ($m\bar{a}gadha$), Sindh salt and honey.
- 40 A treatment ($kriy\bar{a}$) with realgar ($mana h sil\bar{a}$), the three spices, conch, honey, along with Sindh salt, green vitriol ($k\bar{a}s\bar{\imath}sa$) and elixir salve ($ras\bar{a}n\bar{\imath}jana$). 112
 - They say that an elixir salve ($ras\bar{a}\tilde{n}jana$) combined with myrobalans, treacle and dried ginger is good.¹¹³
- Alternatively, a collyrium that has been prepared many times in the eight types of urine¹¹⁴ is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature (*niśācara*)¹¹⁵ one should place it in a conch (*salilotthita*) for two months.¹¹⁶

place it in the mouth of a nocturnal creature (*nisacara*)¹¹⁵ one should place it in a conch (*salilotthita*) for two months.¹¹⁶

One should apply that collyrium together with the flowers of mahua (*madhūka*) and horseradish tree (*śigru*) when [the disease] is caused

But alternatively, all treatments apply when blood is the cause. The procedure that removes bile is good when there is blue dot cataract $(ml\bar{a}yin)$.¹¹⁷

43 For one who has a humour, the physician should consider the rule in

Check out these refs

by all [the humours].

¹¹⁰ These are fig trees. The *Sauśrutanighaṇṭu* (252) specifies the Udumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

¹¹¹ On this term, see SS.1.35.42 (SS 1938 2 :157) and the discussion by Zimmermann (1999:25–31).

¹¹² Dalhaṇa glosses treatment $(kriy\bar{a})$ specifically as inspissation $(rasakriy\bar{a})$ (SS 1938²: 629).

¹¹³ We emend hite to hitam, against the MSS.

¹¹⁴See SS mūtravarga

¹¹⁵ Dalhaṇa glosses nocturnal creature (niśācara) as "vulture," although elsewhere in the SS it is more commonly interpreted as a spirit or demon. In the present context, following verses 33 and 34, it is probably a snake.

¹¹⁶ We interpret "water-born (*salilotthita*)" as "conch" in line with *jalodbhava*, but the term is uncertain.

¹¹⁷ The vulgate follows Dalhaṇa in glossing $ml\bar{a}yin$ as $pariml\bar{a}ya$. The description of this condition at SS.6.7.27–28 appears to refer to "blue dot" or "cerulean" cataract. \sqrt{mlai} derivatives can mean "dark" or "black."), which is normally a different ailment.

- all humoral cases and then smear the ointment on the face.¹¹⁸ The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.¹¹⁹
- The physician should not employ substances in errhines etc., when the humours intensify, and also when disease spreads. And further, in the *Kalpa*, there is a good deal more said about collyriums, and that should be considered and then applied.¹²⁰
- Someone who uses matured ghee, the three fruits, wild asparagus ($\hat{s}a-t\bar{a}var\bar{\iota}$), as well as mung beans (mudga), emblic and barley has nothing to fear from cases of severe blindness (timira).
- 46 Blindness is dispelled by milk prepared with wild asparagus or in emblics, or again cooked barley (*yavaudana*) followed by the water of three fruits with plenty of ghee.
- When there is bloodshot blindness (*rāgiṇi timire*), the wise physician should not cut a vein. A humour injured (*utpīḍita*) by the instrument rapidly destroys vision.
- Non-bloodshot blindness (*araga timira*) in the first layer (*paṭala*) is treatable. And bloodshot blindness (*rāgiṇi timire*) in the second layer, with difficulty. And in the third layer it is mitigable (*yāpya*).
- I shall explain the therapy for success when there is a cataract (linga- $n\bar{a}$ sa) caused by phlegm. It may be white, like a full moon, an umbrella, a pearl ($mukt\bar{a}$) or a spiral ($\bar{a}varta$).
- Or it may be uneven, thin in the middle, streaked or have excessive shine (*prabha*). A humour (*doṣa*) in the pupil may be characterized as being painful or having blood.¹²¹
- At a time that is neither too hot or too cold, the patient who has been oiled and sweated is restrained and seated, looking symmetrically at his own nose.

The wise physician should separate $(muktv\bar{a})$ two white sections from

¹¹⁸ The vulgate edition omits part of this verse (ab) combining earlier and later passages. 119 The term watery eye (*syanda*) refers to the specific disease *abhiṣyanda*. See SS.6.6.5, 1.46.51, etc.

¹²⁰ Dalhana notes that *Kalpa* means the Uttaratantra adhyāya 18 (\$\frac{SS}{1938}^2\$: 633 ff).

¹²¹ In the vulgate, and in parallel passages in the AS, the reading "it may be (*bhavet*)" is replaced with the negative "if, then not (*na ced*)" (cf. AS utt.17.1–3 (AS 1980: 712)). These characteristics are then read as conditions that preclude surgery; for the Nepalese recension, they are simply descriptions of the appearance of a cataract.

the black part (kṛṣṇa) and from the outer corner of the eye ($ap\bar{a}nga$). Having pīḍ- (pressed) properly into the eye,¹²² at the naturally occurring (daivakṛte) hole (chidra) with the probe ($śal\bar{a}k\bar{a}$) made of copper or iron, with a tip like a barley-corn that is held by a steady hand with the middle finger, forefinger and thumb, the left one with the right hand and the other one contrariwise.

