

**Philipp A. Maas / Anthony Cerulli (Eds.)**

# सुहृदयसंहिता

A Compendium of Studies on  
South Asian Culture, Philosophy, and Religion  
Dedicated to Dominik Wujastyk



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Studia Indologica Universitatis Halensis

*Band 28*

Herausgegeben von

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Martin-Luther-Universität Halle-Wittenberg

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Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.de> abrufbar.

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Supported by the Open Access Publishing Fund of Leipzig University  
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The electronic open access version of this work is permanently available on the website of Heidelberg Asian Studies Publishing: <https://hasp.ub.uni-heidelberg.de>.

URN: <urn:nbn:de:bsz:16-hasp-1386-3>

DOI: <https://doi.org/10.11588/hasp.1386>

Published at Heidelberg Asian Studies Publishing (HASP), 2024  
Heidelberg University/Heidelberg University Library  
Heidelberg Asian Studies Publishing (HASP)  
Grabengasse 1, 69117 Heidelberg, Germany  
<https://hasp.uni-heidelberg.de>

Universitätsverlag Halle-Wittenberg, Mansfelder Straße 56, 06120 Halle (Saale), Germany

Umschlaggestaltung: Horst Stöllger – pixzicato, Hannover  
Satz und Layout: Dr. Petra Kieffer-Pülz (mit XeLaTeX)

ISBN 978-3-86977-265-3

e-ISBN: 978-3-948791-99-5



Professor Dominik Wujastyk

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## Preface

By all definitions, the central aim of a festschrift is to honor an esteemed scholar, colleague, mentor, and friend, typically at a momentous time in that scholar's life. This volume is no different. On the occasion of his seventieth birthday and to recognize and celebrate the rigorous scholarship, collegiality, mentorship, and friendship of Dominik Wujastyk, Professor and Saroj and Prem Singhmar Chair of Classical Indian Polity and Society in the Department of History and Classics at the University of Alberta, we are delighted to dedicate to him this compendium of Indological and South Asian studies. In their research, scholarship, and teaching, each contributor to the volume, and countless additional colleagues, have for years and continue today to rely on Dominik's pioneering research on Pāṇini and *vyākaraṇa*, his studies and edited collections on Ayurveda and the Sanskrit medical classics, his models for the critical cataloging of Indic manuscripts, his commitment to open access publishing and digital humanities scholarship, and much more. It was entirely fitting, then, for us (in conversation with Dagmar Wujastyk) to conceive this festschrift as a testimony to Dominik's significant and influential career, the principle stages of which we take the opportunity to sketch in the following lines.

In contradistinction to what might be expected from a scholar of Dominik's international reputation and standing, Indology was not his first academic subject of study. After schooling in the diverse cultural and intellectual environments of London, Lisbon, Khartoum, Entebbe, and Malta, Dominik took up the study of physics at the University of London, which he completed in 1974 with a B.Sc. degree. Having developed a deep affection for the humanities in general and, more specifically, for Indology and South Asian studies, Dominik took a dramatic intellectual turn, which led him to the University of Oxford, where he immersed himself in premodern South Asian languages and cultures and obtained his D.Phil. in Sanskrit in 1982. A particular inclination for the sciences may have contributed to his profound interest in the history of science in South Asia, which made him an internationally renowned expert in Ayurveda and – much later – the founding editor of the open-access journal, *History of Science in South Asia* ([hssa-journal.org](http://hssa-journal.org)).

After his graduation from Oxford, Dominik joined the Wellcome Institute for the History of Medicine, a center for the study and teaching of medical history in London. There, he advanced quickly from the position of Research Fellow to Assistant Curator of the Oriental collection and then to Associate Curator of the South Asian collection, a position he held until 2001. During his successful career of almost two decades at this prestigious research institu-

tion, Dominik published numerous ground-breaking academic works.<sup>1</sup> He also cultivated an active teaching portfolio regionally at SOAS and University College London, as well as internationally at the Universities of Zurich and Helsinki. While at the Wellcome Institute, Dominik's knowledge about information technology and his forward-thinking views about the free and open exchange of scholarly ideas led him to launch the INDOLOGY LISTSERV forum in November 1990. Today, INDOLOGY connects around 850 people worldwide, mostly academics but also some non-academics with a keen interest in premodern South Asia. Thirty-four years after its inception, INDOLOGY still stands as a cornerstone of professional scholarly communication. Countless Sanskritists, Buddhologists, linguists, and historians who specialize on South Asia, including both of us, have learned invaluable information about our fields of study from this online listserv. As graduate students and later as professional scholars we also discovered and learned lessons about the nature and complexities of academic discourse from INDOLOGY.<sup>2</sup> From the time we both started reading (and occasionally adding to) the conversations on the forum, it was always clear to us that Dominik was more than just its founder. He was, and remains today, the model for best practices in the generous, equitable, and inclusive scholarly exchange of information and ideas.

In 2002, Dominik joined University College London, where he became a Senior Research Fellow at the Wellcome Trust Centre for the History of Medicine. One of this book's editors, Anthony Cerulli, met Dominik during this transition time to UCL. Anthony was a new doctoral student at the time. He was assembling his dissertation committee, and following the sage advice of his advisor at the University of Chicago, he sent Dominik an invitation to join as a reader. Dominik did, and his rigorous criticisms and generous counsel made an indelible impact on Anthony's research that is still apparent in the things he writes and teaches today, two decades later. While everyone on Anthony's committee were excellent Sanskritists, only Dominik specialized on medical literature and the history of medicine in South Asia. Dominik's expertise on these subjects, and deep knowledge of archival and manuscript research in south India, profoundly shaped Anthony's career as a professor and scholar, and he is very grateful to produce this volume as a signal of his gratitude for Dominik's role in his research and career.

In 2009, shortly after Dominik had served a term as Visiting Associate Professor in the Department of Asian Studies at the University of Texas–Austin, his appointment at UCL ended unexpectedly in the aftermath of the international financial crisis of 2008, which caused budgetary calamities that hit research and teaching units focused on Indology and premodern South Asian studies very hard. Facing this professional crisis, Dominik decided to leave the U.K. and accept a position as a Senior Research Fellow at the Department of South Asian,

1 For a list of Dominik's publications, see the chapter "The Works of Dominik Wujastyk," below, p. 325–333.

2 For details, see <https://indology.info/a-brief-history/>, accessed on August 23, 2023.

Buddhist and Tibetan Studies at the University of Vienna, where an internationally collaborative research project in the Woolner Collection with Karin Preisendanz as the principal investigator utilized Dominik's expertise in codicology and the digital humanities. After the end of this project, Dominik joined another project directed by Karin Preisendanz as principal investigator, this time on philosophy and medicine in early classical India, which aimed to create a critical edition and annotated translation of "parts of the *Carakasamhitā* that are of fundamental importance for understanding the development of early classical Indian philosophy."<sup>3</sup> During this time, a favorable turn of karma, fate, or coincidence had brought the other editor of this volume, Philipp Maas, to Vienna, where working as an assistant professor and a long-term team member of the *Carakasamhitā* project series, he had the privilege of becoming Dominik's close colleague for almost six years.<sup>4</sup> They socialized together with their families and began to collaborate closely in research, writing, and academic conversation. Dominik and Philipp developed an academic partnership that involved reading each other's research in several stages of development and providing feedback. The quality of Philipp's published research owes an unquestioned debt to Dominik's kind but astute criticisms. This kind of intellectual relationship is uncommon, based as it is on mutual respect and a specific chemistry of temperament that enables criticism to be given and received within the safety of a strong underlying friendship, and Philipp values it highly. Moreover, Dominik's attitude to scholarship in general and specifically the democratization of academia have profoundly influenced Philipp, and he feels privileged to have Dominik as a colleague and friend.

Even though the "golden time in Vienna" – as Dagmar Wujastyk once described her perception of this period in Dominik's career in personal communication – appeared endless, in retrospect, it turned out to be short-lived. In 2015, Dominik received the call for a full professorship that he had long deserved. He moved with his family to Edmonton and became Professor and Saroj and Prem Singhmar Chair of Classical Indian Polity and Society in the Department of History and Classics at the University of Alberta, making Alberta's provincial capital a new center of gravity for Indological teaching and research.

In appreciation of Dominik's personality and character, marked by generosity and consideration for fairness and equity in the scholarly life, and recognizing that Dominik has taught us all so much about the early compendia of Ayurveda, we chose *Subṛdayasamhitā* as the title of this volume.

Considering Dominik's longstanding commitment and advocacy for open-access publishing, we are furthermore delighted to publish this compendium (*samhitā*) for our "good-hearted" (*subṛdaya*) mentor, colleague, and friend in print and electronically under a CC license with the Universitätsverlag Halle-Wittenberg with financial support from the Univer-

3 The two contributions to the present volume by Philipp Maas and Cristina Pecchia may be regarded as offshoots of the series of research projects on the *Carakasamhitā* at the University of Vienna.

4 Further team members of the *Carakasamhitā* project series in Vienna were Vitus Angermeier, Cristina Pecchia and Ernst Prets.

sity of Leipzig. Special thanks are due to Petra Kieffer-Pülz, for her exemplary support of the publication of the present volume. Last but not least, the editors are grateful for the opportunity to publish Dominik's Festschrift in the series *Studia Indologica Universitatis Halensis*. This place of publication may be regarded as an auspicious coincidence, considering that Dominik first met his wife Dagmar at the 5th International Congress on Traditional Asian Medicine in Halle (Saale) in August 2002.

*Anthony Cerulli*, Madison, WI

*Philipp A. Maas*, Düsseldorf

December 2023

## Introduction

*Anthony Cerulli and Philipp A. Maas*

Because the range of Dominik's research interests is vast, we invited a diverse group of contributors who could touch on the major areas of his output. In the end, we have assembled a *samhitā* that hits on some of his primary areas of interest, including linguistics, early Ayurveda, Rasaśāstra, Yoga, Jyotiṣa, Dharmaśāstra, and methodological considerations in philology, translation, and the study of medicine. The thirteen essays in this book touch on other areas, too, areas that Dominik has trod a bit less, but areas he no doubt spent time writing and thinking about, such as Mīmāṃsā and medical anthropology.

We opted to start the book with Stefan Baums's contribution, whose opening chapter, "Whatever Happened to Gāndhāri? Prakrit, Sanskrit, and the 'Gāndhāri Orthography,'" looks at some of the earliest manuscript evidence that informs philological work on textual traditions in ancient South Asia. Baums examines the relationship between different forms of the Gāndhāri language and Sanskrit. He draws attention to the fact that Sanskrit in the Karoṣṭhī script can be written in two different orthographies, one corresponding to Gāndhāri orthography, the other faithfully representing all phonetic peculiarities of Sanskrit, as is also the case for Brāhmī-derived writing systems. In his analysis of two verses written in the Karoṣṭhī script, Baums reveals that the original pronunciation of these verses may have been quite close to that of Sanskrit, even though the verses may appear to be in the Gāndhāri language at first sight. The opposite phenomenon can be observed in a further textual example that Baums discusses. There, the Sanskrit pronunciation is fully revealed in its orthography to such an extent that the application of an Old Indo-Aryan phonetic rule recorded in the Prātiśākhya of the Taittirīya school is actually reflected in the orthography. The textual examples Baums analyzes indicate that Sanskrit and Gāndhāri were intimately related in Gandhāra from the earliest time onwards.

Moving into the realm of Jyotiṣa and omens, in chapter two, Kenneth G. Zysk's "The Knowledge of the Crow (*vāyasavidyā*): *Gārgīyajyotiṣa*, *aṅga* 19" takes a cross-cultural look at ways in which the crow and its larger cousin, the raven, have almost universally been recognized as the birds *par excellence* to divine the future. Most often, he contends, they are considered birds of ill-omen. Yet, in ancient Indian augury they take on a nuanced character that is both inauspicious and auspicious. His study focuses on the Sanskrit omen-verses addressed to the crow in "The Knowledge of the Crow" in the *Gārgīyajyotiṣa*, which possibly



dates from the first century CE and was composed in a vernacular form of Sanskrit. Zysk comprehensively introduces this unique text, to which very few parallels exist. He then presents a first-ever critical edition on the basis of up-to-now neglected manuscript sources, and he provides his edition with a philological commentary and an annotated translation.

Chapters three and four present close studies of early Ayurveda as it reveals itself in the Sanskrit medical classics. In chapter three, Philipp Maas tackles the entanglements of medicine, religion, and cultural identity in “The Religious Orientation and Cultural Identity of Early Classical Ayurveda.” Scrutinizing the *Carakasamhitā* in particular, he looks at previous scholarship and advances new ideas about the religious orientation of ayurvedic physicians in the first century CE. His analysis leads to the conclusion that already the author of the oldest text stratum of the *Carakasamhitā* adroitly combined religious conceptions of Vedic Brāhmaṇism with religious ideas from the *śramaṇa* milieu of Greater Magadha, possibly to create wide acceptance for the newly emerging ayurvedic system of healing. The hybridity of Ayurveda is, thus, apparently not the result of the Brahmanization of a system of healing that originated in the *śramaṇa*-milieu, but instead appears to result from more complex historical processes, in which different medical currents were integrated into ayurvedic schools. To disentangle this complex process, Maas contextualizes the mythological account of the origin of longevity therapy (*rasāyana*) in Ayurveda as presented in *Carakasamhitā* Cikitsāsthāna 1.4 with the early historical account of Indian physicians in Strabo’s *Geography*.

Cristina Pecchia’s study of early Ayurveda in chapter four also presents a close reading of the *Carakasamhitā*. But in this chapter, the focus is on the text’s presentation of the interactions between doctors and patients. Thus, in “The Doctor, the Patient, and Their Interaction: Reading the *Carakasamhitā*,” Pecchia assembles and interprets several passages about values, obligations, and expectations of the doctor and the patient, as well as discussions concerning not only diseases but also situations that may lead somebody to suffer from a disease. She argues that, on the one hand, communication has a vital role in the interaction between doctor and patient and this communication reveals a combined preventive and therapeutic framework in early Ayurveda. On the other hand, her study suggests that a doctor’s agency and efficacy depend upon a set of emotional-relational skills, skills that are not seen in isolation from ethical values, and which are sometimes specific to Ayurveda and motivated by its primary aims of maintaining and restoring health. In the end, Pecchia concludes that the paternalistic model that characterizes the relationship between the ayurvedic doctor and the patient seems to be highly nuanced, especially in consideration of a doctor’s caring attitude to address patients as agents of their own health.

From early Ayurveda, the book turns to Rasaśāstra in chapters five and six. In the former, Dagmar Wujastyk’s “The Forge and the Crucible: Images of Alchemical Apparatuses on Manuscripts of the *Rasendramaṅgala*” examines how the *Rasendramaṅgala* breaks the general pattern in Indian alchemical texts to contain neither detailed descriptions of the apparatuses used for alchemical operations nor illustrations. Several manuscripts of the *Rasendramaṅgala*

actually contain a series of diagrams of various apparatuses, and in chapter five she explores these diagrams and their placement in the manuscripts. She also discusses the relationship of these diagrams to the instruments described in the text and considers the use of diagrams as an aid for alchemical practice.

In chapter six, Patricia Sauthoff's "Cannabis in Traditional Indian Alchemy" responds to Dominik Wujastyk's 2002 paper "Cannabis in Traditional Indian Herbal Medicine" and provides an update to Wujastyk's study in the wake of twenty years of cannabis legalization efforts in North America. In the chapter, she traces descriptions and uses of cannabis in non-Sanskritic alchemical traditions and discusses the mythology, morphology, cultivation, and use of cannabis in the thirteenth century alchemical Rasaśāstra work, the *Anandakanda*.

Chapters seven and eight engage Dharmaśāstra literature. In chapter seven, Patrick Olivelle's philological study, "On the Meanings of *smṛtyantara*," traces the term *smṛtyantara* in Dharmaśāstra commentaries and *nibandhas*, with special attention to four texts: Bhārucci's (seventh century) and Medhātithi's (ninth century) commentaries on *Manu*, and Viśvarūpa's (ninth century) and Vijñāneśvara's (twelfth century) commentaries on the *Yājñavalkyasmṛti*. Olivelle argues, contra much of the existing literature on the topic, that when an author uses the term *smṛtyantara* in citing a text, the term does not, or at least does not usually, refer to passages or verses whose origin or authorship were unknown. Moreover, the term is used with a spectrum of related but distinct meanings depending on the context and the preferred style of the respective author.

In chapter eight, Elisa Freschi examines Dharmaśāstra through the philosophical lens of permissions as presented in Mīmāṃsā. In "Mīmāṃsā and Dharmaśāstra Sources on Permissions," she looks especially at the topic of permissions in works of Śābara (fifth cent. CE?) and Kumārila (seventh cent. CE?). She shows how permissions are not inter-definable with prohibitions and obligations and how Mīmāṃsā authors conceived Vedic permissions as always specifying a less desirable output. In this way, Freschi explains that Mīmāṃsā authors were able to avoid open-ended situations created by free-choice permissions, in which the deontic outcome is not specified. Furthermore, permissions in Mīmāṃsā only occur as exceptions to previous negative obligations or prohibitions and, she suggests, with regard to actions one would be naturally inclined to undertake had they not been prohibited. She concludes with discussions of permissions in two Dharmaśāstra authors, Medhātithi and Vijñāneśvara, who were clearly influenced by Mīmāṃsā deontics. Their analyses presuppose a theory of permissions that is not identical to that of Kumārila, however, and she asks: Did they have an alternative, systematic theory of permissions or were they just less systematic?

The following two chapters are about Yoga. Christopher Minkowski's study in chapter nine, "The *Yogasāra* Cited in Vimalabodha's Commentary on the *Mahābhārata*," moves through five sections. After a brief summary of the nature and format of Vimalabodha's commentary, Minkowski examines the text's verses cited from the *Yogasāra*, as reconstructed from manuscripts currently available to him. He then reflects on the verses and commentaries in

which these citations appear, along with echoes or repetitions of these passages in later commentaries. A sifting of the more than thirty texts known to the *New Catalogus Catalogorum* by the title of *Yogasāra* follows in order to identify the most likely source of the quotation, while ruling out others. In conclusion, he offers a discussion of why Vimala has cited these verses and what is distinctive about them with reference to the history of yoga.

Johannes Bronkhorst's study of Yoga in chapter ten, "The Psychology of Yoga," makes the case that both Pātañjala Yoga and the Buddhist practices that influenced it were concerned with a psychological transformation of the practitioner. Psychology and neuroscience have recently discovered that psychological transformations can result from what is called memory reconsolidation. Apparently, no attempt has yet been made to understand the processes described in the relevant early texts in light of this new discovery. And yet, as Bronkhorst's chapter demonstrates, certain passages lend themselves most readily to such an interpretation.

The last three chapters of the volume concern questions of method. Alessandro Graheli probes typography in chapter eleven's "The Choice of Devanāgarī." While philological considerations are mostly about retrieval, analysis, and interpretation of data, or about editorial strategies in the choice of variants, Graheli argues that typographical decisions needed for the output of philologists' efforts, by contrast, are seldom addressed and discussed, even though such decisions are increasingly taken by philologists themselves, in our digital age of camera-ready productions. The liminal decision of choosing either Devanāgarī or Roman script and the selection of one among the many available fonts to typeset either script are mostly and uncritically taken for granted. In fact, while in South Asia editions are customarily typeset in Devanāgarī, elsewhere Roman script has often been the Indologist's first choice. This election of the script is influenced by technological, philological, sociological and even ideological factors. In this chapter, Graheli examines the reasons in support of the use of the two scripts and discusses the criteria for the evaluation of the available fonts for the sake of typesetting Sanskrit literature. He reflects on related typographical aspects, advocating the importance of considering the functional aspects of typography.

Wendy Phillips-Rodriguez' study in chapter twelve, "Sequencing, Assembling, and Annotating: A Genomic Approach to Text Genealogy," addresses the text genealogy of multiple versions of the *Mahābhārata* that were used for the critical edition of this work by means of traditional and computerized methods. In doing so, she assesses the following two large issues. First, what is the standing of the traditionally made *Mahābhārata* critical edition against the current state of research in stemmatology? Second, what can we learn from this case study, and how can we use it to portray a bigger picture of textual evolution? In the end, Rodriguez-Phillips concludes that besides borrowing computational tools developed to study biological evolution, chances are that textual scholars could also profit from concepts and epistemological approaches that have proven helpful in the biological sciences.

The final study in the volume, chapter thirteen, is Anthony Cerulli's "Always Already Theorizing . . . in the Field, Elsewhere, All at Once." Reflecting on his fieldwork experiences between 2003 and 2017 at the same healing center in central Kerala, in this chapter Cerulli addresses continuity and change in medical ethnographers' awareness of themselves and the people, places, and things they study in the field. He draws on experiences in south India and in the classroom teaching a seminar on ethnography to explore some of the ways that ethnographers have articulated and, moving forward, might express novel insights about health and healing. Consideration of ethnography as a theory-generating process *vis-à-vis* the study of theory and method in the classroom before entering the field lies at the heart of this reflection.

We are truly delighted to present these thirteen studies in honor of Dominik Wujastyk. We are confident readers will see his far-reaching scholarly impact and influence across them all and on the scholars who wrote them. Dominik's books, articles, and essays are rife throughout the bibliographies, and many of the studies make direct reference to the impact that Dominik had in bringing this research to light.



# Whatever Happened to Gāndhāri? Prakrit, Sanskrit, and the “Gāndhāri Orthography”

*Stefan Baums*

## 1. Linguistic diversity in “Gāndhāri” Sources

In 1946, Harold Bailey famously introduced the term “Gāndhāri” to cover, in his words:<sup>1</sup>

the forms of the one Middle Indian dialect of the north-west of India, centered in the old Gandhāra region, around modern Peshawar, and which we meet in most varied sources. Under this name I propose to include those inscriptions of Aśoka which are recorded at Shahbazgarhi and Mansehra in the Kharoṣṭhī script, the vehicle for the remains of much of this dialect. To be included also are the following sources: the Buddhist literary text, the Dharmapada found at Khotan, written likewise in Kharoṣṭhī [...]; the Kharoṣṭhī documents on wood, leather, and silk from Caḍota (the Niya site) on the border of the ancient kingdom of Khotan, which represented the official language of the capital Krorayina [...] of the Shan-shan kingdom, and of one document, no. 661, dated in the reign of the *Khotana maharaya rayatiraya binajha dheva vijida-simha*. [...] The modern Dardic languages Ṣiṇā, Khowar, Phalūra and others represent the same type of Middle Indian.<sup>2</sup>

The language of these sources had previously been known as “Bactrian Pali” and “Northwestern Prakrit.” In the years since Bailey’s article, the scope of the designation “Gāndhāri” has undergone numerous modifications and other subcategorizations have been suggested, just as the number and kind of available sources kept expanding.

To begin with, one may object to the expression “the one Middle Indian dialect” in Bailey’s definition, and Sten Konow, writing in 1929 in the preface of his collection of Kharoṣṭhī inscriptions, already observed that

1 It is a great pleasure to dedicate this little sidelight from “Gāndhāri” manuscripts and inscriptions on Sanskrit language and *śāstra* to my dear colleague Dominik Wujastyk who beyond his own impeccable scholarship has done so much to further all kinds of Indological studies.

2 Bailey 1946: 764–765.

the language of the inscriptions is fairly uniform. We cannot, however, expect to find an absolute consistency. In the first place the area is very extensive, and there are consequently minor dialectic variations. [...] On the other hand, we must reckon with a certain influence exercised by literary languages.<sup>3</sup>

Concerning dialectal variation, Konow proposed that the nominative singular ending of the a-declension was *e* West of the Indus river, and *o* in other localities;<sup>4</sup> further discoveries of Gāndhārī inscriptions have, however, failed to confirm this pattern. As for the influence of literary languages on Gāndhārī inscriptions, he proposed an eastern Middle Indo-Aryan substrate in Buddhist literary quotations, and a more general influence of Sanskrit, correctly pointing out that Gandhāra had long been a seat of Sanskrit learning.<sup>5</sup> It is this relationship between Gāndhārī texts and Sanskrit that will concern us in particular in the following.

In his 1989 magisterial overview “Gāndhārī écrite, gāndhārī parlée,” Gérard Fussman excluded the Gāndhārī-language documents from the kingdoms of Krorayina and Kucha,<sup>6</sup> noted the special linguistic features of other Gāndhārī texts in Central Asia (true at least of the Khotan Dharmapada, CKM 77), and underlined the necessity of understanding Gāndhārī in its homeland as a living language, subject to evolution through time as well as dialectal differentiation. He despaired, however, of actually tracing this dialectal differentiation due to the insufficient number of securely provenanced sources, which at the time meant inscriptions.