When the piercing is done, there is the simultaneous issue of a drop of liquid and a sound.¹²³

- The expert should moisten the exact place of piercing with a woman's breast-milk. Then he should scratch the circuit of the pupil (drstimandala) with the tip of the probe $(sal\bar{a}k\bar{a})$.¹²⁴
- Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing (ucchingana). 125
- Whether the humour is solid ($sty\bar{a}na$) or liquid (cala), one should apply sweating to the eye externally, with leaves ($bha\dot{n}ga$) that remove wind, after fixing the needle ($s\bar{u}c\bar{i}$) properly.¹²⁶
- But if the humour cannot be destroyed or if it comes back, one should apply the piercing (*vyadha*) once again, with appropriate oils and so on.
- Now the pupil (drsti) shines like the sun (hari) in a cloudless sky; then, when objects become visible, one may slowly remove the probe $(\hat{s}a-l\bar{a}k\bar{a})$. 127
- 60 Having smeared ghee on the eye, one should cover it with a bandage.

¹²²We understand the locative *nayane* as the place of pressing; other interpreters take it as an accusative dual. The idea is that the eye is held steady by the surgeon.

¹²³ Dalhana interprets simultaneous (*samyak*) rather as "proper," referring to the proper kind of incision.

¹²⁴The anatomy of the eye is described in SS 6.1.14–16 (SS 1938²: 596) The disks or *mandalas* are the circuits or disks of the eye.

¹²⁵ Palhaṇa describes sniffing (ucchingana) at SS 6.19.8 (SS 1938 2 : 641), clearly intending inward sniffing.

¹²⁶We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna SS 4.32.9, 6.11.5 (SS 1938²: 513, 614) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at AS 6.17.25 (AS 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.

¹²⁷There are many problems with the MS readings and interpretation of this half-verse. We have inferred "sky" and emended from "free from the point (agramukta)" to "free from clouds (abhramukta)". The latter meaning is supported (in different words) by the vulgate and occurs elsewhere in Sanskrit literature.

- Then, he must lie down supine in a house free from disturbances. 128
- At that time, he should not belch, cough, sneeze, spit or shiver. Afterwards there should be restrictions $(yantranaa \bar{a})$ as in the case of someone who has drunk oil.¹²⁹
- Every three days one should wash it with decoctions (kasaya) that remove wind. After three days, one should sweat the eye externally because of the danger of wind.
- Having restrained himself in this way for ten days he should thereafter take a beneficial regimen (*karma*) that clears the pupil (*dṛṣṭi*) and also he should take light food in measure.

[Complications]

- When there is a misshapen eyeball (vilocana), the eye may fill because of the release of blood from a vein.¹³⁰ A hard probe leads to shooting pain ($s\bar{u}la$), a thin to unsteadiness of the
 - humours (doṣapariplava),¹³¹
- a thick-tipped probe leads to a large wound, and a sharp one may cause harm in many ways; a very irregular one may cause a discharge of water, a rigid (*sthirā*) one brings about a loss of function (*kriyāsaṅga*).¹³²
- 66 Therefore, one should make a good probe that is free from these defects.

[Characteristics of the probe]

The probe should be eight finger-breadths long and in the middle it is wrapped with thread and is as thick as a thumb joint. It is shaped like

¹²⁸ Dalhaṇa explains disturbances specifically as dust, smoke, drafts and sunlight SS 6.17.67 (SS $1938^2:631a$).

¹²⁹ Palhaṇa glosses "restrictions (yantraṇā)" as having a controlled diet and the other restrictions appropriate to someone who is taking oil as a preparation before further therapy (SS 6.17.68 (SS 1938 2 : 631)). These restrictions are also described at SS 6.18.28 (SS 1938 2 : 635) and Ah 1.16.25cd (Ah1902: 249).

¹³⁰The condition of "misshapen eye" is referred to briefly in SS 6.61.9 (SS 1938²:800), where Dalhana glosses it as "bent brow and eye (*vakrabhrūnetra*)." The vulgate's reading of "with blood (*śonitena*)" is easier to construe.

¹³¹ There is a medically significant difference here from the vulgate, which reads "a rough (*khara*) probe" not a "thin" probe.

¹³²This translation of loss of function (*kriyāsaṅga*) is given on the basis of Dalhaṇa's gloss of *kriyāsaṅgakarin* as "causing the destruction of actions such as moving (*gamanādikriyāvināśakarī*)" at SS 3.8.19 (SS 1938²: 382).

- a bud at both ends (vaktra).
- 67 A commendable probe should be made of silver, iron or gold (\dot{sataku} - $mbh\bar{\iota}$). 133

[Complications]

Redness, swelling, lumps, driness (coṣa), bubbling (budbuda), ¹³⁴ pigs' eye $(s\bar{u}kar\bar{a}kṣit\bar{a})$, ¹³⁵, irritation (adhimantha), etc. and other diseases arise from faults in the piercing,

- or even from bad behaviour. One should treat them each accordingly. Listen to me once again about compounds for painful red eyes. Red chalk (gairikah), Indian sarsaparilla $(s\bar{a}riv\bar{a})$, panic grass $(d\bar{u}rv\bar{a})$, and ghee ground with barley.
 - 71 This face ointment is to be used for quelling pain and redness. Or else it may be taken combined with the juice of citron (*mātuluṅga*) with sesame gently fried, mixed with white mustard (*siddhārthaka*).¹³⁶ This is immediately beneficial when someone is looking for relief.
 - 72 A paste with Holostemma $(payasy\bar{a})$, 137 Indian sarsaparilla $(s\bar{a}riv\bar{a})$, cassia cinnamon (patra), Indian madder $(ma\tilde{n}jisth\bar{a})$, and liquorice (madhukair) stirred with goat's milk, pleasantly warmed, is said to be healthy. 138
 - Alternatively, it can be made in this way with Himalayan cedar, Himalayan cherry (*padmaka*) and dried ginger. Or, in the same way, with grapes, liquorice and the Lodh tree mixed with Sindh salt.

¹³³The vulgate reads "copper (tāmra)" in place of "silver."