The numerous Gāndhārī manuscript discoveries made since the 1990s do, in fact, reveal a broad range of linguistic variation, some of which may be due to dialect differences, but the field continues to suffer from the problem highlighted by Fussman: almost none of the newly available Gāndhārī manuscripts have a secure (or in fact any) provenance, with the partial exception of the Bajaur collection that by hearsay is attributed to a village in the Dir district of Bajaur.<sup>7</sup>

While dialectal studies thus remain elusive, Richard Salomon distinguishes four registers of Gāndhārī:<sup>8</sup>

“Gāndhārī translationese”

“colloquial *avadāna* style”

“scholastic Gāndhārī”

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“Sanskritized Gāndhārī”

3 Konow 1929: xciv.

4 Konow 1929: cxii; cf. also Brough 1962: 115.

5 Konow 1929: xciv.

6 Contra Brough 1962: 49.

7 Even this, however, is only one of two alternative origin stories for the collection, the other placing it in the region of Kandahar in Afghanistan (Khan & Khan 2004: 9f).

8 Salomon 2001; 2002.

In the words of Salomon, the first of these is characterized by “clearly discernible traces of the phonology and morphology of a substratum language of the midland MIA type,” the third (somewhat vaguely) by its “technical or scholastic style,”<sup>9</sup> and the fourth by the (inconsistent) use of Sanskritic “consonantal conjuncts”<sup>10</sup> and “Sanskrit endings” such as *-sya*.<sup>11</sup> The latter is, however, also a matter of spelling, and Salomon points out that there are no other morphological Sanskritisms in this last variety.<sup>12</sup>

In other words, Sanskritized Gāndhārī is distinguished from regular Gāndhārī by orthographic rather than linguistic features, and within regular Gāndhārī the translationese variant can be distinguished by phonetic and morphological substrate influence, while another variant (that I prefer to call “literary Gāndhārī” rather than “scholastic Gāndhārī” as it encompasses, for instance, also Mahāyāna sūtras) is characterized by stylistic features that are shared with texts of corresponding genres in other Prakrits and Sanskrit.

The picture is completed by a small number of texts in Kharoṣṭhī script that are written in full-fledged Sanskrit, employing a full range of consonant conjuncts and vowel length marks to represent Sanskrit phonetics and in addition exhibiting full Sanskrit morphology.

We can now modify the above table as follows, with the understanding that the horizontal line indicates an orthographic rather than linguistic divide. The linguistic variants above the line are within the range of what in the following I shall call “Gāndhārī orthography” (an expression used by my teacher Clifford Wright),<sup>13</sup> the variants below the line of what we may call “Sanskrit orthography” (more or less perfectly applied).

Gāndhārī translationese  
colloquial *avadāna* style  
scholastic Gāndhārī

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Sanskritized Gāndhārī  
Sanskrit

## 2. Language, script, and orthography

It is important to distinguish orthography not only, as we have seen, from language, but also from script. The Kharoṣṭhī script, as is well-known, died out in its homeland in the third or, at the latest, fourth century CE. There is no consensus on the reasons for its disappearance. Salomon suggested that it had lost one of its main reasons for existence – as an administrative

9 Salomon 2001: 242.

10 Salomon 2001: 244f.

11 Salomon 2001: 241: 245.

12 Salomon 2001: 245f.

13 Cf. for instance Wright 2001: 418.



language of the Kuṣāṇa empire – when this empire faltered, but Strauch countered that in fact Bactrian was the main administrative language of the Kuṣāṇas.<sup>14</sup> To this in turn one can reply that we do see reflected in Krorayina and Kucha an administrative system using Kharoṣṭhī that in its essence is likely to go back to that of the Kuṣāṇas. Eltschinger suggested that in the Buddhist sphere, the use of Sanskrit was a strategy against claims of Brahman superiority, rather than due to any belief in its innate superiority.<sup>15</sup> Baums argued that the relocation of a mainland Buddhist community was responsible for the spread and eventual ubiquity of Brāhmī, Sanskrit, and the pothi manuscript format in at least the western part of the former Kharoṣṭhī area.<sup>16</sup>

We need to remind ourselves again, however, that the choice of Sanskrit language is independent of both script and orthography. Salomon points out that Kharoṣṭhī could easily have been modified to write the ascendant Sanskrit language in precisely the same way as Brāhmī ended up doing, and could thus have survived or even become the predominant South Asian script.<sup>17</sup> Both he and Strauch<sup>18</sup> illustrate this with the well-known Niya document CKD 523, presenting non-Buddhist Sanskrit verses in just such an orthography (sample):<sup>19</sup>

*yathā manuṣyaḥ paṭhi vartamānaḥ  
kva cit kva cid viśramate śramārta[ḥ]  
tathā manuṣyasya dhanāni kāle  
kāle saṃmāśvāsya punar vrajaṃti 1*

as well as the Kucha palm-leaf fragment CKM 90 (sample):

*/// (pa)rihanya · ma sparśasātro[bb](ut). ///  
/// sya ciramjñāḥ · janapade naḥparadbaḥ · [t]. ///  
/// [ḥ]. tasya dutaṃ saṃpreṣayaṃti · bravi(tī) ///  
/// (sva)mi[na](ṃ) duto p(ra)ha ∈ k. [s]. ? ///*

Strauch calls this writing of the Sanskrit language in the Kharoṣṭhī script using the Sanskrit orthography known from Brāhmī documents “external Sanskritization,” and contrasts it with what he calls the “internal Sanskritization” illustrated in a manuscript containing a Rājaniti text in the Bajaur collection (CKM 272) – Sanskrit language in Kharoṣṭhī script using an only slightly modified Gāndhāri orthography:<sup>20</sup>

14 Salomon 2008; Strauch 2012.

15 Eltschinger 2017.

16 Baums 2021.

17 Salomon 2008: 144.

18 Salomon 2008; Strauch 2012.

19 Here and in the following, text-critical marks have the following meanings: [ ] unclear reading, ( ) reconstructed text, ? unclear akṣara, . unclear or missing part of akṣara, /// edge of support.

20 Strauch 2012: 152.

*dhaṇadhanyakupyayavasemḍhaṇ{e}ṇi*  
*yatrayudhani ca rathācā*  
*upakaraṇani ca kośo*  
*naravahanaśipiyodhaṇcā*

It might have been better to avoid the term “Sanskritization,” since all the texts in question are and (with the possible exception of the Kucha fragment) were never anything but proper Sanskrit, but the important point stands. In the Kharoṣṭhī script, Sanskrit can be written in two different orthographies: in regular Gāndhārī orthography, revealing its linguistic nature only in matters such as morphology and sandhi, or in a Sanskrit orthography fully equivalent to Sanskrit orthography in Brāhmī script.

In the following, I will refine the picture by two case studies, showing how two different Kharoṣṭhī scribes use two different kinds of Gāndhārī orthography, the one effectively hiding a Sanskrit verse and Sanskrit loanwords, the other by contrast revealing a phonetic feature described by the Sanskrit phoneticians but invisible in Brāhmī documents.

### 3. Sanskrit hidden by “Gāndhārī orthography”

One manuscript in the British Library collection of Kharoṣṭhī scrolls (CKM 4)<sup>21</sup> contains a commentary on a selection of Buddhist verses. The scribe<sup>22</sup> employs a minimal kind of Gāndhārī orthography that I would like to call “writer-oriented”: it does not use *anusvāra* nor any of the Kharoṣṭhī diacritic marks indicating subtleties of pronunciation, making it easy to write text in, but putting a heavier burden of interpretation on the reader. A typical example verse is the following:

*ṇa vedago dṛiṭhie na mudiyō*  
*su mu ṇa mi di ṇa hi tamayo so*  
*ṇa kamuṇo ṇo vi ṣudeṇa ṇoyo*  
*aṇuaṇido ho ṇiveśaṇehi*

It has parallels in the *Suttanipāta*<sup>23</sup> and the Sanskrit and Chinese *Arthapada*. In order for its *triṣṭubh* meter to scan correctly, the pronunciation would need to have been more or less as follows:

nə ʋe:ðəjə: dṛiṣṭi:jə no: muḍi:jə  
 ? ? ? ? ? nə hi təm:əjə: so  
 nə kəm:uno: no: vi ṣuðe:nə nej:o  
 ənu:ʋəni:ðo: ho niʋe:jəne:hi

21 Ed. Baums 2009.

22 British Library scribe 4 in the classification of Glass 2000.

23 Sn 846 ed. Andersen & Smith 1913: *na vedagū dṛiṭṭhiyā na mutiyā, sa mānam eti na hi tammayo so, na kammanā no pi sutena neyyo, anūpanīto so nivesanesu.*

Note in particular how the ending [i:jə] has the Middle Indo-Aryan heavy-light pattern. Another verse that is of particular interest in the present context is the following:

*taṣadudio puruṣo*  
*tatrataṭraüavatie*  
*teṇa teṇeva sabhodi*  
*dukham edi puṇapuṇo*

This verse has partial parallels in the *Suttanipāta*,<sup>24</sup> *Aṅguttaranikāya*, and *Udānavarga* from Subaṣi, which however do not include the second and third *pādas*. In order for it to scan correctly in the *anuṣṭubh* meter, its pronunciation must have been along the following lines:

təʂŋa:duði:jo: puruʒo:  
 tətɾətətro:vəʋət:ije:  
 te:nə te:ne:və səmbʰo:ði  
 dukʰ:əm e:ði puṇəp:uno:

Note here in particular the Sanskrit long penultimate in [təʂŋa:duði:jo:], the Sanskrit light-heavy pattern in the ending [ije:] and the Sanskrit vowel sandhi in [tətɾətətro:vəʋət:ije:]. A reader sufficiently versed in Sanskrit and recognizing the linguistic nature of the verse (hidden behind its Gāndhārī orthography) might even have pronounced it fully as Sanskrit (with two metrical licenses):

tɾʂŋa:dviti:jəḥ puruṣəs  
 tətɾətətro:pəpət:ija:  
 te:nə te:ne:və səmbʰo:ti  
 dukʰəm e:ti puṇəhpunəḥ

In the same way, the Gāndhārī orthography of this verse commentary hides a number of loanwords. A technical term borrowed from a central MIA dialect is *vijaṭeti*, “disentangle” (3rd pl. pres., cf. P *vijaṭenti*), which in proper Gāndhārī linguistic form would have been spelled *\*vijaḍeti*. Following the logic of the orthography of this scribe, in which the letter *ṭ* must stand either for the geminate or for the class nasal followed by *ṭ*, a reader would have pronounced the spelling *vijaṭeti* as [vidzət:enti] (cf. English [ˈɡarɪdʒ]). A reader familiar with the donor language of the term may have opted for a learned pronunciation [vidzətenti] (cf. English [gəˈrɑːʒ]) instead.

A Sanskrit technical term hides behind the spelling *padastaṇa-* “foothold” (cf. Skt. *padasthāna-*), which in fully naturalized Gāndhārī form would have been *\*padaṭhāna-*. Here a correspondingly naturalized pronunciation would be [pəḍətʰ:a:nə] (with some uncertainty about the phonetic value of *ṭh*), a learned pronunciation [pəḍəstʰa:nə].

24 Sn 740 ed. Andersen & Smith 1913: *taṇḍadutiyo puriso, digḥam addhāna samsaram, ittbabhāva-nīnathābhāvaṃ samsāraṃ nātivattati*.

Finally, a Buddhist Sanskrit term occurs in the orthographic garb *vriṣavidā-* “majesty” (cf. BHS *vṛṣabbhitā-*, P *visabbhitā-*). The scribe of this commentary does not otherwise use the conjunct *vr*, which thus provides a clear indication of the foreign nature of the word suggesting a learned pronunciation [vṛṣəb<sup>h</sup>ita:], although a regular Gāndhārī reader would probably simply have substituted [viṛəviðə].

#### 4. Local Sanskrit revealed

In contrast with the British Library verse commentary, which hides the above range of Sanskrit (and central MIA) material under its minimal Gāndhārī orthography, the British Library *Samgītisūtra* commentary (CKM 17)<sup>25</sup> uses a diametrically opposed orthographic philosophy that we may call “reader-oriented.” Here, *anusvāra* and a large number of Kharoṣṭhī diacritics indicate even the finest details of pronunciation, easing the task of interpretation on the part of the reader, but putting a heavy burden of precision on the writer. As it turns out, this kind of Gāndhārī orthography reveals one particular phonetic feature that was also known to the Vedic phoneticians and laid down by them in the Prātiśākhya. This feature was evidently shared between Gāndhārī and the local pronunciation of Sanskrit in the northwest. (The existence of local forms of Sanskrit is noted, for instance, in Rājaśekhara’s *Kāvyamīmāṃsā*.)

The reflex of OIA [sm] is in this manuscript written with a clear ligature *śp* that has an additional footmark pointing to the right and upwards from the bottom of the stem of the *aḥsara*, as in the words *budhānuśp(?)aṭi-* (OIA *buddhānusmṛti-*) and *taśp(?)a* (OIA *tasmāt*):

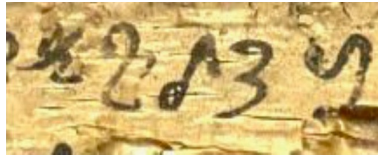


Figure 1.1: Gāndhārī *Samgītisūtra* commentary, detail of l. 321



Figure 1.2: Gāndhārī *Samgītisūtra* commentary, detail of l. ED3

The reflex of OIA [su] is written using the same ligature with the same mystery footmark, as in *avhaśp(?)ara-* (OIA *ābhāsvara-*):

25 British Library scribe 15.

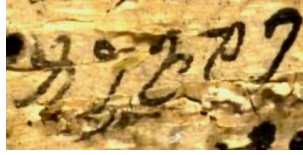


Figure 1.3: Gāndhāri *Samgītisūtra* commentary, detail of l. 74

Graphically, the mystery footmark on this *akṣara* is somewhat ambiguous between the “post-consonantal *r*” mark and the “postconsonantal *v*” mark. By a process of phonetic dissociation,<sup>26</sup> the “postconsonantal *r*” mark had acquired the secondary function of marking the weakening of intervocalic simple consonants (in which case the mark is transcribed as a macron below the consonant, e.g., *ṣ*). Neither the value [r] nor consonantal weakening are applicable, however, in the case of the original OIA clusters [sm] and [sv], and we will therefore in the following transliterate the *akṣara* that we are concerned with as *śpv* without prejudging its pronunciation.

In general, the OIA clusters [sm] and [sv] undergo largely parallel developments in the history of Indo-Aryan. For [sm] (or more generally sibilant + [m]), we find the following possibilities:<sup>27</sup>

1. epenthesis (e.g., OIA *uṣman* > P *usumā*)
2. metathesis (e.g., OIA *raśmi* > P *raṃsi*)
3. s assimilation (e.g., OIA *tasmīn* > Śaurasenī *tassiṃ*)
4. m assimilation (e.g., OIA *grīṣma* > P *gimba*)
5. p assimilation: [Sm] > [S<sup>p</sup>m] > [Sp] (e.g., OIA *tasmāt* > G *taspa*, Kalsi *tapha*), but maybe Northwestern [Sm] > [Sv] > [Sp] (cf. OIA *smṛti* > G *svadi*, OIA *asmin* > G *asvi*)?

In the case of [sv] (and other sibilants + [v]), this is reduced to three possibilities:<sup>28</sup>

1. epenthesis (e.g., OIA *svāmin* > P *svāmin*)
2. s assimilation (e.g., OIA *śveta* > P *seta*)
3. p assimilation: [Sv] > \*[Sβ] > \*[Sϕ] > [Sp] > [pph] (e.g., OIA *viśvāsa* > G *viśpasa*, OIA *śleṣman* > *sepba* [Hemacandra])

The developments of sibilant + [m] or [v] in Gāndhāri and into the modern Dardic languages are illustrated in the following table:<sup>29</sup>

26 For the details of this cf. Baums 2009: 199.

27 Bloch 1935.

28 Sakamoto-Gotō 1988.

29 After Baums 2009: 175.

	Dhp-G <sup>K</sup>	Khvs-G	EĀ-G Dhp-G <sup>L</sup> AG-G <sup>L</sup>	PY-G BL 4	SĀ-G <sup>SS</sup>	Nid-G <sup>L2</sup>	LC	ND	Dardic lan- guages
[sm]	sv, s, sm	sv, s	śp	śp	sp	sp	—	sm	Khowar <i>ispa</i> , Shina <i>āsēi</i> , <i>āsō</i>
[su]	sv, s, śp	—	śp	śp	śp	sp	sv, śp	sv	Shina <i>ispāvū</i> , <i>ūspāū</i> , <i>īspā</i> ; Tirahi <i>spas</i>
[sm]	—	—	—	—	śp	—	—	(sm)	Khowar <i>grīsp</i> ; Shina <i>baṣ</i> , <i>bhāṣ</i> , <i>bāṣ</i>
[su]	—	—	—	—	—	—	(sm)	—	Khowar <i>prazgār</i>
[çm]	śm, sv	—	śp	sp	—	—	—	—	Shina <i>rāṣ</i>
[çv]	śv, ś, śp	—	śp	—	—	sp	—	śv, śp	Kalasha <i>baṣ</i> , Shina <i>āṣpū</i> , <i>āṣp</i> , <i>āṣap</i> , <i>āṣpō</i>

Table 1.1: The Old Indo-Aryan etyma for the cited Dardic words are *asmad-*, *svādu-*, *svasr-*, *grīṣma-*, *\*bhaṣma-*, *\*pruṣvākara*, *raśmi-* and *aśva-*<sup>30</sup>

Here we see only two out of the broader range of possible developments: p assimilation in the Gāndhārī sources and into the modern languages, and s assimilation first at the stage of the modern languages. It is the process of assimilation of [su] and [sm] into [sp] that we have to focus on then to shed light on the mystery orthographic feature in the *Samgītisūtra* commentary.

Here the Prātisākhya of the Vedic Taittirīya school comes to our help.<sup>31</sup> It contains the following set of rules:

*aghoṣād uṣmaṇaḥ paraḥ prathamo ’bhinidhānaḥ sparśaparāt tasya sasthānaḥ* (14.9)

After a voiceless fricative ([x], [ç], [s], [ʃ], [ħ]) followed by an occlusive ([k], [k<sup>h</sup>], [g], [g<sup>h</sup>], [ŋ] ... [p], [p<sup>h</sup>], [b], [b<sup>h</sup>], [m]) (is inserted) a voiceless unaspirated occlusive ([k], [c], [t], [t], [p]) as unreleased sound of the same place of articulation as the latter.

30 Cf. Turner 1966–1985 s.vv.

31 Whitney 1871: 294–298; cf. Bloch 1935: 264–265 and Allen 1953: 78.

*aghoṣe plākṣeḥ* (14.10)

Only if (the latter) is voiceless ([k], [kʰ] ... [p], [pʰ]), according to Plākṣi.

*uttamaṣarāt tu plākṣāyaṇasya* (14.11)

On the contrary, (only) after (a voiceless fricative) followed by a nasal ([ṅ], [ɲ], [ŋ], [n], [m]), according to Plākṣāyaṇa.

These rules describe an articulation of Sanskrit sibilant + [m] with insertion of a stop element [p]. Applying this synchronic observation of regional Sanskrit pronunciation to the diachronic development of the cluster in question in the northwest, we may posit the following sequences for the sample words OIA *griṣma-* (cf. table above) and OIA *ayasmaya-*, leading to the attested modern forms with p assimilation via the Gāndhārī stage with assimilated forms side by side with unassimilated forms (which may reflect dialectal variation):

1. *griṣma* [gri:ṣmṇ] > [gri:ṣpmṇ] (pre-stopped nasal; literally: [gri:ṣpmṇ]) > [gri:ṣpmṇ] (stop with nasal release) > [gri:ṣpṇ]
2. *ayasmaya* [əjəsmṇ] > [əjəspmṇ] > [əjəspmṇ] > [əjəspṇ]

The spelling *śpv* in the first-century Gāndhārī *Samgītisūtra* commentary thus provides documentary evidence for the sound change of the type *griṣma-* > [gri:ṣpmṇ], as described in the *Taittirīyapṛāṭisākhya*, under the interpretation of Plākṣāyaṇa.

From this it follows that the “postconsonantal *v*” element of the cluster *śpv* should probably be interpreted as [m] rather than [v] because

1. this is a necessary condition for the insertion of [p] under the specific interpretation of Plākṣāyaṇa (*uttamaṣarāt*) as well as under the general rule (*ṣarṣarāt*);
2. a sound change [Su] > [Sm] > [Sp] (with consistent increase of occlusion) is phonetically more plausible than [Sm] > [Su] > [Sp] (with decrease followed by increase of occlusion);<sup>32</sup> and
3. direct evidence for [su] > [sm] is preserved in OIA *ikṣvaku-* > G *iṣmabo-*.<sup>33</sup>

This may also provide an explanation for the shape of the Kharoṣṭhī so-called post-consonantal *v* diacritic, resembling as it does the right half of a full letter *m*.

## 5. Conclusions

I hope to have shown how intimately connected the Gāndhārī and Sanskrit language traditions have been from their very beginning. The interactions of these languages are complicated and various, and they need to be analyzed along the independent parameters of script

32 Bloch 1935.

33 Salomon & Baums 2007.

(Kharoṣṭhī vs. Brāhmī) and orthography (Gāndhārī vs. Sanskrit). Sanskrit could be and was written both in the Brāhmī and Kharoṣṭhī scripts, and in the latter case the scribe could employ one out of a range of Gāndhārī orthographies or a Sanskrit orthography. One task for modern scholarship is the tracing of Sanskrit material in the more minimal Gāndhārī orthographies that tend to obscure the linguistic nature of the text they write. On the other hand, the more elaborate Gāndhārī orthographies can record phonetic details beyond what is possible in the Sanskrit orthography, and in one case confirm observations of a Sanskrit phonetic process in the *Taittirīyaprātiśākhya*. This process evidently operated both in the regional Sanskrit and in the vernacular of the northwest, underlining once more the necessity of considering both languages together, and showing that the numerous so-called Gāndhārī manuscripts found in recent years hold much value also for Sanskrit studies beyond their Buddhist content.

## Abbreviations

CKD, CKM: Corpus of Kharoṣṭhī Documents / Manuscripts; see Baums & Glass 2002–

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## CHAPTER 2

# The Knowledge of the Crow (*vāyasavidyā*): *Gārgīyajyotiṣa*, *aṅga 19*

*Kenneth Zysk*

### Introduction

Bird watching and divination are known the world over and have been studied in ancient cultures of the Etruscans, Greeks, Romans, Mesopotamians, and Egyptians.<sup>1</sup> Little attention, however, has been given to it in the early South Asian context. In this paper, I present an early example of bird divination in the form of crow omens, which occurs in the Sanskrit literature of Brahmanic Astral Science (Jyotiḥśāstra). It is found as chapter or *aṅga* 19 in the *Gārgīyajyotiṣa*, called “knowledge of the crow” (*vāyasavidyā*), and consists of seventy omen verses in *anuṣṭubh* meter dealing with divination by means of the crow.

Although the majority of verses are actual omens with the distinctive protasis-apodosis syntactical structure, there is metrical text at the beginning that locates these omens in a Brahmanic social and religious context. The textual structure of these beginning verses is a familiar one in which a useful body of information is appropriated into a Brahmanic system of knowledge (*śāstra*) by a literary enculturation technique, already apparent in the Sanskrit medical literature of Ayurveda. It entails grafting Brahmanic-specific verses at the beginning and end of a body of knowledge that was deemed to contain useful and important information.<sup>2</sup>

In this chapter the useful knowledge (*vidyā*) is a set of omens in verse form that derived from a local tradition of bird diviners, which is not too dissimilar from traditions of ancient Near Eastern bird diviners. One might, therefore, speculate that versions of omens travelled with caravans and military expeditions along the silk road into the Hindu Kush and eventually into what is now Pakistan and Punjab, where speakers of mixed dialects began the process

1 See Zysk 2022, Bouché-Leclercq 1882 [1963], Burkert 1992, and Scheid 2003. In ancient Egypt, early focus was placed on oneriocitica, but by the Graeco-Roman Period (1st–2nd cent. CE), the Demotic divination books included the behaviour of different animals, and these manuals were either collections of omens of individual animals or a single animal, such as the lizard or gecko (Prada 2017 and Quack 2006). Ancient China focussed on pyro-osteomancy, which utilised mainly the scapulae of different animals, the most common being cattle, and turtle plastrons (Flad 2008). Animals also figured in the yin and yang distinction and are described in terms of the four elements, the cardinal directions and the seasons (Smith 1991: 183–84).

2 Zysk 1999, 2021.

of preserving and transmitting the divinatory knowledge of bird watchers and diviners. A collection of these omens was then eventually compiled by a certain Garga, coming down to us in its present form around the beginning of the Common Era, according to Mitchiner.<sup>3</sup>

The chapter of crow omens shows certain similarities in both language and content to the Buddhist *Śārdūlakarṇāvadāna* found in the *Dīvyāvadāna* coming from the Northwest of the subcontinent. The earliest part of this text that refers to bird divination (*śakuna*) dates from at least the fourth century CE, although its specific collections of omens on the “call of the crow” (*vāyasaruta*) is not earlier than the ninth century. It is clear that a form of bird divination was recorded in a Buddhist legend from as early as the fourth century.<sup>4</sup>

A brief synopsis of the chapter provides an overview of its contents and points to a similarity to a non-Indian tradition of bird divination occurring among the Etruscans of ancient Italy.