¹³⁴ Palhaṇa glosses "bubbling (budbuda)" as "prolapse (māṃsanirgama) that looks like bubbles."

¹³⁵The expression "pigs' eye" appears to be a *hapax*. It is glossed as "downward vision (*adhodṛṣṭitva*)" by Dalhaṇa.

¹³⁶On the adverbial use of gently (*mṛdu*), see Gombrich 1979.

¹³⁷The identity of *payasyā* is debated (Singh and Chunekar 1972: 538), and was already in doubt at the time of Dalhaṇa but likely candidates may be those suggested by Dalhaṇa, who suggests either *arkapuṣpī* or *kṣīrakākolī*, that may be *Holostemma adakodien* Schult. and *Leptadenia reticulata* (Retz.) Wight & Arn. (Sivarajan and Balachandran 1994: 195-196). The *Sauśrutanighaṇṭu* glosses it as *kṣīrikā* or *arkapuṣpikā* (Suvedī and Tīvārī 2000: v. 307).

¹³⁸The expression "stirred with goat's milk (*ajākṣīrārdita*)" is difficult. It may be connected with the rare root *ard* documented by Whitney (1885: 15). Cf. √*ard gatau* (*Dhātupāṭha* 1.56).

- Alternatively, goats' milk with the Lodh tree, Sindh salt, red grapes and liquorice, cooked, should be used in irrigation because it removes pain and redness.
- Having cooked it with liquorice, water-lily, and costus, mixed with grapes (*drākṣā*), lac (*lākṣā*), white sugar (*sitā*), with wild asparagus, Hare Foot Uraria (*pṛthakparṇī*), 139 nutgrass (*mustā*), liquorice, Himalayan cherry (*padmaka*), and Sindh salts, one should apply it [irrigation] gently warm.
- 76cd–77ab Ghee that has been cooked in four times the amount of milk that has itself been cooked with drugs that destroy wind. This has an admixture of cottony jujube $(k\bar{a}kol\bar{\iota})$ etc., should be prescribed in all treatments. 141
- 77cd–78ab If pain does not end in this way, one should administer blood-letting to the vein of someone who has previously been oiled and sweated. Then the wise physician should apply cauterization in the advised manner. 142
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After grinding the flowers of perploca of the woods (meṣaśṛṅga), siris (śirīṣa), axelwood (dhava) royal jasmine (jātī), pearl and beryl (vaiḍūrya) with goat's milk, one should put it in a copper pot for seven days.
 - 8ocd–81 Having made it into wicks (*vartti*), the physician should apply it as a collyrium. Alternatively, one should make kohl (*srotoja*), coral (*vidruma*), cuttlefish bone (*phena*), and realgar (*manaḥśilā*) and peppers into wicks as before. One should apply these wicks, which are good in a collyrium, to steady the pupil.
 - 82 I shall again discuss the foremost collyriums at length in the *Kriyākalpa* section. Those various methods may be applied here too.

or a dual

¹³⁹Suvedī and Tīvārī 2000: 18.

¹⁴⁰ Dalhaṇa mentions that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasaṃśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

¹⁴¹ Dalhana notes that this would include errhines, ointments, etc.

¹⁴²The vulgate reads $v\bar{a}pi$ for $c\bar{a}pi$, so Dalhana sees blood-letting and cautery as alternatives, not a sequence of treatments. Dalhana lists the places that cauterization may be applied, such as the brow, forehead, etc.

Abbreviations

Ah1902	Kuṃṭe, Ananta Moreśvara and Navare,
	Kṛṣṇaśāstrī Rāmacandra (1902) (eds.),
	श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, सूत्र-शारीर-निदान-
	चिकित्सा-कृत्य-उत्तरस्थानविभक्तम् श्रीमदरुणदत्तप्रणीतया
	सर्वांगसुंदर्गाख्यया व्याख्यया समलंकृतम् (Kṛṣṇadāsa
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NGMCP

SS 1931

SS 1938

SS 1938²

 SS_{1915}

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Glossary

ablaavā		matileāna, 10	ana arrana ala
abhayā	1: .	pratīkāra: 18	arṇavamala
	oulic	along these lines	cuttle fish: 31
-	balan: 31	evam: 18	asādhya
abhramul		āmalaka	incurable: 29
free	from clouds:	emblic: 30	aśoka
37		amra	asoka tree: 30
ācāra		mango: 30	āśoka
regi	men: 16	aṇḍaja	grief: 16
ācārika		born from eggs: 17	asoka tree
med	lical advice: 23	aṅga	aśoka: 30
accumul	ation	aids: 32	āśrayin
sañc	aya: 18	parts: 18	substrate: 16
adhimant		anger	asthi
irrit	ation: 39	krodha: 16	bones: 18
adhiṣṭhān		angry	аѕӣуӣ
	ted: 16	saṃrambha: 24	jealousy: 16
adhodṛṣṭi		animals	atibalā
	nward vision:	paśu: 17	strong mallow: 33
	iiwaia visioii.	añjana	ātmaka
39 adhyāya		application of	nature: 16
	ions: 19	collyrium: 29, 34	āvarta
	10115. 19		spiral: 36
āgantu	umal factores to	stibnite: 34	awl
	rnal factors: 19	antra	ārā: 21
agra	1	entrails: 32	axelwood
_	ernatant layer:	ants	dhava: 40
34		pipīlika: 17	ayana
agramukt		apāṅga	half-year: 18
free	from the point:	edge of the hole: 24	āyatta
37		outer corner of the	depends on: 16
āhāra		eye: <u>37</u>	āyur
diet	: 16	apatānaka	life, longevity: 13
ahorātra		convulsions: 21	āyurveda
day	and night: 18	application of collyrium	the science of life:
aids		añjana: 29, 34	13
aṅga	1: 32	apramatta	-5
ajākṣīrāra	lita	diligent: 25	baddham
stirr	ed with goat's	ārā	bound, connected:
milk:	39	awl: 21	25
ālepa		araga timira	balā
•	nent: 29	non-bloodshot	country mallow: 33
alleviate		blindness: 36	bala
	ja: 32	arid-land animals	strength: 16
alleviatio		jāṅgala: 35	balm
and viatio		J 33	~ viill