## Division of the chapter

According to a single late manuscript (C), the chapter can conveniently be divided into four sections:

1. Crows’ calls at night, etc. (1–25)
2. Army on the march (26–42)
3. Crows’ nests and offspring (43–56)
4. Crows’ food offerings and method of observation (57–70)

Collections of omens corresponding to the first two sections occur in four other versions. One is in the same collection, *Gārgīyajyotiṣa*, at *aṅga* 42.9–29, “the call of all beings” (*sārva-bhūtaruta*), which bears the internal colophon, “the call of the crow,” (*vāyasaruta*). Another is found in the Buddhist *Śārdūlakarṇāvadāna*, “the call of the crow” (*vāyasaruta*); in a later, greatly expanded and reworked form at Varāhamihira’s *Brhatsaṃhitā* chapter 94, “the call of the crow” (*vāyasaruta*), and in an abbreviated form as “the mark of the crow” (*vāyaseṅgita*) in the *Brhadyaṭrā* by the same author. Similarities between Garga’s versions and that of the *Śārdūlakarṇāvadāna* are given in the following chart.<sup>5</sup>

Sections 1 and 2 find common ground in *aṅgas* 19 and 42, while sections 3 and 4 are particular to *aṅga* 19, which also shares specific content with the Buddhist version.

From the perspective of the history of science, *aṅga* 19 introduces the set of omens with a reasoned explanation and methodology that might be found in any current bird watcher’s field guide, including the classification of types by the bird’s color, behavior, and habits.

3 Mitchiner 2002.

4 Zysk 2022, 2023.

5 See notes to translation for analysis of these parallels.

<i>Gārgīyajyotiṣa</i>		<i>Śārdūlakarṇāvadāna: vāyasaruta</i>
<i>aṅga</i> 19	<i>aṅga</i> 42	
15	26	
20	29	38
27–28	9–10	
30	15	36
35		30
43–44		50–52
50d–51		53
53		19

Table 2.1: Parallel passages

### Eight kinds of crows based on color

Verses 3–5 provide a list of eight different kinds of crows or corvids. They are color-coded and arranged in descending order from best to worst, based on their rarity. Although it is impossible to identify each type precisely, nevertheless, based on the list of probable Corvidae compiled from the *Handbook of Birds of India and Pakistan* by the ornithologists Ali and Ripley (see Table of Corvidae),<sup>6</sup> the following are possible matches for Garga's eight types of crows.

1. *White, king of crows: the albino. It is the rarest of the corvids.*

Figure 2.1: Albino raven<sup>7</sup>

<sup>6</sup> Ali & Ripley 1913[1972].5: 98–266.

<sup>7</sup> Picture detail of a photograph by Kirkamon Guapo Cabello, <http://tinyurl.com/2h947j6t> (CC BY-SA 4.0)

*2. Blood-red:*

1020. West Himalayan Redcrown Jay: vinaceous fawn colour (or pinkish brown).  
 1046. Himalayan Redbilled Chough: Jet-black, with bright red legs and red bill.  
 1027 Himalayan Redbilled Magpie: blue-black head with red bill.  
 1045. Himalayan Yellowbilled or Alpine Chough: Glossy jet black; yellow bill; bright red legs.

*3. Variegated:*

1062. Waxwing: dumpy chestnut, pinkish brown, yellow-tipped tail; wings dark, white, and yellow with brilliant scarlet tips, black throat; grey rump; and chestnut tail. "Bushy crest, black throat, brilliant wing-pattern and yellow-tipped tail make its identity unmistakable."  
 1029. Kashmir or Whiterumped Magpie: Black and white strongly contrasting plumage with black tail.

*4. Tawny:*

1042. Large-spotted Nutcracker: Chocolate and umber-brown with white spots and black bil.

*5. Yellow:*

1025. Western Yellow-billed Blue Magpie: Purplish blue with black head, neck and breast; white nape and underparts; yellow bill, and bright orange legs.  
 1045. Himalayan Yellowbilled or Alpine Chough (see above #2).  
 1062. Waxwing (see above #3).

*6. Grey (poetically described as the colour of a rain cloud)*

1049. Indian House Crow: glossy black with dusky grey or mouse grey nape, neck, upper breast, and upper back.  
 1053. Jackdraw: Slaty black, silvery grey hind-collar with greyish white eyes.  
 1030a. North-western Tree Pie or 1031 Western Himalayan Tree Pie: Sooty grey head, neck, and breast; greyish tail; and white-black wings.

7. *Dark-blue/black: Any Corvid that is dark but not jet-black.*

8. *Jet-black:*

1059. Punjab Raven: glistening jet black.

1052. Rook: glossy jet black, 1058 Eastern Carrion Crow: glossy jet black.

1061. Brown-necked Raven: glistening jet black.

There are generally several possibilities for each type of corvid listed in this chapter of Garga, making an exact match problematic. It is noticed, however, that all the colors mentioned can be found on one or several of the corvids from the regions that constitute the West and Northwest of the Indian subcontinent.

Number	Name	Region	Colour	Call
1020	West Himalayan Redcrown Jay	West Pakistan and Punjab	Vinaceous fawn colour (or pinkish brown)	Harsh <i>shak</i> ; screeching and swearing "snake alert"; <i>ko-kaw-tee</i>
1022	Blackthroated Jay	NW hills of Pakistan	Vinous-grey with black head and white wings	Sams as 1020
1023	Green Magpie	Lower Himalayas from Garhwal eastward through Nepal	Bright leafgreen tail with cinnamon-red wings, and black band on nape	Repeated: <i>peep-peep</i> or <i>kik-wee</i> .
1025	Western Yellowbilled Blue Magpie	Outer Himalayas from Pakistan eastward	Purplish blue with black head, neck and breast; white underparts and nape, yellow bill, and bright orange legs	Piecing <i>quirer-pig-pig</i>
1027	Himalayan Redbilled Magpie	Himachal Pradesh eastward	Same as 1025 with red bill	Same as 1025

Number	Name	Region	Colour	Call
1029	Kashmir or Whiterumped Magpie	Mountains of NW Pakistan and India; Gilgit, Upper Indus Valley, Afghanistan	Black and white strongly contrasting plumage with black tail	Subdued rasping <i>querk</i> or <i>kick</i> ; in alarm, a loud harsh <i>kekky-kekky-kekky</i> run together as a rattling note
1030a	Northwestern Tree Pie	Lower ranges of western Himalayas from Pakistan west to Dehra Dune	Sooty grey head, neck, and breast; greyish tail; and white-black wings.	Loud harsh: <i>kitter kitter kitter</i> or <i>ke</i> (or <i>ka</i> )- <i>ke-ke-ke-ke</i> strungout as a rattling call; metallic <i>ko-ki-la</i> or <i>ku-lo-bee</i> (or <i>bob-o-link</i> ); very metallic <i>ta-chuck chuck chuck</i> ; a long-drawn <i>mee-ao</i> in breeding season.
1031	Western Tree Pie	Rajasthan south through Gujarat	Same as 1030a	Same as 1030a
1037	West Himalayan Tree Pie	Foothills and outer ranges of Himalayas from Jhelum Valley into Punjab	Predominantly sooty-grey.	Nasal: <i>kokil-ko-ko-ko</i> ; singing: <i>tütüti-kākā</i> (or <i>kā-kā-kāk</i> ) comical and long drawn: <i>kree-ee-chuk</i> ;
1042	Larger-spotted Nutcracker	Pakistan and NW India; Baluchistan, Gilgit; Iran, Afghanistan	Chocolate and umber-brown with streaked white spots and black bill	Single <i>gurr</i> or <i>kurr</i> or <i>kraak</i> , sometime run together
1045	Himalayan Yellow billed or Alpine Chough	Himalayas of Pakistan and India; Gilgit Kashmir eastward; Iran, Afghanistan	Glossy jet black; yellow bill; bright red legs	Musical: <i>quee-ab</i> or <i>cree-ab</i>

Number	Name	Region	Colour	Call
1046	West Himalayan Redbilled Chough	Pakistan and India; Kashmir	Jet-black, with bright red legs and red bill	Musical: <i>chiān chiāo</i> ; <i>piu-piu-piu</i> ; high pitched and squeaky: <i>kbew</i> and <i>jack</i> and <i>chee-o-kab</i> and <i>kor-quick</i> , with a far-carrying and often with a ventriloquial effect; sometimes a loud clear <i>quoik</i> in alarm
1048	Sind House Crow	Baluchistan, Sind, Punjab, NW regions	Same as 1049	Shrill: <i>quab quab</i> or nasal <i>kaan kaan</i> ; musical <i>kurrrrrrrr</i> ; subdued: <i>kree-kree-kree</i>
1049	Indian House Crow	All India and Pakistan except Kerala	Glossy black with dusky grey or mouse-grey nape, neck, upper breast and upper back	Same as 1043
1052	Rook	Pakistan and NW India. Baluchistan, Gilgit, Punjab, Iraq, Afghanistan	Glossy jet black	Same as 1043 but mellower and distinctive with a large vocabulary to express various emotions and situations.
1053	Jackdraw	Kashmir, N. Baluchistan, Pakistan, Punjab, Afghanistan	Slaty black, silvery grey hind-collar with greyish white eyes	Single note: <i>chack</i> or <i>jack</i> or <i>kwai</i> ; softer and more musical than other crows; sometimes in quick repetition in different keys



Number	Name	Region	Colour	Call
1054	Himalayan Jungle Crow	Pakistan and NW India for Baluchistan eastward including Gilgit	Black with metallic purplish sheen and heavy black bill	Deep hoarse: <i>help help help</i> ; relaxed: <i>krrreak</i> like a soliloquy; sounds like “a hollow bamboo drawn across the wooden spokes of a wheel (like a wooden rattle) with many amusing variations but all the same tone.”
1058	Eastern Carrion Crow	N. Baluchistan, NW India, Gilgit, Kashmir	Glossy jet black	Harsh sounds like raven. When at rest and relaxed, softer notes in “meditative fashion.”
1058a	Eastern Hooded Crow	NW India, Pakistan, Gilgit, Afghanistan, Iran	Pale drab grey mantle and underparts with glossy black plumage on head, wings, and tail.	Same as 1058
1059	Punjab Raven	N. Baluchistan, Sind, Punjab, NW India, Pakistan, Kutch, and Afghanistan	Glistening jet black	Deep, hoarse frequent <i>prük prük</i> , reminiscent of a wooden cow bell. Large vocabulary with some calls musical.
1060	Tibet Raven	High-altitude trans-Himalayan (4000–5000m).	Same as 1059.	Common call: high-pitched musical <i>kreeük</i> or <i>keeb</i>
1061	Brown-necked Raven	Sind, Baluchistan, Afghanistan	Same as 1059	Same as 1059 and 1069

Number	Name	Region	Colour	Call
1062	Waxwing	NW India, Baluchistan, Kashmir, Nepal, Asia Minor, N and SW Iran	Dumpy chestnut, pinkish brown, yellow-tipped tail; wings dark, white, and yellow with brilliant scarlet tips, black throat, rump grey, chestnut tail, “Bushy crest, black throat, brilliant wing-pattern and yellow-tipped tail make its identity unmistakable.”	High sounding: zeee zeeee when ready to fly.
1063	Grey Hypocolius or Shrike-Bulbul	Rare vagrant: Sind-Baluchistan, Sind, Gujarat, Afghanistan and Arabia	Glaucous blue-grey-black colour; wings black with white tips, tail long, blue grey.	“Unmistakable squeaking note,” but very pleasant. Largely silent except in flock, then noisy.

Table 2.2: Coidae, according to Ali &amp; Ripley 1913 [1972] (vol. 5)

### Three ways crows express the truth

According to the principles underlying bird and animal omens in Garga, birds communicated the decree of the gods (*devavibhita*).<sup>8</sup> In this section, decree of the gods is replaced by “Truth” (*satya*), which is invested in all eight kinds of Corvidae, but the most predominant transmitter of truth is the black one, which is the most common. Likewise, these birds have different characteristics that include beauty, character, and speech, and communicate the truth in three different ways: by what they carry in their beaks, by their call, and by what and the way they dig with their claws (vv 5–7). These are the means used to divine the gods’ messages from the crows. It also is clear that the flapping of the wings is always an inauspicious sign (vv 13, 17), and that crows are the special omen birds consulted on military campaigns (v 26).

8 Garga 42.6: *tasmān me devavibhitaṃ cārataḥ prathamam śṛṇu | mṛgā nānāvidhā devaiḥ pakṣiṇāś ca prayojitāḥ ||*.

## Nesting and offspring

Verses 43–56 introduce new items into crow divination: nesting habits, procreation, and egg production. These categories add aspects to the observation of birds found fully expounded for the first time in Garga’s text. The Buddhist version also has verses on the same subjects.<sup>9</sup>

In relation to the directions in which the nests are built, the author introduces an association between the four cardinal directions and the four castes of Brahmanism, beginning with the warrior (*kṣatriya*) in the east and ending with the priest (*brāhmaṇa*) in the north (vv 47–48).

These avian characteristics, therefore, likely come from a tradition of bird-divination that was common to both collections of bird omens, existing in the Northwest of the subcontinent, where Buddhism was actively practised from the early centuries of the Common Era.

## The food offerings and the observation of crows

The final set of verses (57–70) introduces another unique feature to crow divination that is also found in the *Śārdūlakarṇāvadāna*, where these omen birds are revered as “oblation eaters” (*balibhojana*).<sup>10</sup> One can, therefore, assume from the references that some kind of ritual was also carried out involving the feeding and observation of corvids for the purpose of divination. In addition, these verses offer an insight into the method employed to divine the meaning of the birds’ sounds and behavior. A very similar technique finds a parallel in ancient Etruscan bird divination from about the ninth to the first century BCE, where the emphasis was placed on the flight of birds.

## Cross-cultural bird divination

In this section, we look at bird watching and bird divination in two diverse cultures in antiquity. One is found among the people from the western parts of the Indian subcontinent and the other was utilized by the Etruscans who live in parts of modern-day Italy. The underlying conceptual and structural similarities indicate that they likely derived ultimately from a common source.

## The Indian bird divination

The Sanskrit text wraps the whole process of bird watching into a package of religious rituals that involved the feeding of corvids with various kinds of offerings (*bali*) that took place yearly, half-yearly, or monthly. The information is sketchy, but it is possible to outline the procedure involved in the bird watching ritual. A series of food offerings was prepared over a period of three days and an observation grid was constructed consisting of the cardinal and

9 Śka 44–53. Zysk 2023: 136–37, 140.

10 Śka 3, cf. 6–9 where specific oblations are mentioned (Zysk 2023: 133, 138).

ordinal directions. Beginning with east, the direction of the rising sun, the diviner placed a specific oblation at each of the eight directions, moving clockwise. The directions are identified as the eight protectors of the directions (*dikpālas*), where the ritual for their worship is found in the Brahmanic texts describing the domestic rituals known as the *Gṛhyasūtras*.<sup>11</sup> He then summoned the birds with glad tidings and burnt incense. When they arrived, he observed the corvids that came to eat the offering, paying particular attention to their direction, behavior, and call. Based on this information, he was able to prognosticate future events. A prediction was then made based on the following classification of the apodoses of the directions, and the corresponding food offerings, where the inauspicious directions indicate danger and auspicious directions indicate peace and well-being:

1. east – inauspicious – destruction of the village – sesame porridge with clarified butter
2. southeast – inauspicious – fire – rice gruel with meat
3. south – inauspicious – death-black barley porridge with rice grains
4. southwest – auspicious – dominion – boiled rice with milk curds
5. west – inauspicious – danger – flour cakes or a meal of rice in barley flour
6. northwest – both auspicious or inauspicious – storm – food with barley grains
7. north – inauspicious – strike of the sword – food with milk
8. northeast – both inauspicious and auspicious – rain

The list of directions and predictions indicates that only one (SW) of the eight was truly auspicious, both NE and SW are ambiguous, auspicious for farmers, but inauspicious for those on the move, such as a military on campaign, thus leaving the majority to be inauspicious. The final, NE direction, lacks the mention of a food offering.

In addition to the food offerings, the ritual utilized noise, prayers, and incense. This is an example where an extra-Brahmanic system of knowledge, i.e., bird divination, was integrated into a Brahmanic context by the use of a pre-existing ritual procedure.

The special directional circle for bird divination appears also to have been used for both travelers and sedentary people. Among the travelers there were primarily armies on a military campaign and merchants in caravans.

The Indian method of bird watching and divination using a grid divided according to the cardinal and ordinal directions bears a striking resemblance to the bird watching techniques in the ancient Etruscan tradition of bird divination. The principal differences between them include an underlying Brahmanic social and religious procedure and the specific focus on corvids.

11 Especially *Bhāradvajaṛhyasūtra* 3.13–14 (Einoo 2005: 116).

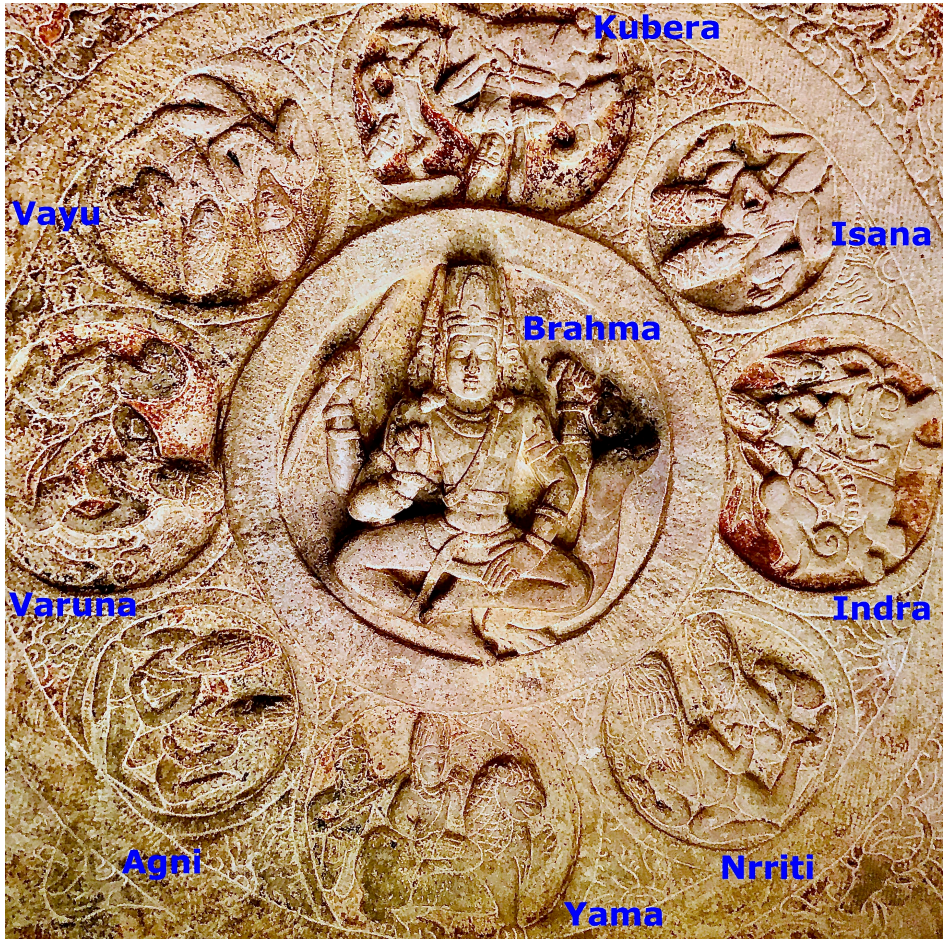
Image of the eight *dikpālas*

Figure 2.2: Cave 3 ceiling, Badami Hindu cave temple Karnataka 3, 6th cent.  
(copyright: public domain)<sup>12</sup>

These representations of the eight earth protectors illustrate the two different configurations of the cardinal and ordinal directions with the principal deity at the center. They occur in the form of either a circle or a 3x3 square placed on the ceiling where it represents the spatial division of the heavens, which is the same as the configuration used in Etruscan bird divination.

12 Image by Sarah Welch. <http://tinyurl.com/mrxxt7a7>





Figure 2.3: Ceiling Panel. Īvara Temple. Ariskere, Karnataka, 13th cent.

Photo by permission of Corinna Wessels-Mevissen

### Etruscan bird-divination

Scholarly opinion suggests that Etruscan bird divination probably came originally from the ancient Near East, travelling northward and westward with traditions of diviners who specialised in both bird watching and hepatoscopy.<sup>13</sup>

J. Linderski's comprehensive study of the decrees from bird divination in Latin sources (1986) indicates that a specially demarcated place called the *templum augurale*, duly structured

13 Burkert 1992: 46–53.

and consecrated, was designated for reading the omens from the flight of birds. It was used in all important decisions and especially in military operations. In Roman times, the flight of birds was largely replaced by the behavior of chickens which were used especially for divination before engaging in war to decide whether or not to enter into battle.<sup>14</sup> The function of observation and the announcement of the signs were under the purview of the magistrates in ancient Rome, who employed augurs to help with ritualized procedures of bird divination and to advise them on the meanings of the signs. Their duty was to carry out auspices which, coming from the Latin *auspicium*, involved “the observation of birds.”<sup>15</sup> The augurs were the intermediaries between the human and divine worlds and had the ability to read the messages sent from the gods to man via the birds.<sup>16</sup> Although the information on bird divination is far more extensive in Roman times than in the earlier Etruscan period, we can get a good idea of the older form of bird divination from the available sources.

In the Etruscan system, as reported by M. Terentius (116–27 BCE) in his *On the Latin Language*, we learn that the *templum* or observation platform was etched on the ground with a special stick (*lituus*). The divisions marked out on the surface of the earth were to mirror the divisions of the sky where the gods resided. The birds received their message as they flew between the two worlds and transmitted it to man via the direction of their flight.

First, a circle was divided by two perpendicular lines, so that the four parts corresponded to the cardinal directions. It was constructed so that, while facing south, the front (*antica*) was south and the back (*postica*) was north; the left (*sinistra*) was east and right (*dextra*) was west. The four cardinal points were expanded to include the four ordinal directions, yielding from the archaeological data a total of eight directions. The bird watcher or diviner was believed to have sat at the centre and observed the flight of birds from different directions. His field of vision was to extend to a grove of the trees in the distance, which implies that the observation point was in the open.<sup>17</sup> Similar observation posts were a regular part of the military camps of armies on the march, since augurs were consulted daily to find out how best to prosecute war.<sup>18</sup>

Several archaeological sites indicate precisely how the observation platforms were constructed and laid out. Their overall construction bears a striking resemblance to the Indian observation site for corvids outlined above. One location designated as the *templum augurale* is found in Bantia, Lucania, Italy, and dates from the first century BCE. It was a place constructed in such a way that six “cippi” or limestone markers were placed to make a 3 x 3 square, each row of which being 3.30 meters apart and oriented in a north-south direction, to confer both the cardinal and ordinal directions (see illustrations). Each cippu bears an acronymic

14 Linderski 1986: 2175, 2229.

15 Scheid 2003: 112; Linderski 1986: 2195–2196.

16 Linderski 1986: 2229.

17 Kent 1938: 273–275 (Varro 7.6–9); Bouche 1882 [1963]: 19–23.

18 Scheid 2003: 114.

inscription whose meaning remains controversial.<sup>19</sup> According to one interpretation, they are abbreviated omens; for example the one to the southeast portends *biva*, “the bird brings a good omen” (*bene iuvante ave*), and the one to the northwest reports *cavap*, “bird comes from a bad place, bringing pestilence” (*contraria ave augurum pestiferum*).<sup>20</sup> Rather than situated in the center, the augur was located at the west cippus facing east, as in the case of the Indian corvid-watching ritual described above.

Another example comes from Marzabotto near Bologna, which was located on the Reno River with access to the Adriatic Sea. From the sixth century BCE, it was a center that exploited the important metal iron, essential in weaponry.<sup>21</sup> The *templum augurale* at Marzabotto had a raised platform, resembling a religious altar, on which an observational grid was inscribed. It appears that the observation spot for the augur was located in the center; the overgrowth of trees over time has obscured the boundary line.

### The *templum augurale*

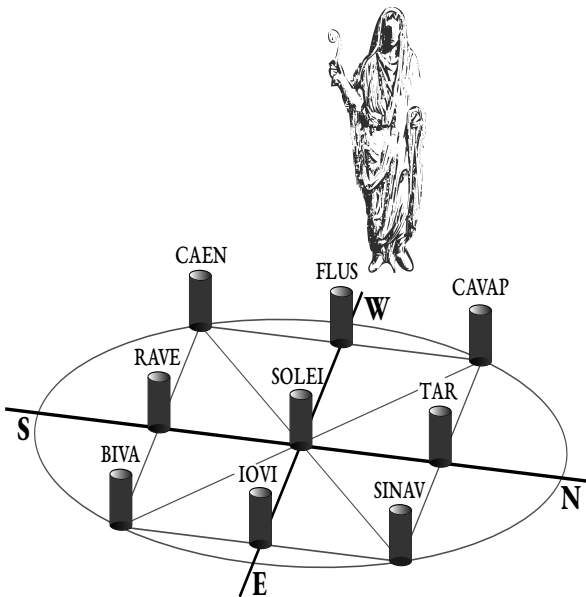


Figure 2.4: Auguraculum cippi, in rows 3 x 3, Bantia, after Torelli 1995

19 Scheid 2003: 120.

20 Magli 2015: 1640.

21 Banti 1973: 9.



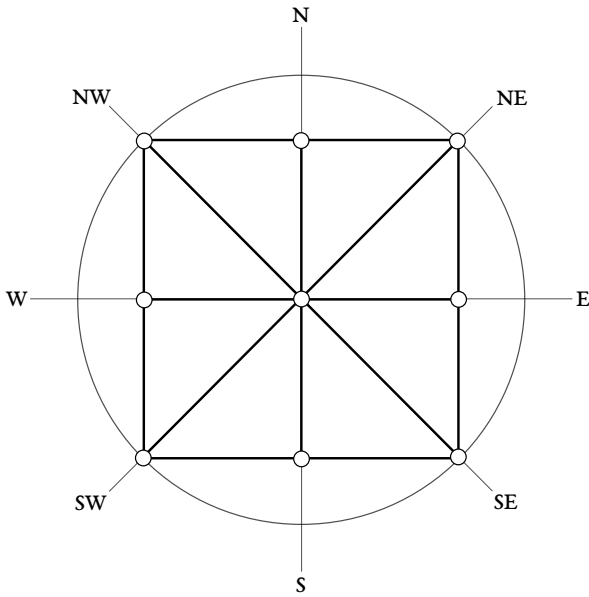


Figure 2.5: Orientation according to cardinal and ordinal points, Bantia, after Torelli 1995



Figure 2.6: Auguraculum of Marzabotto. Gottarelli, A. 2003: 142



Figure 2.7: Cippi, Bantia, Torelli 1966: 315

## Concluding remarks

In both methods of bird divination, one from Northwest India and one from Italy, a designated area, demarcated by the cardinal and ordinal directions, was used specifically for divination through the observation of birds. In both cases, the diviner faced eastwards; and in the example from Karnataka, India, the eight *dikpālas* were arranged in a 3 x 3 manner, exactly the same as found at Bantia, Italy. The similarities at these fundamental levels do not appear to be coincidental, but rather rely on a common template and methodological procedure for bird watching and divination, which were based on an orientation by means of the cardinal and ordinal directions.

In the Indian version, the eight directions are given the names of the eight protectors of the directions (*aṣṭadikpāla*) in Hinduism, which illustrates an aspect of Brahmanic enculturation. Additional differences between them, such as the flight of birds versus the behavior and call of corvids and the ritual practice of food offering based on the domestic rituals of the *Gṛhyasūtras*, are but adaptations based on local beliefs, customs, and practices. It is therefore not unreasonable to assume that these similarities point to a common source of origin.

One final bit of information that could tie Indian bird divination to the Greek world comes from the classical historians' accounts of Macedonian divination described by F. S. Naiden. According to Naiden, Alexander employed six Macedonian royal seers, of whom Aristander was the favorite, being skilled in different forms of divination. Another was Strymon, who specialized in bird-watching with a focus on crows. The only source on Strymon comes from Posidippus (c. 310–240 BCE), who writes in his *On Omens* (*Oionoskopika* 35):

The Thracian hero Strymon, a diviner, who was submissive to the crow, was the supreme master of omen birds. Alexander assigned this title to him, for three times he defeated the Persians, after having been furnished with answers from his crow.<sup>22</sup>

22 μάντις ὁ τῶι κόρακι στρύμων[ν] ὑπ[ο]κείμεν[ο]ς ἦρωσ Θρηήϊξ ὀρνίθων ἀκρότατος ταμίης: ὧι τόδ' Ἀλέξανδρος σημήνατο, τρίς γὰρ ἐνίκα Πέρσας τῶι τούτου χρηράμενος κόρακι. Edition based on Austin & Bastianini 2002: 56. Cf. Austin & Bastianini 2002: 57, and Naiden 2023: 231.

As a specialist in crow divination, Strymon was apparently given a special title in Alexander's army because of his success in providing the predictions leading to auspicious outcomes. Moreover, this is the only place in the Greek literature that crows are attested in the context of divination.<sup>23</sup>

The connection between a Greek crow diviner in Alexander's army and the unique Sanskrit collections of crow omens suggest a common source that might look to Greeks in the northwestern parts of the Indian subcontinent in the centuries just preceding the Common Era.

These two examples of extra-Indian bird watching and divinations suggest the possibility of two trajectories of influence. One is a Greek, and the other is Etruscan via Rome.

## Translation

### I: Calls during the day and at night

1. After paying homage to the divinities and Brahman-sages, I shall teach the behavior of crows as was previously instructed by Brahmā.
2. Brahmā, the knower of reality, taught that there are eight species of crows. I shall teach (you) all of them according to the crow's colors.
- 3–4 White is the king of crows; next best is blood-red; variegated is third; tawny is fourth; yellow is known as the fifth; the sixth resembles a dark cloud; the seventh is dark blue/blackish; and the eighth is black all over.
5. Thus are the eight species of crows, on which Truth is based. But, even though this is the case, crows are seen as black for the most part.
6. As crows have (different characteristics) such as beauty, character, and speech, (so also) in a different way than this, crows emit sounds of many kinds.
7. They communicate danger when they "drag" (things away), . . ., and when they cry out, there is lamentation.
8. One should know that [the call] "khaḍva" (indicates) strife; and (the call) "khaṭa-khaṭa" (indicates) capture. In the case of calls that are harsh and combative, one should recognize (that there will be) a fury with weapons.

23 Naiden 2023: 231, where he says that the title is "hero," which he doubts is true, along with the three battles of Granicus, Issus, and Gaugamela. Referring to Lucian's *The lover of lies* (21-22), he says "Perhaps Aristander mentioned crows in his lost book on divination" (*ibid*). I could not verify this in Lucian's work.

9. If it should call “kaṭ,” there is at once meat; and when the female of the flock makes the call “ketaka,” it is because it is released during sexual intercourse (?).

10–11. And if it calls “kutu-kuḍa,” one should recognize that the Kunti-oil (?) is harmful. In the case of a changed voice, there would be gold. In the case of crows having voices like thunderclouds or like a wagon, it indicates rain. (If it makes the call) “kovā,” one gains a daughter; and (if it makes the call) “vyokuḍiha”(?), (one obtains) prosperity.

12. Having grasped the message (the crows) call out, if it indicates a sign of confidence, then one should know that it is indicated that excellent food is connected to the place.

13. If one crow should utter an indication in a mixed voice while in the presence of cow-dung, then it announces abundant cow’s milk where there is food.

14. If a crow calls out while extending its wings widely, it indicates that the food becomes tasteless and that there is strife at this place.

15. If a calm crow calls out in a sweet sound, “it has gone; it has come back,” then there is the return of the traveler.

16. If a crow calls out exactly (the words) “it has gone, it has gone,” (then) by it, one would shortly come to know that (there will be) a letter that announces a delay (in the traveler’s return).

17. If a crow, arriving on top of a house and gathering up its wings, calls out, then one should know that a fiery glow is nearby.

18. Or, if crows shaking their beaks to the sides (call out), then it indicates an extended journey (?) to the south-eastern direction and danger of fire.

19. If a crow calls out smoothly in a loud voice, (while standing) on a house’s thatch roof, it indicates an ominous great cloud.

20. If crows call out at wells, on the wetlands, and at lakes and rivers, thus it then indicates rain.

21. If (a crow), after taking grass and sticks with its beak, flings (them) into water, then one should know that the crow has indicated the (eventual) plundering of the village.

22. If a crow, being in close contact (with other crows), circling around and settling down in a village, (calls out) from an inauspicious place, then, it portends danger in the region.

23. When twilight time is luminous (i.e., inauspicious) and crows (call out) in every direction (and) disappear at the end of the twilight, they portend horrific danger.

24. If crows appear in the sky at night, call out, and (then) take refuge on houses, one should know that there is panic in the region.

25. Crows that call out in trees with milky sap (situated) in the north-west or in a direction other than north are proclaimers of peace.

## II: Army on the march

26. Because of the (possible) annihilation of the army, one should observe changes during military campaigns. And, (therefore) the status of the campaign is always indicated by crows.

27. When a crow calls out sweetly and distinctly to the traveler, then it is recognized that if it is on the left, there is the attainment of the objectives; if it is on the right, he does not attain his objectives.

28. Now, a crow on the right of him who is on his way back brings about his objective; and he, being glad, will enter (his) home; but, (if it is) on his left, it is not esteemed.

29. If a crow, having taken refuge in a tree with milky sap on the path, calls out sweetly on the left, it portends peace and the attainment of the objective.

30. If a crow clings to the head of a traveler on the path, then this man may be wounded by either a sword or a snake.

31. If an inauspicious crow, whose eyes survey the men on the ground from above (?), calls out, it portends danger in the village and their destruction.

32. Or, if a crow, having picked up a stick (with its beak), stands facing away from the men, then the road is occupied by thieves; it (i.e., the crow) forbids that path.

33. Or, if (a crow, picking up) either grass or a long stick like a snake, drags it (facing away from the men), then, the road is occupied by a snake; it (i.e., the crow) forbids that path.

34. If a crow, picking up a torn piece of cloth (in its beak), stands facing away (from the men), or if picking up a *palāśa* leaf or a birch-bark leaf, it retreats, it portends the attainment of bitumen (and) because of the act of dragging, it portends the destruction of cloth.

35. If it picks up lac, turmeric, or red Indian madder (in its beak) and approaches cautiously, then one should know that the crow has motivated the acquisition of gold.

36. Or, if picking up something white like candied sugar or milt (in its beak), it approaches cautiously, then, one should know that the crow has motivated the acquisition of silver.

37. (If a crow) utters loud sounds with movements to and fro in front (of a man), it portends a turning around (or retreat); it (i.e., the crow) forbids that path.

38. If crows eat the leaves of a felled tree, it portends various food and various (kinds of) corresponding drink.

39. Where crows establish a colony without (seeking) food, it indicates the heat from fire (i.e., campfire), a clandestine division (of forces), and the arming for battle at this place.

40. When there is a traveler on the road, if the bird touches him with both its wings on his head, limbs, or clothes, (then) it intends (to communicate) severe disease.

41. If a crow claws apart (a man's) two sandals or (his) clothes, (then,) the man will meet with terrible danger within seven days.

42. If (a crow) makes a sound consisting of one or two closely connected, salubrious, tranquil, and sweet syllables without tumult, (it portends) both auspiciousness and inauspiciousness.

### III. The crows' nests and offspring

43. If crows make nests in tall trees (or) nests that have disappeared in small trees, it is a sign of drought.

44. If crows make inferior (nests) in the lower parts of trees, . . . .

45. If crows make nests in trees with milky sap, in flowering trees, and in fruit-bearing trees, it is a sign of peace and abundant food. If the nest-building (occurs) at the time when the hot season is emerging, it is an auspicious (sign).

46. If they build nests in the northern and the north-eastern branches of trees, it is a sign of peace and abundant food.

47. If crows build a nest on the eastern side of a tree, then, there is danger to warriors at the place; and if in a withered tree, there is defeat.

48. Thus it is with the classes of merchants, workers, and priests, respectively. The crows by their colonies of nests portend injury according to the directions.

49. Now, a nest at the doors of a palace or prostitute's house announces the rainy season. Making (a nest) on the city gate, watch tower, or on banners, (the crow) portends danger.

50–51. When the nest of crows occurs in the hollow of a tree, great rain clouds begin to form; and crows having three chicks (indicate) famine. In the case of crows that are barren, that have one chick, or when they make their nest anywhere on its (i.e., a withered tree's) limbs (?), (it also indicates famine).

52. Or, if one sees that they are coming together (in a flock), it portends great danger. If (a crow) sent forth (from the flock?) on the left calls in reply to an encamped army or caravan, then, it generates (i.e., portends) that danger is about to spring forth from that region.

53. Or, if (a crow) swoops down on a caravan from behind or from the left, it indicates that the crow proclaimed that there is an army at that place.

54–55. If (it should call out) from the east, there is the destruction of the village; if from the southeast, there is fire; if from the south, death should be recognised; if from the southwest,

dominion; if in the west, one knows there is danger; if in the northwest, there is a storm; in the north, there is the stroke of the sword; (and) if from the northeast, rain.

56. In this way, one should recognize the call of crows in the quarters. In the inauspicious directions, it portends danger; in the auspicious directions, it portends peace.

#### **IV. The crow's food offerings and observation**

57. Now, I shall speak about the crows' food (offerings) according to the quarters. When there are (food) offerings, crows indeed portend what is auspicious and inauspicious.

58. In the east, the oblation should be sesame-porridge mixed with clarified butter. In the southeast, one should give rice gruel mixed with meat.

59. One should know that it is black-barley porridge (mixed) with rice grains in the south. In the southwest, the oblation for the crows is traditionally known as milk curds with boiled rice.

60. But, in the west, it is flour cakes or a meal of rice with barley flour. In the north(west), it is food with barley grains; and in the north, it is food with milk.

61. Thus, on all occasions, the twice-born, who has been engaged (in preparing the ritual and the offerings) for three nights, should present these food offerings in the respective quarters as they have been taught.

62. (He should say:) "Let the crows meet. The eastern (crows), the southeastern, the southern, the southwestern, along with the western, the northwestern, the northern, and northeastern (crows)."

63. (He should continue) "Let the truth-speaking crows in truth individually receive these food oblations offered by him who prepared them."

64. He whose truth is that of the seers and the godhead, whose truth is that of Brahmā, uttered: "May you crows receive these food offerings at this place."

65. The twice-born, who has approached (the site), should stand facing eastward with joined hands (and) offer the oblation to the east. Now, in case of the other (quarters), he should stand (facing) according to the appropriate quarter.

66. At that place, he should call out glad tidings to the previously mentioned crows. He should offer everything at the place: incense and a little food oblation.

67. And (if) he should observe their behavior (and) their call, then, the bird portends (his) every pleasure, battle, and affliction at that place.

68. In this way, a king should carry out (the offering of food oblations to crows) in a year, in six months, or else monthly. He should present the oblation for the sake of the omens.

69. He should not restrain, capture, or kill the crows; and when one (of them) has died, he should cremate it with pieces of wood; and then he will attain success.

70. Thus in the beginning, the lord Brahmā taught this true knowledge concerning crows to both Śukra and Vasiṣṭha.

### Colophon

Thus (ends) the knowledge of crows in the *Gārgīyajyotiḥśāstra*.

## Critical Edition

### Introduction

Nine manuscripts were used in this edition of Garga 19: DCBhRHEBM, and Q, all of which have been previously described;<sup>24</sup> but their descriptions occur again in the list of references. These constitute the most important manuscripts, which fall into three distinct groups: DC, BhR,<sup>25</sup> and HEBM, with Q finding similarities in all three groups, but mostly with HEBM and BhR. It is important to note that C is the most Sanskritic witness, reflective of a more recent handling of the text. It includes verse and chapter numbers and introduces colophons to mark divisions, which are not found in any other witness. *Aṅga* 19 of D corresponds to chapter 62 in C's enumeration. I should point out that the folia in C were mixed, so that the proper sequence should be 86b, 86a, 87b, 87a, 88b, 88a. The parantheses with a "+" or "-" followed by a number next to the sigla or siglum, e.g., BhR (+1 or -1), indicate the reading has either too many or too few *akṣaras* to fit the meter.

### The language of Garga, *aṅga* 19

In this section, I wish to highlight some linguistic characteristics of the Garga's language in this chapter. A full discussion of these is found in the comments to the verses. Together they indicate a text composed in a form of Sanskrit that includes many non-Sanskrit elements that resemble what has come to be known as Buddhist Sanskrit.<sup>26</sup> Already in his edition of Garga *aṅga* 41, Mitchiner recorded some linguistic characteristics of Garga's Sanskrit. These features of language led him to conclude that the text was "influenced by Prakritic or hybrid Sanskritic forms."<sup>27</sup> In the following list, I have included references to forms discussed in Edgerton's *Buddhist Hybrid Sanskrit Grammar and Dictionary*, Vol 1: Grammar (BHSG),

24 Zysk 2016.2: 464–468.

25 BhR's reading at v 14 confirms that the Bh is a copy of R.

26 Zysk 2023.

27 Mitchiner 2002: 33.



Vol 2: Dictionary (BHSD).<sup>28</sup> The number of similarities to the Sanskrit of the *Divyāvadāna* strongly points to a form of Sanskrit found in the north-western regions of the Indian sub-continent during the centuries bracketing the Common Era, which Brough preferred to call “Buddhist Sanskrit.”<sup>29</sup>

The apparatus contains variants from the different witnesses to provide a better overview of the various Prakritic and vernacular forms that occur and thereby facilitate a more complete understanding of the transmission of the text.

### 1. Vowels and Consonants

- a *ā* for *a* (66; BHSG 3.5)
- b *s* for *ś* [esp. *√vās* for *√vāś* (14–17, 19–20, 24–25, 31, 34, 52); BHSG 2.63]
- c *ṣ* for *ś* [39 (Ms C); BHSG 2.59]<sup>30</sup>

### 2. Internal sandhi

- a *sarpimiśra* for *sarpirmiśra*, “mixed with clarified butter” (58; BHSG 4.41)
- b *tilodana* for *tilaudana*, “sesame porridge” (58; BHSG 3.70)
- c *dadhyodana* for *dadhyaudara*: “boiled rice with milk curds” (59; BHSG 3.70)

### 3. Mixing of numbers in a single verse

13 (most Mss), 14 (certain Mss), 22 (certain Mss); BHSG 25.4.  
However, this could be the result of corruption or scribal error.

### 4. Use of irregular gerund

12, 32, 34–36; BHSG 35.9.

### 5. Simplified use of cases

- a accusative for locative (29, 40; BHSG 7.23)
- b genitive for instrument (26; BHSG 7.60)

### 6. Switch in noun gender

2 (n to f), 55, 56, 60 (m to f); BHSG 6.5.

28 Edgerton 1953 [1985].

29 Brough 1954; Zysk 2023.

30 Brough 1954 suggests that the fluidity of sibilants could well be the result of Nawari scribal practices.

## 7. Vocabulary:

- a *māsa* for *māṃsa*, “meat” (9, CDIAL # 9986, p. 572).  
 b unique words

*upakarman* = *upakaraṇa*, “food” (13; cf. BHSD 133)  
*apasamdhya*, “end of twilight” (23)  
*vyāḍa*, “snake” (33; cf. BHSD 517)  
*niḍīyate* (*niḍī* + *ni*), “swoop down” (53)  
*bhaṇḍāra*, “combative” (8)  
*saritā*, “river” (20; cf. BHSD 283)

In addition to these, other features of language are noticed: in the apodosis, several different verbs meaning “to speak,” are used in the sense of “to portent,” indicating that the result is pronounced or spoken. As previously mentioned, manuscript C represents the most Sanskritic version and hence the most recent readings, which includes corrections, reflective of an editorial process. The meter for all the omen-verses is *anuṣṭubh*.

## Text and Critical Notes

## I: Calls during the day and at night

*devatābhyo namas kṛtvā brahmaṛṣibhyas tathaiiva ca |*  
*brahmaproktam pravakṣyāmi vāyasānām viceṣṭitam || 1*

[devatābhyo] daivatebhyo QBM; [kṛtvā] nūtvā D; [vāyasānām viceṣṭitam] ... QBD (unmarked gap).

## Comment

In a, D's *nūtvā*, “having shouted,” “having praised,” expresses the same meaning, but then *namas* would have to be *namo*. The omens in this chapter are adapted to a Hindu social and religious context and brought into, preserved, and transmitted in the Brahmanic system of knowledge.

*aṣṭau vāyasajātyas tu brahma provāca tattvavit |*  
*tān sarvān sampravakṣāmi yathārūpaṃ ca vāyasāḥ || 2*

[aṣṭau ... sampravakṣāmi]... QBM (unmarked gap); [-rūpaṃ] -rūpās DHEBhR, -rūpās C, styās QBM.

## Comment

Emendation is required in d.

*śveto vāyasarājaḥ syāt tato raktas tathāparaḥ |*  
*śabalas tu tṛtīyaḥ syāc caturthas tv aruṇo bhavet || 3*

tato] kṣato D; syāc] syāt D

*Comment*

The corvids are ordered according to their color, with light colors being best and dark colors being worst. Although albino corvids exist, they surely must be rare and, therefore, dearly prized.

*haritaḥ pañcamo jñeyah ṣaṣṭo nilābrasannibhaḥ |  
saptamaḥ kṛṣṇavarṇaḥ syād aṣṭamaḥ kṛṣṇa eva ca || 4*

ṣaṣṭo] vaṣṭo D; aṣṭamaḥ kṛṣṇa] aṣṭamaḥ syāt kṛṣṇa C

*Comment*

The repetition of *kṛṣṇa*, “black,” in *pādas* cd implies perhaps degrees of blackness: the former, with the addition of *varṇa*, “color,” is lighter, i.e., “color like black,” i.e., blackish; and the latter with *eva* is “just back,” i.e., black all over. The more common dark-colored corvids are last in the order of preference, implying a ranking based on rarity.

*iti vāyasajatyo ’ṣṭau yāsu satyaṃ pratiṣṭhitam |  
evam eva tu bhūyiṣṭhaṃ kṛṣṇā dṛśyās tu vāyasāḥ || 5*

dṛśyās tu] dṛśyanti EHDC, dasyāṃte Q, dasyāṃta BM, daśyās tu BhR

*Comment*

Reconstruction of d is based on BhR. The word *satya*, “Truth,” (with an upper-case T) has a special meaning in this Brahmanic context. It refers to the divine truth or the will of the gods. The eight corvids are the specific species of birds through which the gods communicated their will in the form of omens. By far the most common corvids are some degree of black in color.

*kāntiprākṛtibhāṣādyā vāyasānāṃ yathā bhavet |  
ato ’nyathā bahuvīdhā vāco muñcanti vāyasāḥ || 6*

kānti-] kārtti- DCHE; -bhāṣādyā] -bhāṣāyāṃ BhR; -vidhā] -vidhāṃ C; muñcanti] muñcati HERQBM.

*Comment*

In addition to the bird’s variegated appearance, their sounds are also distinguished.

*karṣantīti bhayaṃ prābuḥ . . . |  
. . . rudīte rodanaṃ bhavet || 7*

karṣantiti] kaṣatiti BhRQBM; bhayaṃ] bhavaṃ D; ...] karavidety avibhramaṃ D, (?)ara viṃdeyi bibramaṃ C, karaviṃde vibhramaṃ HE (-1), karaviṃdeti vibhramam BhR, kara vibhramaṃ QBM (-3); ...] śarirapākṣadhunine ... D (marked gap), śarirapāśavade C (-1), śarirapā ... re EHB (marked gap), śarirapāre BhRQBM (-2).

*Comment*

This verse is tentative due to possible textual corruption in *pādas* b and c. BhR provide the basis for a possible reconstruction of b: *karaṃ vindanti vibhramam*, “they find aggression in the claw,” which means that they dig violently with their claws. In c, most witnesses indicate a gap in the text. Only D provides the basis for a reconstruction: *śarirapākṣadbūnane*, “when there is shaking of their bodies and wings.” The verse appears to express the ways by which the birds communicate fear or danger: when they drag things away; (when they vigorously dig with their claws ?); and when they cry out, (flap their wings, and shake their bodies ?) there is distress expressed by weeping.

*khaḍveti kalabaṃ vidyād bandhaṃ khaṭakhaṭeti ca |  
kharabhaṇḍārāśabdeṣu śastrakopaṃ vijānayet || 8*

khaḍveti] ṣaḍveti CQB, ṣaḍjeti D; khaṭakhaṭeti] ṣaṭaṣaṭeti D; khara-] ṣara- QBM.

*Comment*

The word *bhaṇḍāra*, meaning “combative,” only occurs in lexicons. The variants in some of the manuscripts point to different transcriptions of the crow’s calls, where *kb* is pronounced as ṣ.

*kaṭiti bhāṣate sadyaḥ māsaṃ syāt ketaketi ca |  
rutaṃ maithunasyocārāt kārake syāt kulastrīyaḥ (?) || 9*

bhāṣate] cāṣate DHEQBM, cāsane C; sadyaḥ] sadyam C, śadyaṃ QBM; māsaṃ] māmsaṃ BhR; ketaketi ca] sutakēpi ca BhR; ruta-] luta- CBhRQBM, lūta DHE; maithunasyocārāt] maithunatocārāt BhR, maithunocārāt DCHEQBM (-1); kārake] kapūte BMQ; syāt kulastrīyaḥ] syā kṣatastrīyaḥ QBM.