tarpaṇa: 29, 34f	sirāvedha: 29	liṅganāśa: 36
bandha	bloodshot blindness	caturvarga
bindings: 23	rāgin timira: 34	fourfold grouping:
beauty berry	rāgiņi timire: 36	18
priyangu: 34	blue dot cataract	catuṣtaya
beautyberry	mlāyin: 35	four factors: 18
priyaṃgu: 30	blue lotus	caused by wind
bent brow and eye	utpala: 30	pavanodbhava: 32
vakrabhrūnetra: 38	blue vitriol	causing the destruction
beryl	tuttha: 34	of actions such as
vaidūrya: 40	bones	moving
bhadradāru	asthi: 18	gamanādikriyāv-
deodar: 40	born from eggs	ināśakarī: 38
bhanga	aṇḍaja: 17	chebulic myrobalan
leaves: 37	born in in a caul	abhayā: 31
bhavet	jarāyuja: 17	chedya
	born of sweat	cutting: 23
it may be: 36 bhāvita	svedaja: 17	excision: 19
	bound, connected	chidra
cooked: 35	baddham: 25	
infused: 30	box myrtle	hole: 37
bhedya	kaṭphala: 31	circuit of the pupil
splitting: 23	brmhana	dṛṣṭimaṇḍala: 37
bile	nourishment: 16	citron
pitta: 32	bubbling	mātulunga: 39
bindings	budbuda: 39	clusters
bandha: 23	budbuda	samplava: 17
black part	bubbling: 39	cock
kṛṣṇa: 37	bulbs	tāmracūḍa: 33
black pepper	kanda: 17	collection
marica: 30	Kunuu. 1/	varga: 18
black soot	cala	combined
maṣī: 29	liquid: 37	upahita: 32
blessings pronounced	cardamom	comfort
svastivācana: 21	elā: 31	sukha : 18
blindness	carman	complexion
timira: 36	pelt: 17	varṇa: 16, 26
blink of the eye	carnivore	compounds
nimeṣa: 17	kravyabhuj: 33	yoga: 29
blood	cassia cinnamon	compressed
rudhira: 17	patra: 39	saṃkṣipta: 23
śonita: 32	castor oil	compressed
blood-bile	pañcāṅgulataila: 32	saṃkṣipta: 22
śonita-pitta,	castor oil tree	compressed
rakta-pitta: 32	gandharvahasta: 21	saṃkṣipta: 22
blood-letting	cataract	conch
DIOOU-ICHIIIS	cataract	COLICII

salilotthita: 35	misery: 16	humours: 18
congested humours	dais	doṣapariplava
sannipāta: 19	pīṭha: 22	unsteadiness of the
convulsions	daivakṛte	humours: 38
apatānaka: 21	naturally	downward vision
cooked barley	occurring: 37	adhodṛṣṭitva: 39
yavaudana: 36	dārvī	drākṣā
cooked	tree turmeric: 30	grapes: 40
bhāvita: 35	day and night	dravāñjana
copper	ahorātra: 18	liquid collyrium:
tāmra: 39	decanted liquor	34
coral	surāmaṇḍa: 23	dravya
vidruma: 40	decoctions	substance: 26
cosa	kaṣāya: 38	dried ginger
driness: 39	deer	nāgara: 31
cotton		driness
picu: 23	eṇa: 33 deodar	coṣa: 39
cottony jujube	bhadradāru: 40	drsti
kākolī: 40	depends on	pupil: 29, 37f
counteraction	•	dṛṣṭimaṇḍala
pratiședha: 29	āyatta: 16	circuit of the pupil:
country mallow	depression	37
balā: 33	viṣāda: 16	duct
cow's flesh	desert date	sirā: 21
gomāṃsa: 30	iṅgudī: 35	ducts
cow's urine	desire	sirā: 18, 23
gomūtra: 31	icchā: 16	duhkha
cow-dung	dhānyāmla	suffering: 16
gośakṛt: 30	fermented	dūrvā
creepy-crawlies	rice-water: 23	panic grass: 39
sarīsṛpa: 14, 17	dhātrī	dușța
curable	emblic: 31	tainted: 23
sādhya: 29	dhava	dveșa
cuscus grass	axelwood: 40	hatred: 16
uśīra: 34f	dhūmadarśin	
cutting	seeing smoke: 29	earthen products
chedya: 23	diet	pārthiva: 17f
cutting with a blade	āhāra: 16	edge of the hole
śastrakṣata: 29	dilator	apāṅga: 24
cuttle fish	pravardhanaka: 21	elā
arṇavamala: 31	diligent	cardamom: 31
cuttlefish bone	apramatta: 25	elixir salve
phena: 40	disease	rasāñjana: 30, 34f
samudraphena: 31	vyadhi: 18	elixir-salve
Summing with 31	doṣa	rasāñjana: 30
daimua	humour 26	elixir-salve