*Comment*

Corruption obscures a definition. In b, *māsaṃ* with the loss of *anusvāra* in the archetype reflects a form of Prakrit (CDIAL #9986, p. 574; cf. Zysk 2016.2: 473, 476). In c, note the variants, *l* for *r* in *ruta*. The last two *pādas* are uncertain, but point to the sounds made when the birds are mating and suggest that the sound emanates from the female. The discussion of sexual sounds points to familiarity with the *citkāras* of Kāmasāstra.

*kuntitailaṃ (?) vijānīyād gbātaṃ kutukudeti ca |  
vikāre taṃ hiranyaṃ syād varṣaṃ meghasvareṣu ca || 10*

kunti-] kuti C; tailaṃ] taira BhR, tela QBM; kutukudeti] kurukudati BhR, kurukudeti QBM; vikāre] kikāre DCHEQBM; megha-] madhya- BhR.

*Comment*

Since *pādas* d and 11ab are connected, verses 10 and 11 must be understood as one unit. This syntactical anomaly points to a previous version of the text that might have been in another meter or in prose. In a, *kuntitailam* is uncertain, and probably corrupt. The word *kunti(i)* is found often as personal name, but in some cases *kunti* refers to a place. According to the Mūlasārvastivāda Vinaya, it is a city visited by the Buddha after leaving Nandivardhana and before reaching Karjūra where is located the *caitya* of Kaniṣka.<sup>31</sup> Therefore, *kunti* could refer to a city in northern part of modern Maharashtra state, known for its oil (*taila*). In b, the mimicking sound has variations in the witnesses, and in c, the variant *kikāre* gives no meaning, so *k* could be a misreading of *v*.

*vā taṃ śakaṭaśabdeṣu vāyaseṣv abhinirdiṣet |*  
*kovā iti labhet kanyāṃ vṛddhiṃ vyokuḍiheti ca || 11*

vyokuḍiheti] vyokūdbriteti BhR.

*Comment*

The last sound transcribed into Devanāgarī is uncertain. BhR has *vyokūdvriteti* (*vyokūdvrita-iti*). Otherwise, it could be read as *vyokuḍ-iba-iti* (BhR: *vyokūḍ-vrita-iti*), “here [if it makes the sound] “vyokuḍ, ...”

*yal liṅgaṃ vyāhared gṛhya śraddhāliṅgaṃ udāharet |*  
*tal liṅgaṃ aśanaṃ vidyāt saṃpannaṃ deśasaṃśritam || 12*

yal liṅgaṃ vyāhared gṛhya] jaligaṃ vyāharetyatya QBM; śraddhāliṅgaṃ] ādhāliṅgaṃ QBM (-1).

*Comment*

The construction of this omen is complicated and highly irregular, beginning with the abnormal gerund *gṛhya*. The conditional phrase is indicated by the use of the optative mood. In b, *śraddhā* could be a mistake for *śrāddha*, but the manuscript evidence does not support it. The latter would indicate a *śrāddha* rite of honoring the departed ancestors, where there are ample tasty oblations offered. The former, on the other hand, implies secure homes, where tasty foods are in ample supply.

*piṇḍitaṃ cet svaram kuryād gomaye ca samīpataḥ |*  
*gorasaṃ vāyasaḥ prāha prabhūtam upakarmani || 13*

gomaye ca samīpataḥ] gomaye ca gomaye ca gomaye samīpataḥ QBM; gorasaṃ] gāsaṃ (-1) QBM; vāyasaḥ] vāyasāḥ DCHEBhR; prāha] prāhuḥ All witnesses.

31 <https://www.wisdomlib.org/definition/kunti>.

## Comment

In d, *upakarman* does not exist in the lexicons, but has the same meaning as *upakarāṇa*, “doing a service,” “help,” or “food” in Buddhist Sanskrit (BHSD 133). The context points to the last meaning. The mixing of number is found in most witnesses, where the protasis is singular and the apodosis is plural. This again points to corruption, which confuses the meaning. Therefore, emendation is required to maintain continuity.

*vistīrya pakṣau vipulaṃ yadi vāseta vāyasaḥ |*  
*arasaṃ tad bhaved annaṃ kalabaṃ cātra nirdīset || 14*

pakṣau] pakṣe All witnesses; vāyasaḥ] vāyasāḥ QBM; arasaṃ . . . nirdīset] wanting Bh.

## Comment

*Pādas* cd are wanting in Bh, but are found in R, making R the witness used for Bh.

*āgataṃ gatam ity etat yadi vāseta vāyasaḥ |*  
*śānto madhuranirghoṣaḥ proṣitāgamaṇaṃ bhavet || 15*

āgataṃ . . . vāyasaḥ] wanting Bh; āgataṃ] āhataṃ All witnesses.

## Comment

The first two *pādas* are missing in Bh, but are found in R, indicating that Bh is a copy of R. In a, all witnesses read *ābataṃ*, “wounded, hurt, beaten,” which would yield: “it has gone, it has been wounded.” This requires an inauspicious apodosis which all witnesses read as auspicious. A more plausible reading requires the emendation to *āgataṃ*, “has come back,” “returned.” Likewise, the reading *etat* could be emended to *eva*, “just,” as in *pāda* a of the next verse. This verse implies that the sounds of the crows sometimes came in the form of Sanskrit phrases that only the diviner could interpret. A slightly different version of this verse occurs at *aṅga* 42.26:

*svāgataṃ cāraṇaṃ kurvan gṛhadvāri yadā bhavet |*  
*iṣṭaṃ samāgamaṃ brūyāt tadā vā prasthitaḥ priyaḥ ||*

And when [a crow] is at a doorway of a house, crying “welcome,” it announces the sought-after reunion with the dear ones who have set out (on a march).

Both protases quote words of welcome that are expressed in slightly different ways. Verse 19.15 contains the manner in which the welcome is made; and its apodosis expresses that the traveler returns safely from his journey. Being easier, it reflects perhaps a later version of 42.26.

*gataṃ gatakam ity eva yadi vāseta vāyasaḥ |*  
*lekham etena jāniyāt kṣipraṃ yaś ca ciraṃ vadet || 16*

gatakam] kagatakam C (+1); vāyasaḥ] vāyasā QBM; lekham] lekhām DHEBhR, leṣām CQBM; yaś ca] yadi DC, ya HE (-1); ciraṃ] varaṃ BMQ.

*Comment*

This omen is a slightly different version of the previous one, since *pādas* ab are similar in both verses (even Q repeats 14cd). Emendation required in c.

*gṛbasyopari tu hy āyan yadi vāseta vāyasaḥ |*  
*paḥṣena pracayan vidyād agnidābaṃ upastbitam || 17*

paḥṣena] na D (-2); pracayan] pranayaṃ C.

*Comment*

In c, *pracayan* is a first class, Vedic present participle from the √ci, “to gather.” The expression “gathering up its wings” (*paḥṣena pracayan*) indicates that it is flapping its wings. The fiery glow is an ill omen that points to the campfires of the enemy, portending an impending battle and/or destruction by fire.

*tunḍāni ca vidhūnvantaḥ pārśve vā yadi vāyasaḥ |*  
*diśy āgneyaṃ pravāsaṃ ca diśyād agnibhayaṃ tadā || 18*

vidhūnvantaḥ] C, vidhunvantaḥ DHEBhR, vidhunvataḥ BM; pārśve vā ] pārśve QBM (-1), pāśva HE (-1), yāś caiva BhR.

*Comment*

In b, *pārśve*, “to the sides,” (singular with plural meaning) implies that the crows shake their beaks from side to side. The construction of *pāda* c, again, is irregular. A better, but still metrically incorrect reading would be *āgneyadiśi pravāsaṃ diśyād*. The word *pravāsa* means a travel abroad leading to a foreign residence, i.e., an extended journey.

*gṛhavalike tu yadā snigdhaṃ vāsati vāyasaḥ |*  
*svareṇa mabatā dīptaṃ mabāmeghaṃ vinirdīset || 19*

gṛhavalike] gṛho valike All witnesses; svareṇa] jvaroga- BhRQ.

*Comment*

Another possible reading in a is *gṛbe valike*, which could be the intended meaning of the witnesses, where *o* is misread for *e* in Devanāgarī script. In c, *dīptaṃ* normally means inauspicious. In this case, it seems to indicate “lightning,” i.e., great cloud with lightning, which is ominous. The omen is ambiguous since rain is both auspicious and inauspicious. The onset of the monsoon rains is auspicious to villagers and farmers, but wholly inauspicious for travelers, such as soldiers, traders, and mendicants.

*udapāneṣu anūpeṣu sarassu saritāsu ca |*  
*vāyasā yadī vāsante varṣam evaṃ vinirdīset || 20*

sarassu] śaratsu DQ, sarāṃsi BhR; saritāsu] saraḥsu D.

*Comment*

The word *saritā* is the Buddhist Sanskrit feminine form of *sarit* (BHSD 583). The verse finds parallels in both Śka and *aṅga* 42.

Śka 38  
*svareṇa parituṣṭena tīrbhavṛkṣeṣu vāsati |*  
*ūrdhvamukhaṃ tathā vakti vātavṛṣṭiṃ vinirdīset ||*

(If a crow) calls out with a glad voice in the trees by a bathing place; and if it speaks with an opened and upturned beak, it indicates wind and rain (i.e., monsoons).

Garga 42.29  
*udapāneṣu kūpeṣu sarassu saritāsu ca |*  
*yatrāriṣṭo vadet tuṣṭo varṣaṃ tatrādīśen mabat ||*

Where a contented crow<sup>32</sup> calls out at wells, caves, pools, or rivers, it indicates abundant rain at that place.

All three versions speak of rain as the final outcome. Garga 19.20 and 42.29 derive from a common source, while Śka offers a more nuanced version.

*tṛṇakāṣṭhāni saṃdaśya prakṣipati yadodake |*  
*grāmaghātaṃ tato vidyād vāyasena niveditam || 21*

saṃdaśya] samdasya C; yadodake] yatodake HEBhRBM, tatodake Q; vāyasena niveditam] vāyase san-  
 niceṣṭitam D, vāyase sanniveditam C, vāyase sanniveditam HE, vāyase niveditam Q (-1), vāyase sanivedi-  
 tam BM.

*Comment*

Apparently, the casting away or dropping of the things used in a crow's nest-building indicated the eventual destruction of the nests (i.e., habitats) where humans live.<sup>33</sup>

*dīptasthānād yadī grāme abhiniya tu vāyasab |*  
*saṃyogī maṅḍalībhūtas tasyāṃ diśi bhayaṃ vadet || 22*

32 The word *ariṣṭa* is the omen bird *par excellence*, the crow, or more generally a corvid.

33 I thank Philipp Maas for this insightful suggestion.



dīptasthānād] saptasvānād (?) C; vāyasah] vāyasāḥ BM, vāsāḥ H (-1), vāmāḥ E (-1); maṇḍali-] maṇḍalaṃ Q; -bhūtas] -bhūtās DC, -bhūtaṃ BhRQ.

*Comment*

Some witnesses use both the singular and plural. In a, *dīptasthānād* can also mean “from a blazing place,” i.e., a place exposed to the sun, which is inauspicious as indicated by the apodosis.

*saṃdhyā velā yadā dīptā vāyasāḥ sarvato diśam |*  
*aṃsaṃdhyam praliyante bhayam śaṃsanti dāruṇam || 23*

diśam] diśe D; bhayam] bhaye D.

*Comment*

In b, *dīptā*, here, means the blazing direction, i.e., facing the sun, which being luminous is always inauspicious. The grammar of this verse is loose. The word *aṃsaṃdhyā* does not occur in lexicons and is therefore unique. It has the sense of when the twilight has gone away or ends.

*yad antarikṣe vāsante rātrau dṛśyante vāyasāḥ |*  
*gr̥beṣu ca vilīyante vidyād deśasya vidravam || 24*

vāsante] vasate D, vasati C, vasata HEQBM; dṛśyante] dṛśyanti C

*Comment*

*Pāda* b is metrically defective in all witnesses but C, where it is an emendation. The word *vidrava*, “panic,” in the apodosis also occurs at Śka *khañjarīṭakajñānam* 10b (Zysk, 2023: 159, 161). The √li + vi, “to meld away,” has the sense of hiding away or taking refuge.

*deśasyottarapūrveṇa pareṇottarato 'pi vā |*  
*vāsantaḥ kṣiravṛkṣeṣu vāyasāḥ kṣemavādinaḥ || 25*

vāsantaḥ] vāsanta DCHEQBM; vāyasāḥ] vāyasā All witnesses; kṣemavādinaḥ ||] kṣemavādinaḥ ||25|| iti rātreṣu bhāty ubhaṃ svarādi || C

*Comment*

C adds a colophon that marks the end of the section on calls during the day and the night. Here the orientation is according to the cardinal and ordinal directions, which implies a fixed location.

## II: Army on the march

Verses 26–42 constitute a unit of omens that focus on an army on campaign. Among them we notice a shift to an egocentric orientation of space, using the terminology of right, left, front, and back, which is reflective of movement with a non-fixed point of reference. The theme is also found with several similarities in *āṅga* 42.9–29 and *Śārdūlakarṇāvadāna*, “Vāyasaruta.”

*senānāśād vikārāmś ca prasthāneṣv abhilakṣayet |*  
*vāyasānām samuddiṣṭam gatisthānam ca sarvadā || 26*

senā-] sanā- HEBhRQBM; abhilakṣayet] apilakṣayet DC; -diṣṭam] -diṣṭo D, -diṣṭā C.

### Comment

Here again the genitive has the sense of the instrumental, which is expected with the use of the past passive participle (*samuddiṣṭa*). With this verse there is the new theme of an army on the march. Changes in the campaign are to be noticed; and appropriate manoeuvres are indicated by crows.

*prasthitasya yadā samyag vāyaso madhuraṃ vadet |*  
*vāme ’rthasādhano jñeyo dakṣiṇo ’rthān na sādhatet || 27*

-sādhano jñeyo] sādhanā jñeyā BhR.

*dakṣiṇas tu nivṛttasya vāyaso ’rthakaro bhavet |*  
*vāme na śasyate hr̥ṣṭo gr̥haṃ pravīśate tathā || 28*

śasyate] spr̥syate D; hr̥ṣṭo] dvaṣṭo M.

### Comment

This and the previous verse find parallels at *āṅga* 42.9–10:

*dakṣiṇād vāmabhāgād vā nibodheta pṛthag dvijān |*  
*ariṣṭo nāma śakuniḥ prasthitasya yathā bhavet |*  
*vāmato ’rthakaraḥ sa syāt dakṣiṇo ’rthān vināśayet || 9*  
*puram̐ praveśyamānasya grāmaṃ vā yadi vā gr̥haṃ |*  
*dakṣiṇe śobhano ’rthaḥ syād vāmatas tu vigarbitaḥ || 10*

One should pay attention to birds individually on either the right or the left side. For him who has set out (on a journey), if a crow is on the left, there is the accomplishment of the objective; but (if it is) on the right side, it causes the objectives to be lost. 9.

For him being led into (i.e., re-entering) his town, village, or house, if (a crow) is on the right, the outcome is auspicious; but it is reprehensible, if it is from the left. 10

It appears that 19.27–28 present an easier version of the right-left distinctions, where the syntax of *pādas* 28cd is reversed. This suggests that 19.27–28 is the more recent of the two versions.

*madhuraṃ vyāharan vāmam kṣīravṛkṣam upāśritaḥ |  
pathi tu kṣemam ācaṣṭe arthasiddhiṃ ca vāyasaḥ || 29*

-vṛkṣam] -vṛkṣas D; upāśritaḥ] apāśritaḥ HEBhRQBM; pathi tu] pathika BhR.

*Comment*

Here either the accusative has the meaning of locative/adverb (*vāmam* for *vāme*) or it is a misreading of *m* for *e* in script.

*yasyābhiliyate mūrdhni vāyasaḥ pathi gacchataḥ |  
śastreṇa vā sa vidhyeta manuṣyaḥ pannagena vā || 30*

śastreṇa] śastrair HEBhRQBM.

*Comment*

In c, the word *vidhyeta* is passive from *vyadb*. The crow probably would only land on the head of a man who was already dead or dying. A slightly different version of this omen occurs at Śka 36 and *aṅga* 42:15.

Śka 36  
*yasya śīrṣe niśīditvā karṇam karṣati vāyasaḥ |  
abhyantare saptarātrān maraṇam yasya nirdīśet ||*

If a crow sits down on a man's head and tears away at his ear, it indicates his death within seven nights.

Garga 42.15  
*nīliya mūrdhani yadā vāyaso yasya bhāṣate |  
tadā tasya bhayaṃ vidyāc chastreṇa bbujagena vā ||*

If a crow, after alighting on the head of a man, calls out, then one should know that he has danger from a sword or a snake.

The protases of all three versions locate the crow on the man's head (*śīrṣa*, *mūrdhan*); and the apodoses are all inauspicious indicating imminent death (Śka) or the reason for the man's fatal injuries: attack with sword or snake bite, both of which are mentioned in both versions from Garga.

*yeṣāṃ abhimukho bhūmau dīpto vāseta vāyasaḥ |  
prasāryakṣo (?) bhayaṃ grāme teṣāṃ gbātaṃ vinirdīśet || 31*

dipto] diptau R; prasāryakṣo] prasārdakṣo C; bhayaṃ] bhasaṃ HEBhRBM; maṃsa Q.

*Comment*

The construction of this omen verse is complicated. In c, the word *prasāryakṣo* is uncertain. It appears to be composed of *prasāry+akṣo*, where *prasāri* is from *prasārin*, “coming forth,” extending,” i.e., a crow whose eyes are extending over or surveying (the men).

*nṛṇām vā yadi vā kāṣṭhaṃ gr̥hya tiṣṭhet parāṇmukhaḥ |*  
*caurais tu dhāryate panthās taṃ mārgaṃ pratiśedhayet || 32*

gr̥hya] gr̥hṇan BhR; caurais] corais M; dhāryate] cāryate All witnesses; panthās] pathas C

*Comment*

In b, *gr̥hya* is an irregular gerund; in c, BhR read the regular present participle *gr̥hṇan* and C has the irregular *panthās*. Both the gerund and noun are examples of vernacular or Prakritic influence. In c, emendation follows *dhāryate* at 33c. It is likely the *c* was read for *dh* in script.

*tr̥ṇaṃ vā yadi vā kāṣṭhaṃ dirghaṃ vyādaṃ ca karṣati |*  
*sarpeṇa dhāryate panthās taṃ mārgaṃ pratiśedhayet || 33*

nṛṇām ... pratiśedhayet] wanting C; tr̥ṇaṃ] nṛṇām BhR; dirghaṃ] dirgha DHBDM, dārva Q; vyādaṃ] vyāṃdaṃ BhR, vyaṃdaṃ HEBM, vyaḍaṃ Q; dhāryate] dhāryataṃ Q; taṃ] tri- DHEQBM.

*Comment*

This verse is wanting in C, and probably edited out because *pādas* a and d are identical to those in the previous verse. On *vyāda*, see BHSD 517. This and the previous verse are perhaps variants, where elements of one are found in the other. The long stick and the grass here symbolize a snake in the grass.

*vidalaṃ yadi vastraṃ ca gr̥hya tiṣṭhet parāṇmukhaḥ |*  
*palāśapattraṃ bhūrjaṃ vā yadi gr̥hyāpasarpati |*  
*vāyasaḥ śailalābhāya celanāśāya karṣaṇāt || 34*

vastraṃ ca] vastrāgraṃ D, vāstrāgo C, vastrātaṃ] HEBM, vāstraṃ taṃ Q; palāśa-] palāśa DC; bhūrjaṃ] bhūje DCHEQBM; celanāśāya] cet sa nāśāya BhR, ce la tiśāya Q; cela-] caila- D; karṣaṇāt] karmaṇām BhR, karmaṇi Q.

*Comment*

This omen has six *pādas* in *anuṣṭubh* meter. The irregular use of the gerund *gr̥hya* continues in this verse; and *s* for *ś* in DC could be scribal. In d, *gr̥hyāpasarpati* could be a mistake for *gr̥hyopasarpati* as found in 35d.

*lākṣābaridrāmañjiṣṭhām yadi gr̥hyopasarpati |  
suvarṇalābham jānīyād vāyasena pracoditam || 35*

-haridrāmañjiṣṭhām yadi] -habhedram api ... yadi Q (gap indicated); -haridrā-] haridraṃ BhR.

*Comment*

In d, the use of the irregular *gr̥hya* again points to Prakritic or vernacular influence and *gr̥hyopasarpati* could be a mistake for *gr̥hyāpasarpati* as found in 34d.

Śka 30 provides a verse with similar content.

*lākṣābaridrāmañjiṣṭhābaritālanahsilāḥ |  
jasyāharet puras tasya suvarṇalābham vinirdiṣet || 30*

(If a crow) fetches lac, turmeric, red Indian madder, yellow orpiment, or red arsenic in front of (a man, then) it indicates his acquisition of gold.

Common to both protasis are lac, turmeric, and red Indian madder; and both apodoses are the same, gold.

*śarkarāmatsyaśuklaṃ vā yadi gr̥hyopasarpati |  
rūpyalābham vijānīyād vāyasena pracoditam || 36*

gr̥hyopasarpati] gr̥hyopatiṣṭhati D, gr̥hyāpasarpati BhRM.

*Comment*

In b, irregular *gr̥hya* continues; and there is confusion in BhRM as to the construction of the main verb, giving rise to opposite meanings. It could mean either it retreats from (*apa-sarpati*) or moves cautiously towards (*upa-sarpati*) the men. Based on my observations of corvids when feeding crows, the bird usually picks up the item in its beak and moves cautiously away from me, since crows are generally timid around humans. In these three verses, I understand that it retreats where the apodosis is inauspicious and approaches where it is auspicious. It appears that the color of what the bird has in its beak indicates either gold or white silver, the latter less valuable than the former.

*agrataḥ parivartena vyāhareta babusvarān |  
parivartanam ākhyāti taṃ mārgaṃ pratiṣedhayeṭ || 37*

agrataḥ] agrato BhRQ; -svarān] -svarāt C.

*Comment*

*Pāda* d, or the apodosis, is the same as verses 32–33, so this omen verse might be out of place.

*vicchinnavṛkṣapatrāṇi yadi kbādanti vāyasāḥ |  
annaṃ vividham ākhyāti bhakṣaṃ ca vividhānugam || 38*

-vṛkṣa-]-dakṣa- D; khādanti] śādanti Q; ākhyāti] āśyāti Q; bhakṣam] bhakṣāṃś All witnesses; vividhānugam] vividhāt sa gāḥ D, vividhās ca gāḥ CHEBM, vividhānugāḥ BhR, vivāsvagāḥ Q (-1).

*Comment*

In a, D mixes up of letters *d* and *v*. *Pāda* *d* is corrupt in BhR's reading: *vividhānugāḥ* exhibits double sandhi *metri causa*. The logical connection between the protasis and apodosis eludes me, unless a felled tree indicates the presence of woodsmen with different kinds of food and drink.

*anāmiṣam saṃniveśam yatra kurvanti vāyasāḥ |*  
*agnidāham mithobbedam saṃnāham cātra nirdīset || 39*

anāmiṣam] anāmiṣe D, anāmiṣa- BM; -veśam] -veṣam C; kurvanti] kurvati D; vāyasāḥ] vāyasā Q; mitho-] midho- C.

*Comment*

In a, C shows a perhaps scribal confusion of sibilants. D's *anāmiṣe* suggests that it is a place where food is wanting. The connection between the protasis and apodosis is elusive.

*advānam praṣhito yas tu pakṣābhyām sprśate khaḡaḥ |*  
*mūrdhni gātreṣu cele vā mahāntam vyādhim icchati || 40*

pakṣābhyām] pakṣibhyam All witnesses; cele] caile DCBhRQ, caine HEBM; vyādhim icchati] vyādhimamthati DCEHQBM.

*Comment*

In a, the accusative *advānam* has the sense of the locative, "on the road." In b, *pakṣibhyām* could be a Prakritic variant. *Pāda* *d* follows BhR. All other witnesses read *manṭhati* or *mantḥati*, "he mingles," which does not fit and is probably corrupt. The use of *√iṣ*, "to desire," is unusual in these omen verses. I presume that it means that the bird desires to communicate that the traveler will suffer a deadly disease, especially since corvids rarely come close enough to touch a living person with its wings.

*upānahau vā vastram vā vāyaso yadi kuṭṭayet |*  
*abhyantareṇa saptāhād bhayam prāpnoti dāruṇam || 41*

upānahau] upānahō CBM; vāyaso] vāmaso Q; kuṭṭayet] kudayet QBM.

*ekākṣaram dvyakṣaram vā ca saṃsaktam anāmayaṃ |*  
*śāntam madhuranirghoṣam vyāhareta śubhāsubham || 42*

ca saṃsaktam] anāsaktam D, asaktam CHEBM(-1), yaḥ saṃsaktam BhR, ya saktam Q (-1); śāntam madhuranirghoṣam] śāntam ... rghoṣam Bh (torn page); vyāhareta] vyāharena na D, vyāharet BM (-1); śubhāsubham ||] śubhāsubham||42|| iti patrā || C.

*Comment*

The meaning of the verse is subtle: a call with only one or two syllables, even if auspicious in every other way, is not enough to predict an auspicious or an inauspicious outcome, so the result is inconsequential.

It is not an omen call. For example, the call “kā” or “kā-kā” carries little meaning. However, if it is repeated again and again, there is cause for alarm. In *pāda* b, if the relative pronoun is intended, then it must be in the nominative as in the reading of BhR, but that would require the other two words also to be in the nominative, resulting in the metrically incorrect: *yaḥ saṃsakto ’nāmayāḥ*, where the crow, as the subject, is both healthy and closely connected perhaps to the flock. Therefore, the text has been emended, so that the meaning is clear, i.e., the syllables are closely connected or come right after each other. Again, C indicates that this is the end of a section that is called “leaves” [*patrā(ni)*], i.e., the behavior of the crows, which includes the carrying of leaves in their beaks.

### III. The crows’ nests and offspring

Verses 43–56 introduce a new set of omens from bird watchers and diviners. They include signs based on when and where nests are built, such as location and direction, and on the number of eggs the bird produces. Both help to complete the bird watcher’s handbook of crow omens. Some omens in this section have variants in the Buddhist Sanskrit text of the *Śārdūlakarṇāvadāna*’s “Vāyasaruta.”

*niḍāny ucceṣu vṛkṣeṣu yadi kurvanti vāyasāḥ |*  
*nivṛttāny alpavṛkṣeṣu tad anāvṛṣṭilakṣaṇam || 43*

niḍāny] atha vaṃśyādi niḍāny C; nivṛttāny ...-lakṣaṇam] wanting C.

#### Comment

Witness C indicates a new section by introducing it with “now begins the genealogy, etc.,” i.e., nest building and offspring, but lacks *pādas* cd of this and the next line.

*nīcair nīcāni kurvanti vṛkṣāṇāṃ yadi vāyasāḥ | 44*

nīcair ... vāyasāḥ] wanting C.

#### Comment

The word *nīcāni* could be a scribal mistake for *niḍāni*, “nests,” but not a single witness confirms it. This omen lacks an apodosis, indicating corruption. Moreover, witness C lacks these *pādas*.

For 43–44, Śka 50–52 provide a version, where the focus is on crops rather than rain. The implied meaning is that the higher up in the tree the nest is found, the better the crops will be.

*upari vṛkṣaśikhare yadā sūyati vāyasī |*  
*alpōdakam vijānīyāt sbale bījāni ropayet || 50*

*yadā tu madhye vṛkṣasya nilayam karoti vāyasī |*  
*madhyamaṃ varṣate varṣam madhyaśasyam prajāyate || 51*

*skandhamūle tu vṛkṣasya yadā sūyati vāyasī |  
anāvṛṣṭir bhaved ghorā durbhikṣam tatra nirdīśet || 52*

When a female crow gives birth on the crown of a tree, one should recognise that (even) little water will cause the seeds in the ground to grow (at that place). 50

But, when a female crow makes a nest in the middle of a tree, moderate rain will fall and a moderate amount of grain will be produced (at that place). 51

And, when a female crow procreates at a branch of a tree trunk (i.e., near the bottom of the tree), (then) there will be terrible drought that indicates famine at the place. 52

Garga's text seems to be saying something different. Although there is corruption, it would appear that nests in tall trees and hidden in small trees indicate drought and fewer crops, which would be the opposite of Śka.

*kṣīravṛkṣeṣu phulleṣu vāyasāḥ phaliteṣu ca |  
yadi nīḍāni kurvanti kṣemasaubhikṣalakṣaṇam |  
grīṣmanirgamane kāle nīḍānām karaṇam śubham || 45*

ca] vā DHEBMQ; grīṣmanirgamane] grīṣmaike nirgame BhR; nīḍānām] nīḍā HEQBM (-1).

#### Comment

Beginning with this verse, there is a set of four omens (45–48), which focuses on another set of parameters for the nest. They include the type of tree, the season, and the side of the tree with respect to the quarters (46–48), which points to a fixed location.

*pūrvottarāsu śākhāsu vṛkṣānām uttarāsu ca |  
yadi nīḍāni kurvanti kṣemasaubhikṣalakṣaṇam || 46*

pūrvottarāsu] pūdyottarāsu Q; śākhāsu] śālāsu HEBhRBM; uttarāsu ca] uttaram uttarāsu ca Q; kṣemasaubhikṣa-] kṣemaṃ saubhikṣa- BhR.

#### Comment

In a, a large group of witnesses (HEBhRBM) has *śālāsu*, “large branches” or “houses;” in c, *uttarāsu*, might also mean “in the upper” branches; but it more likely a juxtaposition to *pūrvottarāsu* in a. In d, BhR has *kṣemaṃ saubhikṣalakṣaṇam*, “peace (i.e., well-being) characterized by abundant food.”

*nīḍam purastād vṛkṣasya yadi kurvanti vāyasāḥ |  
kṣatriyānām bhayaṃ tatra śuṣkavṛkṣe parājayaḥ || 47*



kṣatriyānām ... parājayaḥ] wanting Q; parājayaḥ] parājayam C.

*Comment*

The mention of *kṣatriya*, “warriors,” identifies the Brahmanical social and intellectual context.

*evaṃ vaiśyās ca śūdrās ca brāhmaṇās ca vibhāgaśaḥ |  
yathādīśaṃ piḍayanti vāyasā niḍasaṃcayaibḥ || 48*

evaṃ ... saṃcaye] wanting Q; evaṃ] sarve DC; -saṃcayaiḥ] -saṃcayeh D, -saṃcaye HEBMC.

*Comment*

In c, the verb of the apodosis, *piḍayanti*, “cause pain,” has the sense that they bring about injury in the form of pain to the different classes. Filling out the proper directional sequence, beginning with the warriors in the previous verse, this verse continues with the other classes (*varṇa*), moving clockwise from east, so that merchants are in danger when the nests are on the south side; workers, when on the west side; and priests, when they are on the north side. In terms of hierarchical sequence, it would appear that the warriors are first and priests last, pointing to a social environment such as a royal court, where members of the princely classes predominate. In other words, each of the four directions applies to a social class, beginning with warriors and ending with priests. The omen applies the cardinal directions to the four Brahmanic castes.

*prāsādaveśyadvāreṣu niḍaṃ varṣām athocyate |  
gopurātṭālake kurvan dhvajeṣu ca bhayaṃ vadet || 49*

prāsāda-] ... da Q (unmarked gap); -veśyadvāreṣu] dvāraveṣu D, dvāraveṣu HEQBM, dvāraveśāni C; varṣām athocyate] vārṣikam ucyate DHEBMBhRQ; gopurātṭālake] gopurādālake D, goṣudāralakeṇa Q (+1); kurvan] pūrvan Q; vadet] bhavet D.

*vṛkṣasya suṣire niḍaṃ vāyasānām yadā bhavet |  
mahāmeghāḥ pravartante trīśāvās caiva vāyasāḥ || 50*

niḍaṃ ... vāyasāḥ] wanting BhRQ (unmarked gap); suṣire] sukhire CBhR, suṣire HE, suśirai BM, susire Q; mahāmeghāḥ] mahāmedhāḥ D. trīśāvās] trīśāyās C niśāyās D, nṛśāyās HEBM.

*Comment*

In 50d, *trīśāvāḥ* is the emended reading based on the mention of numbers of offspring in the following verse. D has *niśāyās*, “nights,” which makes no sense, and the other readings are corrupted.

*durbhikṣam anapatyeṣu ekaśāveṣu caiva hi |  
tājāmṣeṣu (?) yadā niḍaṃ vāyasaḥ kurute kvacit || 51*

durbhikṣam ... niḍam] wanting BhRQ (unmarked gap).

*Comment*

Verses 50–51 belong together, but there is also an indication of corruption from the unmarked gaps in BhRQ. Verse 51 speaks about where the nests are located and the numbers of offspring produced. At 51c, the compound *tajjāṃśeṣu*, “on the limbs born of it” (*taj-ja-aṃśeṣu*). The “it” (*tad*) implies the tree at 50a. Furthermore, that tree, being hollow, indicates a withered or dead tree that results from the lack of water. The apodosis (*durbhikṣam*) applies to both protases. Śka 53 gives an abbreviated version of the omens based on the number of chicks, including only the auspicious apodosis. Nevertheless, it points to the same tradition from which the text of *aṅga* 19 derived.

*caturaḥ pañca vā potān yadā sūyati vāyāsī |*  
*subbhikṣam ca bhavet tatra phalānām uditam bhavet ||*

When a female crow generates four or five chicks, then, it is said that there will be an abundance of fruits at that place.

Both protases include a specific number of offspring. Śka indicates that when the number is large, the outcome is auspicious, while Garga’s version expresses it in the opposite way: the lower number indicates an inauspicious outcome. Both use the number of offspring and come to the same result, but the Śka asserts a positive and Garga a negative outcome. Difference is found merely in the mode of expression.

*saṃgacchamānā dṛśyed vā tad ākhyāti mahadbhayaṃ |*  
*senāṃ niviṣṭaṃ sārthaṃ vā vāme sṛṣṭo ’nuvāsate |*  
*tasmād deśāt prayātavyaṃ bhayaṃ hy atra prajāyate || 52*

ākhyāti] ākṣatir BhR; senāṃ niviṣṭaṃ] senāniviṣṭā DHEBhRQBM; vāme sṛṣṭo ’nuvāsate] vāmeṣvoṣṭanu-  
vāsate BhR; vāmeśceṣṭo D; vāme śreṣṭo C, vāme sṛṣṭho HE; deśāt] deśān HEBhR.

*Comment*

Although corruption obscures clarity, the omen verse appears to be talking about flocks of crows. In d, the reading *sṛṣṭaḥ* is uncertain. D’s *ceṣṭaḥ* could refer to the bird’s gestures; but it is unconvincing. The emended reading of C, *śreṣṭhaḥ*, “the best [crow being] on the left ...,” is a possible alternative. The word *prayātavyaṃ* gives the sense that danger from war is about to break out in the region. In d, the use of the verb *prajāyate*, “generates,” is unusual in this context of omen verses. It means in this context that it generates a result, i.e., “it indicates or portends,” which is the common meaning of verbs in the apodosis. The birds on the left in this and the next verse, indicative of an inauspicious result, imply a return journey.

*prṣṭhato yadi vā sārthe vāmato vā niḍiyate |*  
*saṃgrāmaṃ nirdīśet tatra vāyasena pracoditam || 53*

niḍiyate] nijiyate Q.

*Comment*

The use of √ḍi + ni is not found in lexicons and therefore is unique. A variation of this verse occurs at Śka 19:

*sārthopari niṣīditvā kṣāmaṃ dīnaṃ ca vyābaret |  
nīpatet sārthamadhye 'smin caurasainyaṃ na samśayaḥ || 19*

If, after having settled down (in a tree) above a caravan, (a crow) calls out weakly and miserably (and) swoops down in the midst of the caravan, then, without doubt, there is an army of thieves (at that place).

The protasis of both omens includes a caravan and the bird's flight pattern of swooping down. The Śka focusses on the sound of the bird and Garga on its direction. Both apodoses are inauspicious with an underlying military theme: Śka has an army of thieves, and Garga has an army.

*purastād grāmaghātaḥ syād agnir dakṣiṇapūrvataḥ |  
mrtyur dakṣiṇato jñeyo nairṛtād uta śāsanam || 54*

agnir ] agni HEBhRQBM, agniṃ DC

*paścimāyāṃ bhayaṃ vidyād vāyus cottarapaścime |  
śastrapātaś ca saumyāyāṃ varṣaṃ cottarapūrvataḥ || 55*

vāyus cottarapaścime] vāyur uttarataḥ smṛtaḥ C, vāyasottarataḥ smṛtaḥ D, putrottarataś ca taḥ BM, vāyucottarataś ca taḥ HE.

*Comment*

This and the previous verse address the call of the crow from a fixed location, e.g., a campsite, a village or a temple, with the orientation indicated by both the cardinal and the ordinal directions. In 55c, the word *saumyāyāṃ* is in the feminine gender to agree with the implied *dīśi*. In b, *vāyu*, “wind,” in the sense of a moonson storm, could be both auspicious and inauspicious. It is auspicious for a farmer in the village, but inauspicious for a traveler on the road.

*evaṃ dikṣu vijānīyād vāyasānāṃ prabhāṣitam |  
dīptāsu bhayam ākhyāti śāntiṃ śāntāsu nirdīśet || 56*

ākhyāti] ichaṃti BhR; nirdīśet ||] nirdīśet ||56|| iti veśyādi C

*Comment*

As indicated by C, this verse ends the section dealing with “a prostitute's house, etc.” In cd, *dīptāsu* and *śāntāsu* are in the feminine gender agreeing with *dikṣu* in a. In d, the word *śānti* in a Brahmanic context is a synonym of *kṣema* in a Kṣatriya context.

#### IV. The crow's food offerings

This section continues with the Brahmanic ritual terminology by listing the cardinal and ordinal directions along with their corresponding food offerings. The names include both the quarters (*dik*) and the eight guardians of the quarters (*aṣṭadikpāla*), known in Brahmanic literature. In the *Śārdūlakarṇāvadāna*, the oblations might well have indicated food items that a Buddhist mendicant could expect to receive as an offering. The ritual procedure specifies in which quarter a specific food is to be distributed to the birds, when the ritual is to be performed and its duration. The directions are listed using terms derived from the pantheon of largely Vedic gods. The construction of an observation site using the cardinal and the ordinal directions in these verses is reminiscent of the Etruscan *templum augurale*, which is marked out for the observation of birds' flights during divination (see introduction).

*athopahārān vakṣyāmi vāyasānāṃ yatbādīśam |*  
*śubhāśubhaṃ hi śaṃsanti upahāreṣu vāyasāḥ || 57*

athopahārān] athopahān DH (-1), athopahāgan HQM, athopārāṃs ca BhR.

##### Comment

In a, BhR read *upārān*, which is a rare word that means “offenses,” and therefore must be a mistake. The *śaṃs* has the common meaning “to praise,” but in this context it means “to announce” or “to predict,” i.e., to portend.

*purastād upahārah śyāt sarpimiśraṃ tilodanam |*  
*yavagūṃ māṃsasammiśrāṃ dadyād dakṣiṇapūrvataḥ || 58*

sarpimiśraṃ] sarpirmiśraṃ HEBM; tilodanam] tilaudanam DC.

##### Comment

In b, the key witnesses read *sarpimiśraṃ* for the more correct *sarpirmiśraṃ* found in HEBM, and only DC have the correct Sanskrit form *tilaudanam*, which the others (HEBhRQBM) read the Prakritic *tilodanam*, where sandhi is compromised. Both cases point to Prakritic or vernacular influence.

*kṛṣṇadbhānyaudanaṃ jñeyaṃ dakṣiṇe taṇḍulaiḥ saba |*  
*dadhyodanaṃ hi nairṛtyāṃ vāyasānāṃ baliḥ smṛtaḥ || 59*

-dhānyaudanaṃ] -dhānyodanaṃ QBM; dakṣiṇe taṇḍulaiḥ] dakṣiṇenadhanaiḥ DC, dakṣiṇenadinaiḥ HEBM, dakṣiṇe taṇḍilaiḥ Q; dadhyodanaṃ] dadhyaudanaṃ DR.

##### Comment

In a, only a few insignificant witnesses (QBM) read the Prakritic *dhānyodanaṃ*, while the key witnesses prefer the Sanskrit *dhānyaudanaṃ*; however in c, it is the reverse, only DR read the Sanskrit

*dhānyaudanaṃ*, while the majority prefer the Prakritic *dhānyodanaṃ*. This indicates the influence from the vernacular or Prakritic speakers.

*apūpās tv atha vāruṇyāṃ vā yavyaṃ śālibhojanam |*  
*yāvakottarataś cāpi saumyāyāṃ dugdhabhojanam || 60*

bhojanam] bhog ... Q (unmarked gap).

*Comment*

*Pādas* cd refer to the north, but in different ways. I suspect that *pāda* c really refers to the northwest (*uttarapaścimā*), which is the logical direction in the sequence. It should be noted that the oblation in the northeast is missing in order to complete the sequence of cardinal and ordinal directions. This suggests that the text is incomplete and still in the formative stage.

*evaṃ dikṣu yathoddiṣṭān upahārān imān dvijaḥ |*  
*trirātropāṣṭhito bhūtvā dadyāt parvasu parvasu || 61*

yathoddiṣṭān] yathordiṣṭaṃ C, yathodiṣṭān BhRQ; imān ... parvasu] ... Q (unmarked gap); parvasu parvasu] parvam uparvasu D.

*Comment*

In d, the Sanskrit form is *upāsthito*.

*aindrāgneyās ca yāmyās ca nairṛtyā vāruṇaiḥ saha |*  
*vāyavyasaumyaraudrās ca samāgacchantu vāyasāḥ || 62*

aindrāgneyās ... vāyasāḥ] ... Q (unmarked gap); nairṛtyāṃ vāruṇaiḥ] nairṛtyā ... vāruṇaiḥ BhR (marked gap)

*Comment*

These directions are the eight protectors of the quarters (*aṣṭadikpāla*) found throughout Brahmanic literature. In b, the plural *vāruṇaiḥ* is perhaps honorific and *metri causa*. The use of *raudra* for northeast points to an early formulation of the eight, since it occurs in the Brāhmaṇas, Upaniṣads, and Sūtras, and is replaced by *īśāna* in the Purāṇas.<sup>34</sup>

*tatkṛtopabṛtān imān upahārān pṛthak pṛthak |*  
*pratigrhṇantu satyam vai vāyasāḥ satyavādinah || 63*

34 Wessels-Mevissen 2001: 9–10, 15.

tatkr̥topahṛtān ... pṛthak] ... pṛthak Q (unmarked gap). vai] eva All witnesses.

*Comment*

*Pāda* a is unmetrical and corrupt. A possible emendation could be *etān* for *imān*, but since the text is non-Sanskritic, it remains. *Pāda* c can be emended to be metrical.

ṛṣidevatāsatyena brahmasatyena vāyasāḥ |  
ākhyātam pratigr̥hṇīdhvam upabārān imān iba || 64

-devatā-] -daivatā- CBhR; -satyena ... vāyasāḥ] -satyena ... vāyasāḥ R (unmarked gap); pratigr̥hṇīdhvam] pratigr̥hṇīyād D, pratigr̥hṇītvā CHEBM, pretigr̥hṇātu Q.

*Comment*

The meter is irregular in *pāda* a. In c, only BhR have the regular Sanskrit readings. The others could result from scribal misreading or attempts at simplification. This verse calls the corvids to the ritual feeding and identifies those specific divine beings that bear Brahmā's truth communicated by the crows.

prāṇmukhaḥ prāñjalis tiṣṭhet pūrveṇopahared balim |  
yathādīśam athānyeṣu tiṣṭhed abhyāgato dvijaḥ || 65

prāñjalis] prānalis Bh, prāṇnalis R; abhyāgato dvijaḥ] satyāhanū dvijaḥ D, abhyāsāhanū dvijaḥ C, abhyāhanū dviṭaḥ HE, abhyāgatā dvijaḥ BhR, abhyāhanū dvijaḥ BM, ibhyārha dvijaḥ Q.

*Comment*

In d, *abhyāgato* follows BhR, but emended to the singular form. Other witnesses could read *abhyābhūya*, "addressing" (the crows), after emendation. This would give a slightly better rendering: "he should stand, addressing (the crows), according to the quarters." The meaning is that the twice-born should first stand facing east and should offer the food to the east, and do the same for all the other quarters in a clockwise manner (i.e., east, southeast, south, etc.). Being the direction of the rising sun east is always the starting point.

tatrāhlādanān vāyasānām pūrvoktānām udāharet |  
dhūpam alpōpahāraṃ ca sarvaṃ tatra nivedayet || 66

tatrāhlādanān] tatrāhlādanāt tat D (+1), tatrāhlādanā HEQBM, tatrāhlādanād C, tatra hlādi Bh, tatrāhlādi R; tatra nivedayet] tatrānivedayet Q.

*Comment*

*Pāda* a is metrically defective with an extra *akṣara*, and BhR's reading is also metrically defective. R could yield, "he, causing joy," but then the verb lacks an object. In c, all witnesses read *ā* for initial *a* in *alpōpahāraṃ*. It is a pattern in all the witnesses, reflective perhaps of Prakritic or vernacular influence.

This verse specifies that he should do things to make the crows refreshed and happy, which included food appropriate to the quarter and burn incense to purify the air.

*tac ca teṣāṃ nirikṣeta ceṣṭitaṃ vyāhṛtaṃ vadet |  
barṣaṃ yuddhaṃ atbo dainyaṃ sarvaṃ tatra nirvedayet || 67*

The verse is wanting in CR; tac ca] na ca HEBMQ, ta ca Bh.

*Comment*

The verse is suspicious because it is wanting in two trustworthy witnesses, C and R (but found in Bh). The reconstruction relies on Bh. The verse seems to be saying that if the twice-born observes the crows' behavior and recognizes the bird's call, then the bird will reveal all to him.

*evaṃ saṃvatsare kuryāt ṣaṇmāse vā mahīpatiḥ |  
māsānumāsam athavā nimittārthaṃ baliṃ haret || 68*

saṃvatsare] savatsaram BHRQ; ṣaṇmāse] ṣaṇmāsāṃ DHEBM, ṣaṇmāsāṃ C; māsānumāsam athavā] māsīmāsy athavā kāryaṃ BhR; māsānumāsam] māsam Q (-3).

*Comment*

This verse makes it clear that the offering of food oblations is meant to obtain the omens from the corvids that come to consume the food.

*na vārayen na gr̥bhñiyād vāyasān na ca ghātayet |  
mr̥te cāpi dabet kāṣṭhais tathā siddhim avāpnuyāt || 69*

*Comment*

The Brahmanic funeral practice of cremation is applied to these important omen birds.

*iti vidyām imāṃ satyāṃ vāyasānāṃ prabhāṣitām |  
brahmā śukravaśiṣṭhābhyāṃ provāca bhagavān purā || 70*

*Comment*

This last verse is reminiscent of the language of the Purāṇas, and offers the mythological origin of the omens. In this way, the text of the *vāyasavidyā* now becomes part of the Brahmanic system of knowledge (*śāstra*).

### Colophon

*iti gārgīye jyotiḥśāstre vāyasavidyā ||*

gārgiye jyotiḥśāstre vāyasavidyā] gārgiye jyotiḥśāstre vāyasavidyānam adhyāyaḥ BhR; gārgiye jyotiḥśāstre] gārgiye jyotiḥśāstra D, gārgījyotiḥśāstre ||62|| C, gārgiye jyotiḥ HEBM, gārgiyo jyotiḥ Q.

#### Comment

The colophon construction varies in the witnesses. BhR has the most complete colophon, which indicates it to be a chapter in the overall corpus; C numbers the chapter as 62; and D has Jyotiḥ for *jyotiḥ*, which is a viable alternative.

## Abbreviations

BHSD Edgerton, F. *Buddhist Hybrid Sanskrit Grammar and Dictionary*  
 BHSG Edgerton, F. *Buddhist Hybrid Sanskrit Grammar and Dictionary*  
 CDIAL Turner, R. L. *A Comparative Dictionary of Indo-Aryan Languages*  
 Śka Śārdulakarṇāvadāna

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35 Mitchiner 2002: 24–28; Pingree 1971: 116–17; 1976: 29; 1981: 78; and 1994: 78.



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- Q No. 2549=2603. Rajasthan Oriental Research Institute, Alwar. 186 folios. 11 lines per page. Yellow-white paper, thick woven. Black ink. Devanāgarī script. *Samvat* 1912 (1855–56 CE). According to Mitchiner there is a comment at the end of the manuscript stating that it was “written by the Brahmin Nāthurāma and presented to the Mahārāja’s library in *Samvat* 1912.” I could not find this comment, but found the following: *vṛddhagargeṇa kṛtā ce yai (?) gārgāsaṃhitā saṃpūrṇa[m] mayā likhitā || samvat 1912. dā. pustakaśālāsarakāra alavara saṃ 1811 (or 1911).*<sup>36</sup>
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36 Cf. Menaria *et al.* 1985: 608f, where the text is described as incomplete and the *samvat* date of 1912 is given.