śīta: 30	rasa: 16, 26	glassy opacity
embelia	flesh	kāca: 34
vidaṅga: 34	тāṃsa: 18	godhā
emblic	vadhra: 25	monitor lizard: 32
āmalaka: 30	flowering trees	gold
dhātrī: 31	vṛkṣa: 17	śātakumbhī: 39
eṇa	flowers	gomāṃsa
deer: 33	ри <i>ṣра</i> : 1 <mark>7</mark>	cow's flesh: 30
enclosed roasting	fortnight	gomūtra
puṭākhya: 33	pakṣa: 18	cow's urine: 31
puṭapāka: 35	four factors	gośakṛt
ends	catuṣtaya: 18	cow-dung: 30
vaktra: 39	fourfold grouping	juice of cow-dung
energy	caturvarga: 18	30
ojas: 26	free from clouds	granthi
entrails	abhramukta: 37	lumps: 21
antra: 32	free from the point	granthita
envy	agramukta: 37	lumpy: 22
īrṣyā: 16	frogs	grapes
errhine	maṇḍūka: 17	drākṣā: 40
nasya: 33	fruit trees	greed
essence	vanaspati: 17	lobha: 16
sāra: 17	fruits	green vitriol
evam	phala: 17	kāsīsa: 35
along these lines:		grief
18	gāḍha	āśoka: 16
excision	pinched: 23	guḍikā
chedya: 19	gairika	pill: 30
expressed juice	ochre: 29f	r y-
svarasa: 30	gairikaḥ	half-year
external factors	red chalk: 39	ayana: 18
āgantu: 19	gamanādikriyāvināśakarī	hare foot uraria
extract of rohu carp	causing the	pṛthakparṇī: 40
rauhita: 30	destruction of	hareṇu
extracts	actions such as	hareņu: 30f
rasa: 34	moving: 38	hareṇu
7.1.011. 34	gandharvahasta	hareṇu: 31
fat	castor oil tree: 21	hareṇu
vasā: 33	gauze	hareņu: 31
fermented rice-water	prota: 23	hareņu
dhānyāmla: 23	general rule	hareņu: 30
filaments	paribhāṣā: 34	harenu
kiñjalka: 30	gently	hareņu: 30
flame of the forest	mṛdu: 39	hari
palāśa: 34	ghee	sun: 37
flavours	sarnis: 20	haridrā

turmeric: 35	sāriva: 31	jealousy
harṣa	indragopa	asūyā: 16
overexcitement: 16	red velvet mites: 17	joins
hatred	inflamed	sandhāna: 21
dveṣa: 16	vidagdha: 29	sandhi: 22
herbs	infused	joints
oṣadhi: 17	bhāvita: 30	sandhi: 18
himalayan cherry	iṅgudī	juice extract
padmaka: 39f	desert date: 35	svarasa: 17
hīna	inherent factors	juice of cow-dung
reduced: 25	svabhāva: 19	gośakṛt: 30
hole	inherent	juices
chidra: 37	svābhāvika: 16	rasa: 33
holostemma	injured	
payasyā: 39	utpīḍita: 36	kāca
honey collyrium	inspissation	glassy opacity: 34
kṣaudrāñjana: 31	rasakriyā: 35	kākolī
honey	intended	cottony jujube: 40
kṣaudra: 30	vyākhyāta: 19	kalā
madhu: 30	irregularities	minutes: 17
horseradish tree	vaiṣamya: 16	kālakṛta
śigru: 35	irrigation	items created by
human being	seka: 29	time: 17f
puruṣa: 16, 18	irritation	kālānusāriva
humour	adhimantha: 39	indian sarsaparilla:
doṣa: 36	prakopa: 18	31
humours	īrṣyā	kāma
doṣa: 18	envy: 16	lust: 16
	it may be	kanda
icchā	bhavet: 36	bulbs: 17
desire: 16	items created by time	kapālacūrṇa
if, then not	kālakṛta: 17f	powdered
na ced: 36		earthenware
illness	jambū	crockery: 23
ruj: 31	jambu: 30	kapittha
in those cases	jambu	wood apple: 30
tatra: 32	jambū: <mark>30</mark>	karma
incurable	jāṅgala	regimen: 38
asādhya: 29	arid-land animals:	karman
indian lotus	35	therapies: 19
nalina: 30	jaṅgama	kārśmarī
indian madder	moving: 17f	white teak: 30
mañjiṣṭhā: 21, 39	jarāyuja	kaṣāya
indian sarsaparilla	born in in a caul: 17	decoctions: 38
kālānusāriva: 31	jātī	kāśipati
śārivā: 39	royal jasmine: 40	lord of kāśī: 28

kāsīsa	honey collyrium:	greed: 16
green vitriol: 35	31	located
kāṣṭhā	kṣīṇa	adhiṣṭhāna: 16
trice: 17	wasted: 24	lodh tree
kaṭphala	ksīra	lodhra: 30, 34
box myrtle: 31	sap: 17	lodhra
khara	kunta	lodh tree: 30, 34
rough: 38	small insects: 17	long pepper
kinihī	kupyaka	kṛṣṇā: 29
white siris: 35	metal: 30	māgadha: 35
kiñjalka	kuśa grass	тāgadhī: 31, 34
filaments: 30	kuśa: 34	māgadhi: 32
knowledge	kuśa	pippali: 30
_	kuśa grass: 34	lord of kāśī
veda: 13	Rusu grassi 34	kāśipati: 28
kohl	lac	loss of function
srotas: 33	lākṣā: 40	kriyāsanga: 38
srotoja: 31, 40	lākṣā	lumps
kravyabhuj	lac: 40	granthi: 21
carnivore: 33	layer	lumpy
kriyā	paṭala: 36	granthita: 22
procedures: 15f, 19	leaves	lust
treatment: 18, 35	bhaṅga: 37	kāma: 16
kriyākāla	patra: 17	lūtā
the time for	lekhana	
therapies: 18	scarification: 16	spiders: 14
kriyāsaṅga	lekhya	lye
loss of function: 38	scarification: 23	kṣāraka: 34
kṛmi	life, longevity	madhu
worms: 17	āyur: 13	honey: 30
krodha	liṅganāśa	madhuka
anger: 16	cataract: 36	liquorice: 30
kṛṣṇa	liniment	madhūka
black part: 37	ālepa: 29	mahua: 33ff
kṛṣṇā	liquid	madhukair
long pepper: 29	cala: 37	liquorice: 39
kṛtamaṅgala	liquid collyrium	madira
received a		
benediction: 21	dravāñjana: 34	spirits: 34 madirā
kṣaṇadāndhya	liquorice madhuka: 30	
night blindness: 31	madhukair: 39	spirits: 31
	9,2	māgadha
kṣāraka	liver extract	long pepper: 35
lye: 34	yakṛdrasa: 31	māgadhī
kṣaudra	liver	long pepper: 31, 34
honey: 30	yakṛt: 31f	māgadhi
ksaudrāñiana	lohha	long pepper: 22