37 *Ibid.*

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## The Religious Orientation and Cultural Identity of Early Classical Ayurveda\*

*Philipp A. Maas*

### 1. Introduction

The history of Indological research on the religious orientation and cultural identity of Ayurveda can be roughly divided into two phases that correspond with two radically different perceptions. In the initial phase, starting with the publication of Julius Jolly's survey of ayurvedic medicine in 1901, scholars viewed Ayurveda as a derivative of Vedic medicine that, in its religious dimension, was an offshoot of Vedic Brahmanism.<sup>1</sup> This assessment persisted throughout the first half of the twentieth century. Even as late as 1964, Jean Filliozat summarized in the English translation of his *La doctrine classique de médecine Indienne* the results of his research on the religious affiliation of Ayurveda in the following manner:

Indian medicine has therefore drawn on the Veda even for the principal elements of its general doctrines. Thereby Ayurveda is the legitimate heir to the Veda, but it has developed to a large extent the patrimony thus received.<sup>2</sup>

Filliozat was well aware that Ayurveda is built upon conceptions that are lacking in the Vedic intellectual world such as, for example, the teaching of the three pathogenetic substances wind (*vāta*), bile (*pitta*), and phlegm (*śleṣman* or *kapha*), which exist in a healthy human body in a suitable relation. Despite these apparent innovations, he saw Ayurveda as a continuation of Vedic medicine based on a Vedic worldview.

\* This article is an extended and revised version of the presentation “Āyurvedic approaches to reality as reflected in the *Carakasamhitā* and its origin myth of *rasāyana*” on June 13, 2015, held in the thematic panel “The *Carakasamhitā* as a Mirror of South Asian Cultural History” at the 16th World Sanskrit Conference, Bangkok that the present author co-organized together with Karin Preisendanz. Other occasions at which materials pertinent to the present study were presented are the invited online presentation at the Consortium for History of Science, Technology and Medicine: “The Cultural Identity and Religious Orientation of Early Classical Ayurveda” on February 22, 2022, and my habilitation colloquium at the University of Leipzig on December 19, 2021. I am grateful to the audiences of these events for their comments, which helped me develop the presentations into the present article. Special thanks are due to Patrick Olivelle, who prevented me from perpetuating the Indological myth of *puruṣārtha* as “the goals of life” by pointing me to his article on *trivarga* (2019).

1 Jolly 1901.

2 J. Filliozat 1964: 188.

Kenneth G. Zysk, whose groundbreaking studies on the history of medicine in ancient India, published between 1985 and 1991, mark the beginning of the second phase of Indological research on Ayurveda's original religious milieu, developed a new perception by taking more seriously than Filliozat the fact that Vedic sources do not attest to the existence of specifically ayurvedic medical conceptions and methods, such as the just-mentioned theory of pathogenetic substances or humors. When he identified conceptions and methods of treatment occurring in early Buddhist literature as predecessors of related ayurvedic theories, Zysk concluded that Ayurveda did not develop from Vedic medicine, which was based on the "magico-religious" concepts of Vedic medicine, but from methods of healing that were first practiced in early Buddhism and other contemporary ascetic traditions. He characterized these methods as "empirico-rational" and contrasted them with the religio-magical conceptions of Vedic medicine.<sup>3</sup> Ayurveda's affiliation with Vedic Brahmanism results, according to Zysk, from the endeavor of ayurvedic physicians to create acceptance for their profession in a society that was dominated by Brahmanical norms and values.

In *Greater Magadha*, Johannes Bronkhorst drew upon Zysk's work to support his paradigm-shifting hypothesis on the early South Asian history of culture and religion.<sup>4</sup> Bronkhorst argued in favor of the existence of the cultural complex of Greater Magadha that was largely independent of Vedic Brahmanism in the eastern part of the Ganges valley from the middle of the first millennium BCE onwards and identified this complex as the home of the so-called ascetic or *śramaṇa* religions, among which Buddhism and Jainism have survived to the present date. According to Bronkhorst, the *śramaṇa* religions of Greater Magadha, which developed in the context of newly emerging city-states, had a different worldview and culture than Vedic Brahmanism. This reveals itself, for example, in their belief in karma and rebirth, cyclic time, a unique funerary practice in round sepulchral mounds, and practicing an empirical-rational system of medicine, i.e., Ayurveda.

For his identification of the cultural complex of Greater Magadha as the origin of Ayurveda, Bronkhorst relied almost exclusively on Zysk's *Asceticism and Healing in Ancient India* and left the sources of early Ayurveda, specifically the *Carakasamhitā*, unconsidered.<sup>5</sup> However, this comprehensive work, which can be dated for its earlier strata that comprise the first five *sthānas* and the beginning of the sixth to approximately the first century CE, is an eminent source for research into the cultural and religious history of early Ayurveda, even if the composition and compilation of this work took place at the very end of Ayurveda's formational period.<sup>6</sup> Considering that the *Carakasamhitā* is an amalgamation of various medical

3 However, this does not mean that Ayurveda was "scientific" in the modern western sense of the word. Cf. Engler 2003.

4 Bronkhorst 2007: 57–60.

5 Zysk 1991.

6 On the redactional history of the *Carakasamhitā*, see Maas 2010. Meulenbeld (1999–2002 vol. IA: 114) argues that the *Carakasamhitā* must have been composed between ca. 100 BCE and 200 CE.

traditions that were current when Caraka composed and compiled his medical compendium,<sup>7</sup> many of which will have had a prehistory, the *Carakasamhitā* should reflect the cultural and religious milieu of Ayurveda at a very early stage of its development.

Based on this assumption, the present article surveys and interprets selected passages from the *Carakasamhitā* on the backdrop of the pertinent secondary literature, earlier and contemporaneous Sanskrit and Pali sources, and in connection with a passage from Strabo's *Geography* to reassess Bronkhorst's hypothesis of Ayurveda's origin in the culture of Great Magadha and to reach preliminary conclusions concerning early classical Ayurveda's cultural identity and religious orientation in relation to the *śramaṇa* worldview and that of Vedic Brahmanism.

## 2. Vedic Brahmanism

As indicated above, already the early Indological scholarship on Indian medicine noticed that Ayurveda presents itself as an off-shoot of Vedic Brahmanism. This holds good already for the early classical Ayurveda of the *Carakasamhitā*, as can be concluded from the very fact that the early redactor of the *Agniveśatantra*, who is called Caraka in the section headings throughout the work and in Siddhisthāna 12.37d f., used the Sanskrit language to compose his work. He thus chose the prestigious form of the Old Indo-Aryan language that was the liturgical language of Vedic Brahmanism, and intimately related to the socio-political ideology of Brahmanism. Opting for Sanskrit was an obvious choice, considering that at Caraka's time, Brahmanism had become influential in many parts of South Asia to such an extent that even religions such as Buddhism and Jainism that had originally used Middle Indo-Aryan languages for the composition of their canonical and exegetical literature, now partly turned

However, a date around the beginning of the common era appears to be the best-educated guess at the present state of research, considering terminological and conceptual similarities between *Carakasamhitā* Śārirasthāna 5.9f. and Aśvaghōṣa's *Buddhacarita* (12.16–30), which can be confidently dated to the first half of the first century CE (Maas 2018a: 72f., n. 80).

- 7 Throughout this article, the name "Caraka" is used as a convenient designation for the author and redactor who composed the earliest written version of the first more than five *sthānas* of the *Carakasamhitā*, which became the starting point of the manuscript transmission of this work. J. Filliozat (1964: 21) argued that the personal name "Caraka" might hint at his association with the Vedic school of the Black Yajurveda that likewise is called Caraka. Michael Witzel (1981: 121) took up this lead, for which the text of the *Carakasamhitā* provides little evidence. An alternative and maybe more plausible speculation would be to connect the name with the *carakas*, a group of homeless ascetics (*parivrājaka*), mentioned in Buddhist and Jaina literature (see Edgerton 1953: 225a, s.v. *caraka*) because the *Carakasamhitā* depicts ideal physicians as homeless wanderers (see below, p. 95). The largely uniform style of writing that prevails throughout the first five *sthānas* and the beginning of the sixth points, however, to the author-cum-redactorship of a single person for this part of the work. For a comprehensive survey of the academic discussion of the identity and dating of the author of the *Carakasamhitā*, see Meulenbeld 1999–2002, vol. 1A: 105–115.

towards Sanskrit.<sup>8</sup> However, the Sanskrit of the *Carakasamhitā*, as that of other ayurvedic compendia, “shows similarities with that of the epics and Purāṇas, with that of inscriptions, and with ‘Hybrid’ Sanskrit,”<sup>9</sup> and thus does not fully comply with the standard of Brahmanism.

A further sign of Ayurveda’s affiliation to Brahmanism is the designation of the medical system of knowledge as Ayurveda, i.e., the knowledge (*veda*) of a long life, which may be interpreted as an allusion to the Vedic text corpus.

As can be expected under these conditions, textual evidence for the proximity of early Ayurveda to Vedic Brahmanism frequently occurs throughout the *Carakasamhitā*. Already the origin myth of Ayurveda at the outset of the work narrates that the Vedic gods Prajāpati, the Āsvins, and Indra transmitted the entire body of ayurvedic knowledge that originally only the god Brahmā possessed from heaven to earth. This lineage of teachers and students connects Ayurveda with the Vedic pantheon and implicitly with the Vedic religion.<sup>10</sup>

A direct reference to the four collections of Vedic literature occurs in *Carakasamhitā* Sūtrasthāna 30.20f.:

In this regard, if there should be persons questioning which of the four Vedas of the *Rg-*, *Sāma-*, *Yajur-* and *Atharvaveda* the experts in Ayurveda teach, ... the physician thus questioned should declare that among the four [collections] of the *Rg-*, *Sāma-*, *Yajur-*, and *Atharvaveda* his own adherence is to the *Atharvaveda*. As is well-known, the Veda of the *Atharvaṇa* priests teaches medicine because it encompasses donations, benedictions, *bali* offerings, auspicious acts, fire sacrifices, self-restrictions, atonements, fasting, mantras, and so on.<sup>11</sup>

The above-quoted passage mentions the *Atharvaveda* as the collection of Vedic literature to which the ayurvedic physician claims devotion. However, the relationship between the *Carakasamhitā*’s Ayurveda to the ritualism of the *Atharvaveda* probably was not as intimate as the text suggests at first sight. The fact that ayurvedic physicians may be asked about their Vedic affiliation indicates that some socially relevant actors may have questioned the connection of Ayurveda to Vedic Brahmanism.

8 On the spread of Sanskrit in South Asia and beyond, see Bronkhorst 2011: 42–65. On Buddhism’s and Jainism’s linguistic turn towards Sanskrit, see *op. cit.*: 122–153. Vincent Eltschinger (2017) confirms that the appropriation of Sanskrit in larger segments of Buddhist communities reflects Buddhism’s rivalry with Brahmanism as an important socio-political factor.

9 Das 1990: 47.

10 Cf. Zysk 1990: 122.

11 *tatra cet pṛṣṭārāḥ syuḥ – caturṇām ṛksāmayajuraratharvavedānām kiṃ vedam upadiśanty āyurvedavidāḥ? ... tatra bhiṣajā pṛṣṭenaivam caturṇām ṛksāmayajuraratharvavedānām ātmano ’tharvavede bhaktir ādeśyā, vedo hy ātharvaṇo dānasvastyayanabalimaṅgalahomaniyamaprāyaścittopavāsamantrā-dipariḡrabhāc cikitsām prāba ...* CS Sūtrasthāna 30.20f., p. 186b.

Nevertheless, Caraka's reference to Ayurveda's proximity to the *Atharvaveda* was well-founded. Some of the means of ritual healing that the above-quoted passage mentions appear in a list in *Vimānasthāna* 8.87 referring to medicine "depending on destiny or karma" (*daivavyāpāśraya*) as one of two main categories of medicine, the other being medicine "depending on combination" (*yuktivyāpāśraya*). In *Sūtrasthāna* 11.54, these two main categories are supplemented with "conquering the mind" (*sattvāvajaya*) as a third basic category of medicine.<sup>12</sup> For Caraka, the fundamental role that these passages ascribe to ritual healing justified the presentation of the ayurvedic physician as standing in the tradition of the *Atharvaveda*, even though in the bulk of the *Carakasambhitā* ritual healing does not play a prominent role. Nevertheless, Caraka's project to establish a connection between Ayurveda and Vedic Brahmanism through ritual healing became quite a success. In his commentary on the above-quoted passage, approximately a thousand years after Caraka, Cakrapāṇidatta identified the *Atharvaveda* with Ayurveda right away.<sup>13</sup>

The *Carakasambhitā* does not only integrate Vedic rituals as foundational forms of medicine, but it also contains numerous references to the socio-political ideology of Vedic Brahmanism concerning the stratification of the society into the four classes of priests (*brāhmaṇa*), warrior nobility (*kṣatriya*), free workers (*vaiśya*) and servants (*śūdra*), for example, in the reappearing summons to venerate the gods, cows, *brāhmaṇas* and other high-status beings.<sup>14</sup>

Caraka also addressed the question of the social position of ayurvedic physicians within the Brahmanical scheme of social stratification into four classes in *Sūtrasthāna* 30.29, where he discussed the question of which social position qualifies for studying medical science.

And *brāhmaṇas*, *kṣatriyas*, and *vaiśyas* may study this [Ayurveda]. Of these, *brāhmaṇas* [may study Ayurveda] for the sake of kindness to living beings, *kṣatriyas* for the sake of protecting, and *vaiśyas* for the sake of payment. Or, in general, all [may study Ayurveda] for attaining merit [gained through fulfilling obligations] (*dharmā*), wealth (*artha*), and pleasure (*kāma*).<sup>15</sup>

In the third sentence of this passage, in which Caraka connected the practice of Ayurveda with the "three major domains of human activities and pursuits that are beneficial to persons who

12 See Angermeier 2022 and Maas 2018b: 554.

13 "He [i.e., Caraka] mentions the cause for the identity of Ayurveda with the *Atharvaveda*" *āyurvedasyātharvavedābbedabetum āha* (*Ayurvedadīpikā* *Sūtrasthāna* 30.21, p. 186b). Cf. Dasgupta 1932: 278.

14 See, for example, CS *Sūtrasthāna* 8.18: *devagobrāhmaṇaguruvṛddhasiddhācāryān arcayet* (p. 48a), *Vimānasthāna* 8.7: *devarṣigobrāhmaṇaguruvṛddhasiddhācāryebhyo namaskṛtya* (p. 262a), and *Cikitsāsthāna* 1.4.31: *devagobrāhmaṇācāryaguruvṛddhārcane ratam* (p. 388b).

15 *sa cādhyetavyo brāhmaṇarājanyavaiśyaibḥ. tatrānugrahārthaṃ prāṇinām brāhmaṇair āraḥsārthaṃ rājanyair vṛttyārthaṃ vaiśyaibḥ sāmānyato vā dharmārthakāmāparigrabhārthaṃ sarvaiḥ* (CS *Sūtrasthāna* 30.29, p. 169b).



perform them,<sup>16</sup> it remains ambiguous whether the pronoun *sarvaiḥ* refers to all members of the before-mentioned three social classes or whether it refers to men in general independent of their class membership. In the first case, the medical profession would be reserved for the group of *āryas*, i.e., the society's inner circle with active access to the Vedic religion consisting of the three classes explicitly mentioned in the quoted passage above. In the second case, physicians could be recruited from any stratum of society.

Caraka's attitude towards the socio-political ideology of Brahmanism and its relationship to Ayurveda becomes clearer from the text passage *Cikitsāsthāna* 1.4.51–53, in which he encouraged the veneration of qualified physicians.

Living beings should venerate an ethically good, intelligent, and focused twice-born who has reached perfection in the knowledge system [of Ayurveda] as if he were their own teacher because he is traditionally known to be a teacher of life. It is said that at the completion of his education,<sup>17</sup> the physician obtains his second birth because the doctor does not bear the title of a doctor because of his previous birth. At the completion of his education, a firm *brāhma-* or *ārṣa-*mind takes possession of him because of his knowledge. Therefore, the doctor is traditionally known to be a twice-born.<sup>18</sup>

Here, Caraka explained that at finishing his medical education, the student becomes constantly possessed of a specific type of mind. He thus alluded to his categorizations of minds in *Śārīrasthāna* 4.36–41, where he initially explained that although the variety of minds of living beings is infinite for several reasons, minds can be categorized as triple based on the dominance of one of the three qualities *sattva*, *rajas*, and *tamas*.<sup>19</sup> In Caraka's worldview these qualities are, in contradistinction to classical Sāṅkhya, psychological factors rather than constituents of the material world. *Sattva* is the substance of which the mind naturally consists, whereas *rajas* and *tamas* are mental pathogenetic factors that bind beings to the cycle of *saṃsāra*.

The minds of living beings, according to the classification of the *Śārīrasthāna*, may be pure, i.e., dominated by their *sattvic* nature. In this state, the mind is virtuous (*kalyāṇāṃśatva*). Alternatively, if *rajas* dominates the mind, it is partly dominated by passion (*roṣāṃśatva*), and,

16 On the three domains in premodern South Asian intellectual traditions and their relationship to the concept of *puruṣārtha*, see Olivelle 2019; for the three spheres of human activities in the context of Ayurveda, see Roṣu 1978b.

17 On the meaning of *vidyāsamāpti* “completion of education,” see Olivelle 2017: 14.

18 *śilavān matimān yukto dvijātiḥ\* śāstrapāragab | prāṇibhir guruvat pūjyaḥ prāṇācāryaḥ sa hi smṛtaḥ || 51 || vidyāsamāptau bhīṣajo dvitīyā jātir ucyate | āsnute vaidyaśabdaṃ hi na vaidyaḥ pūrvajanmanā || 52 || vidyāsamāptau brāhmaṇā vā sattvam ārṣam athāpi vā | dhruvam āviśati jñānāt tasmād vaidyo dvijaḥ smṛtaḥ || 53 ||* CS *Cikitsāsthāna* 1.4.51–53, p. 389b. Variant reading: \**dvijātiḥ*] *trijātiḥ*. The stemmatical relevant manuscripts of the *Carakasamhitā* support the hypothesis that the reading *dvijātiḥ* is of archetypal origin. See Kajihara 2016: 278, n. 15. For a different translation of this passage, see Dominik Wujastyk 1993: 762.

19 Cf. Roṣu 1978a: 117f.

finally, the mind becomes deluded when dominated by *tamas*. Caraka subdivided in descending order the quality of minds dominated by the quality *sattva* into seven subcategories, those with a prevalence of *rajas* into six, and tamasic minds into three.<sup>20</sup>

The two subcategories of minds that Caraka referred to as the *brāhma*- and the *ārṣa*-minds head this sixteen-fold categorization scheme. He described the most excellent mind as follows:

One should know that the *brāhma*-mind is pure, truth-speaking, self-restrained, sharing, perfected in general and specific knowledge, speech, and counterspeech, mindful, free from desire, anger, greed, arrogance, delusion, envy, lust and impatience, and impartial to all beings.<sup>21</sup>

This collocation of traits characterizes the perfectly healthy mind from the perspective of Ayurveda, and it also depicts the exemplary character of a physician as described in several instances of the *Carakasamhitā*. Caraka referred to the perfection of mental health when he described the *brāhma*-mind as “free from desire, anger, greed, arrogance, delusion, envy, lust, and impatience,” in a compound parallel to the enumeration of mental diseases occurring in *Vimānasthāna* 6.5.<sup>22</sup> Caraka’s allusion to the medical profession becomes clear from his mentioning of being “perfected in general and specific knowledge, speech, and counterspeech,” which corresponds to the description of the suitable partner in a friendly medical debate described in *Vimānasthāna* 8.17.<sup>23</sup> In addition, mindfulness or possessing an excellent memory is one of the qualities that a suitable medical student requires, according to *Vimānasthāna* 8.8.<sup>24</sup>

Caraka characterized the traits of the second-best mind, i.e., the one belonging to the *ārṣa*-category, immediately after the *brāhma*-mind.

One should know that the *ārṣa*-mind is highly inclined towards sacrificing, studying, vows, fire oblations, and religious conduct. It keeps the vow of hospitality, is calm, devoid of arrogance, longing, aversion, delusion, greed, and

20 See CS Śārīrasthāna 4.36, p. 323a.

21 *śuciṃ satyābbisamḍhaṃ jitātmānaṃ samvibhāgināṃ jñānavijñānavacanaprativacanasampannaṃ smṛtīmantaṃ kāmakrodhalobhamānamobersyāharṣāmarṣāpetam samam sarvabhūteṣu brāhmaṃ vidyāt* || (CS Śārīrasthāna 4.37.1, p. 323b).

22 “*Rajas* and *tamas* are the mental pathogenetics. Their diseases are desire, anger, greed, delusion, envy, arrogance, intoxication, sorrow, anxiety, agitation, fear, and lust.” *rajas tamaś ca mānasau doṣau | tayor vikārāḥ kāmakrodhalobhamobersyāmānamadaśokacintodvegabbayahaṣādayaḥ* (CS *Vimānasthāna* 6.5, p. 254a).

23 *jñānavijñānavacanaprativacanaśaktisampannenākopanenānupaskṛtavidyenānasūyakenānuneyenānūnayaividena kleśakṣameṇa priyasamhbhāṣaṇena ca saba samdbāyasaṃbhāṣā vidbīyate* (CS *Vimānasthāna* 8.16 in Preisendanz *et al.* forthcoming, corresponding to 8.17, p. 264b in Jādvajī Trikamjī Ācārya printed edition). The compound occurs at two further instances in CS *Vimānasthāna* 8.20 to characterize members of an assembly of referees in a debate.

24 Caraka described the ideal medical student as “perfected in thinking and mindfulness” (*vitarka-smṛtisampanna*). See CS *Vimānasthāna* 8.8, p. 262b.

passion. It possesses intuition, speech, special knowledge, and the capability to memorize.<sup>25</sup>

This collocation of character traits differs from the preceding by mentioning various inclinations to ritual activities as they are common in Vedic Brahmanism. Living beings with an *ārṣa*-mind have an inclination for sacrificial rituals (*ijya*) and fire oblations (*homa*). Like the *brāhma*-mind, the *ārṣa*-mind lacks mental defects, even though its degree of mental excellence seems lower since the second passage's list of lacking faults is shorter than the previous one. Also, the collocation of positive characteristics of the *ārṣa*-mind is less comprehensive, lacking the perfection of counterspeech (*pratīvacana*), general knowledge (*jñāna*), and containing the capability to retain knowledge (*dhāraṇaśakti*) instead of mindfulness or memory (*smṛti*).

Returning to the analysis of Cikitsāsthāna 1.4.51–53, it appears that for Caraka, fully educated physicians fall into two categories. The first one is that of an ideal ayurvedic physician with a *brāhma*-mind who is rationally orientated and morally perfected. The second category comprises physicians with an *ārṣa*-mind who are morally almost equally excellent as physicians with a *brāhma*-mind, also rationally orientated but more ritualistically inclined.

Even more pertinent concerning the present investigation into early classical Ayurveda's attitude towards Vedic Brahmanism is Caraka's reference to physicians with the term twice-born (*dvijāti*), which in Vedic Brahmanism frequently designates the class of *brāhmaṇas*, although, from the theoretical perspective of Dharmasāstra, the term applies to members of all three hereditary classes of the society of *āryas*, i.e., *brāhmaṇas*, *ṣatriyas*, and *vaiśyas*,<sup>26</sup> who are entitled to the study of the Veda. The ritual initiation into this study (*upanayana*), through which the initiate became a full member of the society of the *āryas*, was regarded as a second birth, succeeding the initial biological birth.<sup>27</sup>

In the quote above, the term “twice-born” is used with a divergent meaning, which indicates a re-interpretation of this technical term of Dharmasāstra. As stated by Hartmut Scharfe and Patrick Olivelle, Caraka used the word “twice-born” not to designate *āryas* who have entered into Vedic study but for medical students who completed their education in Ayurveda.<sup>28</sup> Accordingly,

[w]hat these two verses clearly do is to anchor the exalted status of a physician (*bhiṣaj*) on the fact that he is a doctor (*vaidya*) on account of accomplishment in

25 *ijyādhyayanavratāhomabrahmacaryaṣaram atīthivratam upāsāntimad\* amānarāgadvēsamohalobhāroṣaṃ pratibhāvacanaviññānopadhāraṇaśaktiṣaṃpannam ārṣaṃ vidyāt* || Variant: \**upāsāntimad*] emendation of PM; *upāsāntamad* ed. (CS Śārirasthāna 4.37.2, p. 323b).

26 See Lubin 2005: 86–89.

27 “This [initiation] is a second birth.” *tad dvitīyaṃ janma*. (Gautamadbarmasūtra 1.8, Olivelle 2000: 120; 2005: 54). See also *Mānavadharmasāstra* 2.169: “According to scriptural injunction, the first birth of a Brahmin is from his mother; the second takes place at the tying of the Muñja-grass girdle ...” (tr. Olivelle 2005b: 103). For further references to the *upanayana* in the Ṛgḥya- and the Dharmasūtras, see Kajihara 2016: 276–278.