mahua	puṭapāka: 29	mudga: 36
madhūka: 33ff	mental	mūṣika
malice	mānasa: 16	rodents: 14
mātsarya: 16	meşaśringa	mustā
тāṃsa	perploca of the	nutgrass: 40
flesh: 18	woods: 40	myrobalan
māṃsanirgama	meṣaviṣāṇa	pathyā: 30
prolapse: 39	periploca of the	
manahśilā	woods: 32	na ced
realgar: 31, 34f, 40	metal	if, then not: 36
red arsenic: 30f	kupyaka: 30	nadīja
mānasa	minutes	salt: 30
mental: 16	kalā: 17	nāgara
maṇḍūka	misery	dried ginger: 31
frogs: 17	dainya: 16	nalada
mango	misshapen eyeball	spikenard: 35
amra: 30	vilocana: 38	nalina
mañjiṣṭhā	mitigable	indian lotus: 30
indian madder: 21,	уаруа: 36	nasal medicines
39	mitigatible	nasya: 29
manyāstambhā	уāруа: 2 9	nasya
paralysis of the	mlāyin	errhine: 33
nape of the neck: 21	blue dot cataract:	nasal medicines: 29
mardita	35	naturally occurring
massaged: 24	monitor lizard	daivakṛte: 37
marica	godhā: 32	nature
black pepper: 30	month	ātmaka: 16
māsa	māsa: 18	needle
month: 18	moving	sūcī: 37
masī	jangama: 17f	night blindness
black soot: 29	mṛdu	kṣaṇadāndhya: 31
massaged	gently: 39	nimeṣa
mardita: 24	mudga	blink of the eye: 17
mātsarya	mung beans: 36	niryāsa
malice: 16	muhūrta	resin: 17 niśācara
mātuluṅga	three-quarters of	nocturnal creature:
citron: 39	an hour: 18	
matured	muktā	35 nișevita
vipakva: 30	pearl: 36	prepared: 33
may repair	muktvā	used: 32
yojayed: 25	separate: 36	nivāta
medical advice	mūla	no wind: 17
ācārika: 23	root: 16	no wind
medicines cooked in a	roots: 17	nivāta: 17
crucible	mung heans	nocturnal creature

palāśa	perploca of the woods
flame of the forest:	meṣaśṛṅga: 40
34	phala
	fruits: 17
•	phena
	cuttlefish bone: 40
	physical
	śārīravad: 18
	picu
3	cotton: 23
	pīḍ-
	pressed: 37
	piercing
•	vyadha: 37
_	vyadhana: 23
•	
_	pigs' eye
	sūkarākṣitā: 39
-	pill
	guḍikā: 30
•	pinched
	gāḍha: 23
	pipīlika
	ants: 17
	pippali
	long pepper: 30
	pīṭha
layer: 36	dais: 22
pāthā	pitta
velvet leaf: 35	bile: 32
pathyā	plīhan
myrobalan: 30	spleen: 32
patra	powdered earthenware
cassia cinnamon:	crockery
39	kapālacūrņa: 23
	prabha
-	shine: 36
•	practical purposes
-	prayojanavat: 18
	pragāḍha
	steeped: 33
•	prakopa
	irritation: 18
•	prakṛti
•	temperament: 16
	nratīkāra
	34 pallava shoots: 37 pañcāṅgulataila castor oil: 32 panic grass dūrvā: 39 paralysis of the nape of the neck manyāstambhā: 21 paribhāṣā general rule: 34 pārthiva earthen products: 17f partial blindness timira: 32 particulars vikalpa: 18 parts aṅga: 18 paśu animals: 17 paṭala layer: 36 pāthā velvet leaf: 35 pathyā myrobalan: 30 patra

alleviation: 18	риșра	kṛtamaṅgala: 21
remedy: 29	flowers: 17	red arsenic
pratisandhā-	put it back together	manaḥśilā: 30f
put it back	pratisandhā-: 25	red chalk
together: 25	puṭāhvaya	gairikaḥ: 39
pratiședha	taken hot: 34	red velvet mites
counteraction: 29	puṭākhya	indragopa: 17
pratuda	enclosed roasting:	reduced
scavenging: 24	33	hīna: 25
pravardhanaka	puṭapāka	regimen
dilator: 21	enclosed roasting:	ācāra: 16
prayojanavat	35	karma: <u>3</u> 8
practical purposes:	medicines cooked	remedies
18	in a crucible: 29	oṣadhi: 18
prepared		oṣadhī-: 16
nișevita: 33	rāgin timira	remedy
prepared with tilvaka	bloodshot	pratīkāra: 29
tailvaka: 29	blindness: 34	resin
prepared with turpeth	rāgiņi timire	niryāsa: 17
traivṛta: 29	bloodshot	restrictions
pressed	blindness: 36	yantraṇā: 38
pīḍ-: 37	rainy seasons	rigid
priyaṃgu	varṣā: 17	sthirā: 38
beautyberry: 30	rajana	rodents
priyangu	turmerics: 31	mūṣika: 14
beauty berry: 34	raktabaddha	rohīta
probe	obstructed by	rohīta tree: 34
śalākā: 37	blood: 23	rohīta tree
procedures	rasa	rohīta: 34
kriyā: 15f, 19	extracts: 34	root
prolapse	flavours: 16, 26	mūla: 16
māṃsanirgama: 39	juices: 33	roots
prota	the blood of birds	mūla: 1 7
gauze: 23	and animals: 30	rough
pṛthakparṇī	rasakriyā	khara: 38
hare foot uraria: 40	inspissation: 35	royal jasmine
puffed up	rasāñjana	jātī: 40
śopha: 24	elixir salve: 30, 34f	ŗtu
	elixir-salve: 30	season: 18
pupil	rauhita	rudhira
<i>dṛṣṭi</i> : 29, 37f purification	extract of rohu	blood: 17
	carp: 30	ruj
saṃśodhana: 16	realgar	illness: 31
puruṣa	manaḥśilā: 31, 34f,	sādhubaddha
human being: 16,	40 received a henediction	well joined: 25

sādhya	joints: 18	seed-eating
curable: 29	sannipāta	vișkira: 24
saindhava	congested	seeing smoke
sind salt: 29, 31	humours: 19	dhūmadarśin: 29
sindh salt: 34	sap	seka
sal tree	kṣīra: 17	irrigation: 29
śālā: 30	sapāṇa	separate
śālā	off his hand: 33	muktvā: 36
sal tree: 30	sāra	septic
śalākā	essence: 17	pāka: 23
probe: 37	śārīravad	shine
salilotthita	physical: 18	prabha: 36
conch: 35	sarīsṛpa	shooting pain
water-born: 35	creepy-crawlies: 14,	śūla: 38
salt	17	shoots
nadīja: 30	sāriva	pallava: 37
samāñjana	indian sarsaparilla:	udbhid: 17
same collyrium: 34	31	shrubs
same collyrium	śārivā	vīrudh: 17
samāñjana: 34	indian sarsaparilla:	siddhārthaka
saṃkṣipta	39	white mustard: 39
compressed: 22f	sarpis	śigru
compressed: 22	ghee: 29	horseradish tree:
samplava	śastrakṣata	35
clusters: 17	cutting with a	simultaneous
saṃrambha	blade: 29	samyak: 37
angry: 24	śātakumbhī	sind salt
saṃśamana	gold: 39	saindhava: 29, 31
pacification: 16	śatāvarī	sindh salt
saṃśodhana	wild asparagus: 36	saindhava: 34
purification: 16	sauvīraka	sinews
samudraphena	stibnite: 30	snāyu: 18
cuttlefish bone: 31	scarification	sirā
saṃvatsara	lekhana: 16	duct: 21
year: 18	scarification	ducts: 18, 23
samyak	lekhya: 23	sirāvedha
simultaneous: 37	scavenging	blood-letting: 29
sañcaya	pratuda: 24	siris
accumulation: 18	scramberry	śirīṣa: 30, 40
sandal	tālīśa: 30	śirīṣa
sugandhi: 32	tālīśapatra: 31	siris: 30, 40
sandhāna	season	śīta
joins: 21	ṛtu: 18	elixir-salve: 30
sandhi	sections	sitā
ioins: 22	adhuāua: 10	white sugar: 40

skin	stiff: 22f	agra: 34
tvak: 17f	stalk	suppurating
slice of flesh	vṛnta: 30	srāva: 23
vadhra: 25	stationary	suppuration
small insects	sthāvara: 16, 18	srāva: 24
kunta: 17	steeped	surāmaṇḍa 📉 🛴
รกลิ่งน	pragāḍha: 33	decanted liquor: 23
sinews: 18	sthāvara	svabhāva
sneha	stationary: 16, 18	inherent factors: 19
oil: 17	sthirā	svābhāvika
sniffing	rigid: 38	inherent: 16
ucchiṅgana: 37	stibnite	svarasa
solid	añjana: 34	expressed juice: 30
styāna: 37	sauvīraka: 30	juice extract: 17
śonita	stiff	svastivācana
blood: 32	stabdha: 22f	blessings
śonita-pitta, rakta-pitta	stirred with goat's milk	pronounced: 21
blood-bile: 32	ajākṣīrārdita: 39	svayamgupta
śonitena	strength	velvet bean: 30
with blood: 38	bala: 16	śvayathu
sopha	strong mallow	swelling: 21
•	atibalā: 33	svedaja
puffed up: 24		born of sweat: 17
spiders	styāna	swelling
lūtā: 14	solid: 37	śvayathu: 21
spikenard	substance	syanda
nalada: 35	dravya: 26	watery eye: 36
spiral	substrate	
āvarta: 36	āśrayin: 16	tailasugandhi
spirits	$s\bar{u}c\bar{t}$	the fragrant one in
madirā: 31	needle: 37	oil: 32
madira: 34	suffering	tailvaka
spleen	duḥkha: 16	prepared with
plīhan: 32	sugandhi	tilvaka: 29
splitting	sandal: 32	tainted
bhedya: 23	sūkarākṣitā	duṣṭa: 23
srāva	pigs' eye: 39	taken hot
suppurating: 23	sukha	puṭāhvaya: 34
suppuration: 24	comfort: 18	tālīśa
śreyas	śūla	scramberry: 30
welfare: 13	shooting pain: 38	tālīśapatra
srotas	sun	scramberry: 31
kohl: 33	hari: 37	tāmra
srotoja	sunivișța	copper: 39
kohl: 31, 40	very intent: 24	tāmracūḍa
stabdha	supernatant layer	cock: 33

tarpaṇa	haridrā: 35	varga
balm: 29, 34f	turmerics	collection: 18
tatra	rajana: 31	varṇa
in those cases: 32	turpeth	complexion: 16, 26
temperament	trivṛt: 32f	varṣā
prakṛti: 16	tuttha	rainy seasons: 17
the blood of birds and	blue vitriol: 34	varti
animals	tvak	wick: 21
rasa: 30	skin: 17f	vartti
the fragrant one in oil		wicks: 40
tailasugandhi: 32	ucchiṅgana	vasā
the science of life	sniffing: 37	fat: 33
āyurveda: 13	udbhid	veda
the three fruits	shoots: 17	knowledge: 13
triphalā: 34	unsteadiness of the	vedanābhighāta
the three spices	humours	pain and injury: 13
vyoṣa: 31	doṣapariplava: 38	velvet bean
the time for therapies	upahita	svayaṃgupta: 30
kriyākāla: 18	combined: 32	velvet leaf
therapies	ираѕ́ата	pāthā: 35
karman: 19	pacification: 18	very intent
three fruits	used	sunivișța: 24
triphalā: 29, 31	nișevita: 32	vidagdha
three-quarters of an	uśīra	inflamed: 29
hour	cuscus grass: 34f	vidanga
muhūrta: 18	utpala	embelia: 34
timira	blue lotus: 30	vidruma
blindness: 36	utpīdita	coral: 40
partial blindness:	injured: 36	vikalpa
32	Jl	options: 22
traivṛta	vadhra	particulars: 18
prepared with	flesh: 25	vilocana
turpeth: 29	slice of flesh: 25	misshapen eyeball:
treatment	vaidūrya boryle 10	38
kriyā: 18, 35	beryl: 40	vipakva
tree turmeric	vaiṣamya	matured: 30
dārvī: 30	irregularities: 16	vīrudh
trice	vakrabhrūnetra	shrubs: 17
kāṣṭhā: 17	bent brow and eye:	viṣāda
triphalā	38 vaktra	depression: 16
the three fruits: 34		vișkira
	ends: 39	•
three fruits: 29, 31	vanaspati	seed-eating: 24
turnoth: oof	fruit trees: 17	vital energy
turpeth: 32f	non-flowering tree:	ojas: 16
turmeric	35	vṛkṣa

flowering trees: 17	well joined	kṛmi: 17
vṛnta stalk: 30 vyadha piercing: 37 vyadhana piercing: 23 vyadhi disease: 18 vyākhyāta intended: 19 vyāla wild animals: 17 vyoṣa the three spices: 31	sādhubaddha: 25 white mustard siddhārthaka: 39 white siris kinihī: 35 white sugar sitā: 40 white teak kārśmarī: 30 wick varti: 21 wicks vartti: 40 wild animals	yakṛdrasa liver extract: 31 yakṛt liver: 31f yantraṇā restrictions: 38 yāpya alleviated: 32 mitigable: 36 mitigatible: 29 yavaudana cooked barley: 36 year samvatsara: 18
wasted kṣṇṇa: 24 water-born salilotthita: 35 watery eye syanda: 36 welfare	vyāla: 17 wild asparagus śatāvarī: 36 with blood śonitena: 38 wood apple kapittha: 30 worms	yoga compounds: 29 yojayed may repair: 25 yuga yuga: 18 yuga
śreyas: 13	WOIIII	yuga: 18

Index of Manuscripts

The numbers after the colon refer to pages in this document.

Bikaner Anup 4390: 6 London BL H. T. Colebrooke 908: 10

Cambridge Add. 1693: 27

Kathmandu NAK 5-333: 8, 10, 27

Kathmandu, KL 699: 2

Kathmandu, NAK 1-1079: 2

Kathmandu, NAK 5-333: 2

Thanjavur TMSSML 10773: 41

Appendix

On digital critical editions

- Price, Kenneth M. (2013), 'Electronic Scholarly Editions', in Ray Siemens and Susan Schreibman (eds.), *A Companion to Digital Literary Studies* (Chichester, UK: John Wiley & Sons, Ltd), 434–50.
 DOI: 10.1002/9781405177504.ch24, URL, accessed 04/07/2021.
 A survey of the field in 2013, with a focus on the presentation of electronic texts rather than on critical editing as such.
- Moureau, Sébastien. (2015), 'The Apparatus Criticus', in Alessandro Bausi et al. (eds.), Comparative Oriental Manuscript Studies: An Introduction (Hamburg: Tredition), 348–52, ISBN: 978-3-7323-1768-4, URL, accessed 04/07/2021.
 Useful discussion about the apparatus criticus in general, and an evaluation of the plus and minus points of positive and negative apparatuses.
- Burghart, Marjorie (2016), 'The TEI Critical Apparatus Toolbox: Empowering Textual Scholars through Display, Control, and Comparison Features', Journal of the Text Encoding Initiative, 10/Issue 10. DOI: 10.4000/jtei.1520, URL, accessed 12/12/2017.
 Discussion of a software tool, including the handling of positive and negative apparatus. Makes the assumption that online displays are notational variants only.
- Burghart, Marjorie (2017), 'Textual Variants', in Marjorie Burghart et al. (eds.), Digital Editing of Medieval Texts: A Textbook (DEMM), URL, accessed 04/07/2021.
 - Discussion of how to express various kinds of apparatus in TEI.
- Bausi, Alessandro et al. (2015), Comparative Oriental Manuscript Studies. An Introduction (Hamburg: Tredition). DOI: 10.5281/ZENODO.46784.
 - A huge book that disappointingly says nothing at all about Sanskrit manuscripts. Nevertheless there are many interesting case studies and remarks applicable to the Indian manuscript tradition.