28 Scharfe 2002: 262f. and Olivelle 2017: 13–15.

knowledge, and it is this status that confers on him the second birth and the title of “twice-born,” that is, a true Brāhmaṇa.<sup>29</sup>

The fact that Caraka identified the completion of medical study with a second birth implies that medical students of early classical Ayurveda cannot have undergone a Vedic initiation before they entered the study. Otherwise, completing medical education would not account for the second but the third birth of a physician.<sup>30</sup> Therefore the qualification for medical education must have been independent of the social class membership. In other words, the medical profession was not exclusively reserved for *āryas*. This conclusion is supported by the passage Vimānasthāna 8.8, which describes the mental and physical qualities of an ideal medical student virtually without reference to the social status of the initiate.<sup>31</sup>

Now the injunction for teaching. A master, being determined to teach, should, first of all, examine the student concerning whether he is calm, of a noble nature, does not act meanly, has straight eyes, mouth, and nasal bone, has a delicate and soft tongue, does not have deformed teeth or lips, does not speak indistinctly, is resolute, not egoistic, intelligent, perfect in thinking and mindfulness, has a noble mind, is born in a family of medical experts or practices the lifestyle of a medical expert, is devoted to what is real, is not deformed, has unimpaired sense faculties, is firm, not arrogant, not vicious, of good behavior, pure and dedicated, endowed with skill and devotion, desirous of studying, utterly devoted to practical knowledge and perceiving the treatment, neither greedy nor idle, desires the wholesome for all beings, observes all commands of the master, and is attached.<sup>32</sup>

29 Olivelle 2017: 15.

30 This is the view of Yogindra Nath Sen, a student of Gangadhar Ray (1789–1885), as quoted in n. 3 to CS Cikitsāsthāna 1.4.51, “The first birth [of a physician] is the birth from the mother’s womb, the second the Vedic initiation, the third, however, occurs at the completion of the medical education. Therefore the physician who has mastered the medical corpus of knowledge is called a thrice-born on account of his third birth, which is characterized by the completion of his study. (“*prathamā jātiḥ mātṛgarbhato janma, dvitīyā jātir upanayanāt, tṛtīyā tu vaidyavidyāsamāptau, atah śāstrapārāgo vaidyaḥ vidyāsamāptilakṣaṇatṛtīya janmanā trija ucyate*” iti Yogīndranāthasenaḥ, p. 389b). On Gangadhar Ray and his work, see Pecchia 2022.

31 On the contextualization of the initiation of the medical student in the *Carakasambhitā* Vimānasthāna and the literature of Ayurveda, see Preisendanz 2007.

32 *athādhyāpanavidibḥ — adhyāpane kṛtabuddhir ācāryaḥ śiṣyam āditāḥ parikṣeta, tadyathā, praśāntam āryaprakṛtim akṣudrakarmāṇam ṛjucakṣurmukhanāsāvamaṣaṃ tanuviśadajihvam avikṛtadantauṣṭham amiṇmiṇaṃ dhṛtimantam anahaṃkṛtim medhāvinam vitarkasmṛtisampannam udārasattvam tadvidyakulajam athavā tadvidyavṛtṭam tattvābhinivēśinam avyaṅgam avyāpannendriyam nibhṛtam anuddhatam avyasaninaṃ śīlaśaucānurāgādākṣyapṛādakṣiṇyopapannam adhyayanābhikā-mam atyartham vijñāne karmadarśane cānanyakāryam alubdham anālasaṃ sarvabhūtabitaiṣiṇam ācāryasarvānuśiṣṭipratikaram anuraktam..* (CS Vimānasthāna 8.7 critically edited in Preisendanz et al. forthcoming, corresponding to CS Vimānasthāna 8.8., p. 262b in Jādavji Trikamji Ācārya printed edition; for variant readings, see Appendix, p. 101.)

From this comprehensive list of qualities, only two attributes may be interpreted as having a social connotation, namely (1) “being of a noble nature” (*āryaprakṛti*) and (2) “belonging to a family of medical experts” (*tadvidyakulaja*), for which the text mentions “practicing the conduct of medical experts” (*tadvidyavṛtta*) as an alternative. Of these, the first specification is ambiguous since it remains open whether the word *ārya* in *āryaprakṛti* is used with reference to the class membership of the student or whether it means more generally “noble.” Considering that in ayurvedic contexts, the second part of the compound, “nature” (*prakṛti*), usually refers to the humoral constitution of human beings rather than their social background,<sup>33</sup> and taking into account that the qualified student’s family affiliation is determined by education rather than birth, it appears safe to conclude that for Caraka the social position of an aspirant was of little relevance for admission into the medical study. In any case, Caraka did not see any necessity to mention the class membership of the medical student expressively.

A different attitude towards class membership of the medical student prevails in Suśruta’s ayurvedic compendium, which was probably composed a few decades after the *Carakasamhitā*.<sup>34</sup>

A physician may initiate anybody as a student who is a *brāhmaṇa*, *kṣatriya*, or *vaiśya*, possesses a good family, youth, ethical conduct, courage, purity, proper behavior, self-control, willpower, strength, intelligence, firmness, mindfulness, and cognition, has a fine tongue, lips and tip of the teeth, a straight mouth, eyes, and nose, a pure mind, speech, and actions, and endures afflictions. He may not initiate anybody with contrary properties.<sup>35</sup>

In this passage, which parallels to a considerable degree Caraka’s above-quoted account, Suśruta explicitly mentioned that only members of the *ārya* community may be initiated into medical studies. Access to medical study is, in Suśruta’s view, strictly regulated through hereditary class membership. Moreover, *Suśrutasaṃhitā* Sūtrasthāna 2.4 prescribes a different initiation ritual for each of the three classes, and Sūtrasthāna 2.5 regulates the eligibility to initiate medical students according to the class membership of teachers. Teachers are only entitled to initiate members of their own and lower classes. The section ends with the statement that according to some authorities (*eke*), even *śūdras* of good family and qualities may be admitted to study, however, without any initiation ritual. Suśruta’s attitude towards class membership was thus considerably more restrictive than that reflected in Caraka’s work, which does not contain regulations concerning the social status of initiates, prescribing a

33 See Maas 2021.

34 See Meulenbeld 1999–2002, vol. 1A: 351.

35 *brāhmaṇakṣatriyavaiśyānām anyatamam anavayayaḥśīlaśauryaśaucācāravinayaśaktibala medhādbr̥tismṛtimatipratīpattiyuktam tanujibhvauṣṭhadantākramṛjuvaktrākṣināsamprasannacittavākceṣṭam kleśasahaṃ ca bhīṣak śīṣyam upanayet ato viparitagunaṃ nopanayet* (SS Sūtrasthāna 2.3, p. 10b). For a slightly deviant translation, see Hoernle 1897: 13.

ritual initiation for members of all social classes. Nevertheless, Caraka could not ignore the socio-political ideology of the fourfold stratification of society. The fact that he referred to the class membership of ayurvedic physicians in several instances of his work indicates the relevance of this classification scheme in the society to which Caraka belonged. It appears, however, that Brahmanism had not successfully enforced the ideology of social stratification in all segments of the society.

Caraka's approach to defining membership in the social class of *brāhmaṇas* for physicians through the excellence of their character, which is in turn lacking from the *Suśrutasamhitā*, is reminiscent of the *brāhmaṇa*-conception in early Buddhism, where the usage of the term is not restricted to the hereditary membership to the highest social class. For example, in the *Kassapasihanādasutta* of the *Dīghanikāya*, the Buddha explains to the ascetic Kassapa that the designation *brāhmaṇa* is applicable to a monk who lives a moral life after having realized spiritual liberation from the cycle of rebirth and to ascetics who follow specific ascetic observances.

Kassapa, a monk who cultivates a non-hostile, non-oppressive, friendly intention, who remains in the state of having for himself fully understood, realized, and attained in this world here the liberation of his mind and the liberation of his insight, which because of the destruction of mental taints is free from mental taints, this monk, o Kassapa, is therefore called a *śramaṇa* and also a *brāhmaṇa*.<sup>36</sup>

In *The Snake and the Mongoose*, Nathan McGovern interpreted this passage and related ones in which the two terms *śramaṇa* and *brāhmaṇa* occur side by side to indicate that in the cultural milieu of early Buddhism no ideological opposition existed between *śramaṇas* and *brāhmaṇas*.<sup>37</sup> According to McGovern, both terms were more or less indistinctly used for male adults pursuing a spiritual quest as homeless wanderers. Even if this should have been the case in the early phase of Buddhism, i.e., from 400 BCE onwards within Buddhism's original cultural milieu, the situation was different at the time of the composition of the *Carakasamhitā* within the milieu of Brahmanism. Caraka's meritocratic view of Brahminhood resulting from the completion of medical education is clearly at odds with the Brahmanic theory of social stratification, according to which membership in the *brāhmaṇa* class is attainable exclusively through birth, even though birth alone is no sufficient condition for maintaining the *brāhmaṇa* status.<sup>38</sup>

36 *Yato kho Kassapa bhikkhu averaṃ avyāpajjhaṃ metta-cittaṃ bhāveti, āsavānaṃ ca khayā anāsavaṃ ceto-vimuttiṃ paññā-vimuttiṃ diṭṭhe va dhamme sayaṃ abhiññā sacchikatvā upasampajja viharati, ayaṃ vuccati Kassapa bhikkhu samaṇo iti pi brāhmaṇo iti pi* (*Dīghanikāya* 8.15, p. 167).

37 McGovern 2019: 81–84.

38 In Brahmanism, birth is a necessary but not a sufficient condition for maintaining the status of a *Brāhmaṇa*, which needs to be supplemented by an appropriate fulfillment of social and ritual obligations to maintain the "hereditary qualification (*adbikāra*) and ... identity as an Aryan" (Halbfass 1990: 332).

The high social ranking that Caraka postulated for ayurvedic physicians contrasts sharply with the low social standing that Brahmanism ascribed to the medical profession. The literature of Dharmaśāstra is explicit in this regard. As Patrick Olivelle has highlighted in his above-quoted article from 2017, several works of the Dharma literature, from the earliest texts onwards, portrayed physicians as belonging to a despised group of persons from which *āryas* are not allowed to accept food. The *Mānavadharmasāstra*, which may be dated approximately 150 years after the earlier layer of the *Carakasamhitā*, states in this regard that

[f]ood of a medic is pus; the food of a lascivious woman is semen; the food of a usurer is excrement; and the food of an arms merchant is filth.<sup>39</sup>

The fact that Manu enumerated the physician in the same breath as lustful women, usurers, and arms merchants attests to the low standing of physicians in his view of society. The *Vasiṣṭhadharmasūtra*, which may be roughly contemporaneous to the earlier layers of the *Carakasamhitā*, outrightly denies the *brāhmaṇa* status of physicians, “implicitly affirming that Brāhmaṇas may, indeed, have taken up these professions” (Olivelle 2007: 3) when it states that

a man ignorant of the Veda is not a Brāhmaṇa, and neither is a trader, an actor, one taking orders from a Śūdra, a thief, or a medic.<sup>40</sup>

On the backdrop of the low social prestige of physicians in Brahmanism, Caraka’s claim of meritocratically qualified Brahminhood for ayurvedic physicians through education must reflect the attempt to create social recognition for physicians within the society of the *āryas*, which in fact, was not fully established. However, the fact that Caraka could depict the status of a *brāhmaṇa* as accessible through medical education presupposes a certain openness for this idea within Caraka’s intended audience. The *Carakasamhitā* apparently addressed listeners or readers who were familiar with – and to some degree open for – the Buddhist meritocratic ideal of the *brāhmaṇa*, which may be an inheritance of the *Carakasamhitā*’s early classical Ayurveda from the cultural complex of Greater Magadha.

### 3. Cyclic time

The early classical ayurvedic worldview of the *Carakasamhitā* resembles the worldview of the *śramaṇa* religions, which, according to Bronkhorst, had developed in the cultural complex of Greater Magadha in having a conception of time as cyclic. According to this view, time

39 *pūyaṃ cikitsakasyānnaṃ puṅścalyās tv annam indriyam | viṣṭhā vārdhuṣikasyānnaṃ śastravikrayiṇo malam ||* (*Mānavadharmasāstra* 4.220, tr. Olivelle 2017: 4).

40 *nānṛg brāhmaṇo bhavati na vaṇiṇ na kuśilavaḥ | na śūdraṇpreṣaṇaṃ kurvan na steno na cikitsakaḥ ||* (*Vasiṣṭhadharmasūtra* 3.3, Olivelle 2020: 360f).

stretches eternally into the past and the future, lacking a beginning and end, except for those few beings who realize liberation from the cycle of rebirth. Within its eternal extension, time is structured into different periods, called eons or *kalpas* in Buddhism, at the end of which the world is destroyed and recreated in the next *kalpa*. According to Bronkhorst, this conception is attested in early Buddhism, Jainism, and Ājivikism, and the idea of cyclic time appears to be a shared inheritance of the three religion's common cultural milieu, i.e., that of Greater Magadha.<sup>41</sup>

Similar time conceptions, which are unattested in early and middle Vedic literature, occur in the literature of early classical Hinduism, such as the *Mahābhārata* and the Dharmaśāstras. The possibly earliest account of the concept that time is structured into four world ages or *yugas* in which the life span and living conditions of humans deteriorate sequentially appears, however, in the *Yugapurāṇa*-section of the *Gārgīyajyotiṣa* or *Gargasamhitā*,<sup>42</sup> a work on divination for which John Mitchiner suggested the period around the year 25 BCE as the most likely date of composition, i.e., approximately a few decades earlier than the oldest strata of the *Carakasamhitā*.<sup>43</sup> However, Vincent Eltschinger draws this early date of the *Yugapurāṇa* seriously into question by highlighting parallels of this brief work to quite late strata of the *Mahābhārata*, which suggest the *Yugapurāṇa*'s "indebtedness to late (second to fourth century CE?) strata of the *Mahābhārata* and perhaps other texts such as the *Harivaṃśa* and early Purāṇas."<sup>44</sup>

Caraka was thoroughly familiar with the concept of the *kr̥ta*-, *tretā*-, *dvāpara*- and *kaliyuga*, to which he referred in at least three instances. In Sūtrasthāna 12.8, he mentioned the destructive force of agitated wind, viewed, according to the eleventh-century commentator Cakrapāṇidatta, as a divinity that produces the clouds, sun, fire, and storm that destroy the world at the end of the four ages.<sup>45</sup> Moreover, in Śārirasthāna 5.5, while laying out the homology of the cosmos with the human body, Caraka identified the four ages of the world with the four ages of the human being and the end of a sequence of *yugas* with death.<sup>46</sup> Finally, Caraka referred to the deterioration of the human life span in the course of the ages in Vimānasthāna 3.24–27 while discussing mass mortality.<sup>47</sup> This account differs from other descriptions of the sequential deterioration of the life expectancy within each *yuga* cycle. According to Vimānasthāna 3.26, the life span of humans decreases by one year after a hundred years have passed

41 See Bronkhorst 2007: 69f. and Bronkhorst 2023.

42 See Gonzáles-Reimann 2009: 415.

43 Mitchiner 1986: 82.

44 Eltschinger 2020: 51.

45 *prakupitasya khalv asya lokeṣu carataḥ karmāṇimāni bhavanti, tadyathā: ... caturyugāntakarāṇāṃ meghasūryānalānilānāṃ visargaḥ* (CS Sūtrasthāna 12.8, p. 79b).

46 *yathā kṛtayugam evaṃ bālyam, yathā tretā tathā yauvanam, yathā dvāparas tathā sthāviryam, yathā kalir evaṃ āturyam, yathā yugāntas tathā maraṇam iti* (CS Śārirasthāna 5.5, p. 325b).

47 See Angermeier 2007: 47f. and 75–81.



in each age. In contrast, the *Yugapurāna* ascribes a life span of 100,000 years to humans in the *kṛtayuga*, 10,000 years to those in the *tretāyuga*, 1,000 to those in the *dvāparayuga*, and, implicitly, 100 years to humans in the *kaliyuga*. In contradistinction to these varieties of a *yuga* theory, the puranic quasi-standard account of the *yuga* conception teaches that the life span decreases from 400 years in the *kṛtayuga* by 100 years in each of the subsequent *yugas*, reaching 100 years in the *kaliyuga*.<sup>48</sup> Thus, at least three *yuga*-conceptions were current in early South Asia from approximately the first centuries CE onwards. This fluidity, which is matched with terminological inconsistencies concerning periods of world-creation and destruction in the *Mabābhārata*,<sup>49</sup> suggests that *yuga* conceptions were still developing at Caraka's time and that early Ayurveda probably did not inherit its conception of cyclic time directly from the culture of Greater Magadha, even though, as Johannes Bronkhorst argues, the development of *yuga*-conceptions of Brahmanism may have been influenced by the cyclic time conceptions that were prominent in the culture of Greater Magadha.<sup>50</sup>

#### 4. Karma and rebirth

The most significant agreement between the worldview of early classical Ayurveda and that belonging to the cultural milieu of the *śramaṇa* religions is their common acceptance of a theory of karma and rebirth, combined with the religious goal of spiritual liberation.<sup>51</sup> For Caraka, karma and rebirth were not mere matters of faith but facts that can be established by all available means for a proper investigation (*parīkṣa*), i.e., reliable verbal communication (*āptopadeśa*), perception (*pratyakṣa*), inference (*anumāna*), and reasoning by the combination of facts (*yukti*) according to Sūtrasthāna 11.<sup>52</sup> Knowledge concerning karma and rebirth is obtained through the verbal testimony of previous and ancient sages or seers (*maharṣis*), who have proclaimed this teaching after directly perceiving the functioning of karma and rebirth with their divine eye.<sup>53</sup>

Although direct perception by ordinary beings cannot provide knowledge of karma and rebirth, multiple directly perceptible facts, such as the difference between parents and their children, the different living conditions, experiences, and life spans of beings belonging to the same species, the attainment of results of previously committed acts, the longing of newborn babies for the breast of their mothers, the fact that the same actions performed by different people lead to different results, the unequal distribution of talents among humans, memories

48 González-Reimann 2009: 417.

49 González-Reimann 2009: 415.

50 See Bronkhorst 2023: 225.

51 On possible origins of karma theories in the region of Greater Magadha, see Bronkhorst 2022.

52 See also for the following section of this article P.-S. Filliozat 1993.

53 Cf. P.-S. Filliozat 1993: 102f.

of previous births and different emotional reactions of different people towards identical items lead to the inference that karma and rebirth must exist.<sup>54</sup>

Also, inference establishes knowledge concerning the existence of karma and rebirth by explaining the present existence as the result of actions in previous births and the future existence as the result of actions in the present birth, just like the existence of a fruit justifies inferring the existence of its seed, and the seed the existence of a fruit.<sup>55</sup> And finally, the mental “combination” of various facts (*yukti*) supports the doctrine of karma and rebirth.<sup>56</sup> Accordingly, for Caraka, the theory of karma and rebirth “is part of the system; it is not an artificial insertion of foreign matter in a medical book.”<sup>57</sup>

This conclusion not only holds for the more philosophically orientated parts of the *Carakasamhitā*, but it also applies for passages dealing with essentially medical theories such as embryology and etiology.<sup>58</sup> For example, the karma of past lives explains the existence of diseases that are incurable with ayurvedic remedies,<sup>59</sup> and it is karma that accounts for the various living conditions under which an embryo is finally born.<sup>60</sup> Caraka thus employed the theory of karma to explain the limitations of the medical practice in the case of incurable diseases. In addition, the theory played a role in the self-understanding of ayurvedic physicians, who consider their practice an ethically good activity, leading to a favorable rebirth.<sup>61</sup>

## 5. Spiritual liberation

Caraka’s theory of karma and rebirth is intimately related to the idea of spiritual liberation, to which textual references frequently and prominently occur throughout the work. Caraka

54 Cf. P.-S. Filliozat 1993: 104f.

55 Cf. P.-S. Filliozat 1993: 106.

56 Cf. P.-S. Filliozat 1993: 108f.

57 Cf. P.-S. Filliozat 1993: 111.

58 See also Krishan 1980 and Weiss 1980.

59 “The karma of a previous life, designated with the term ‘fate,’ is also a cause for diseases perceived in accordance with time. It is well-known that no great action exists, the fruit of which is not experienced. Diseases that arise from karma cancel medical treatment and become alleviated only by its destruction.” *nirdiṣṭam daiṣaśabdena karma yat paurvadebikam| hetus tad api kālena rogāṇām upalabhyate || na hi karma mabat kiñcit pbalaṃ yasya na bhujyate | kriyāghnāḥ karmajā rogāḥ praśamaṃ yānti tatksayāt ||* (CS Śārīrasthāna 1.116–117, p. 298a–b). For a slightly different translation of this passage, see Dominik Wujatczyk 2023: 244.

60 “The mother, the father, and the self do not, indeed, bring the fetus into various conditions according to their will. They produce a part of the result with their own power; another part happens through the power of karma.” *na kbalu garbhasya na ca mātur na pitur na cātmanaḥ sarvabhāveṣu yatbeṣṭakāritvam asti; te kiñcit svavaśāt kurvanti, kiñcit karmavaśāt.* (CS Śārīrasthāna 3.9, p. 311b). Cf. Halbfass 2000: 228–230.

61 In Cikitsāsthāna 4.1.4, Caraka lets the god Indra describe the system of Ayurveda as “highly meritorious, ... a sacred text (*brahman*) appropriate for seers ... the illustrious imperishable [medical] action (*karman*) derived from Brahṃā.” Cf. below, p. 94.

referred to the concept of spiritual liberation already at the very beginning of his work in the context of Ayurveda's origin myth, in which the Rishis deplore the fact that diseases have arisen.

Health is the most important root of merit [gained through fulfilling obligations] (*dharma*), wealth (*artha*), pleasure (*kāma*), and liberation (*mokṣa*).<sup>62</sup>

With this brief statement, Caraka characterized health through the mouth of a large congregation of eminent seers (who spoke with one voice) as the most important condition for the fulfillment of the major domains of human activities and pursuits. In contradistinction to the passage discussed above in which three valid human aims are considered – *dharma*, *artha*, and *kāma* – here Caraka lists a fourth: spiritual liberation (*mokṣa*).<sup>63</sup> By stressing the fundamental role of health in all domains of legitimate human pursuits, Caraka highlighted the fundamental importance of his own medical science. This may be interpreted as a further strategic move to create acceptance for the medical profession in a society where Brahmanical values and norms combined with those of the *śramaṇa* religions were prominent.

The inclusion of spiritual liberation into the set of legitimate domains of activity in the *Carakasamhitā* reflects the integration of the religious worldview of the *śramaṇa* religions into Caraka's religious horizon, which is paralleled in other roughly contemporary works of early Hinduism, such as the *Mahābhārata*, some middle Upaniṣads, and Dharmasūtras. In this synthesis, spiritual liberation did not substitute but supplement the Vedic soteriological aim of a post-mortem fate in heaven, as can be seen from Caraka's discussion of trustworthy verbal testimony (*āptāgama*) in Sūtrasthāna 11.27.

In this regard, trustworthy verbal testimony is, first of all, the Veda. In addition, reliable verbal testimony is every other verbal expression of authoritative corpora (*śāstra*) that does not contradict the meaning of the Veda, was put forth by investigators, is approved by educated people, and exists for the welfare of the world. Because of trustworthy verbal testimony, one cognizes that donations, austerities, sacrificial rituals, truthfulness, non-harming, and chastity cause ascension [to heaven] and the highest good (i.e., liberation).<sup>64</sup>

Here, Caraka initially ascribed the highest authority of verbal testimony as a means of valid knowledge to the Veda, i.e., the sacred literature of Brahmanism. Then, he extended the range

62 *dharmārthakāmamokṣāṅām ārogyaṃ mūlam uttamam* || (CS Sūtrasthāna 1.15cd, p. 6a).

63 See above, p. 73f.

64 *tatrāptāgamas tāvad vedāḥ. yaś cānyo 'pi kaścid vedārthād aviparītaḥ parīksakaiḥ praṇītaḥ śiṣṭānumato lokānugrahaḥ pravṛttaḥ śāstravādaḥ sa cāptāgamaḥ; āptāgamād upalabhyate dānataḥ poyajñasatyāhiṃsā brahmacaryāny abhyudayaniḥ śreyasakarāṇīti*. (CS Sūtrasthāna 11.27, p. 72b). For a slightly divergent translation, see P-S. Filliozat 1993: 100.

of this particular means of valid knowledge to non-Vedic authoritative text corpora provided they do not contradict the Veda, are approved of by the educated members of society, were composed by investigators (*parikṣaka*) – which may refer to rationally orientated ayurvedic physicians – and lead to the welfare of living beings.

The purpose of reliable verbal communication is to provide soteriological orientation. In the just-quoted passage, as elsewhere in early Hinduism, two alternative soteriological aims are acknowledged, namely the attainment of heaven after death through the fulfillment of ritual and social obligations (*dharma*) and the attainment of spiritual liberation. The former aim can be reached by ritual means, whereas the latter is realizable through special insights gained by ascetics. The list of religious practices that Caraka provided here integrates sacrificial rituals (*yajña*) leading to a post-mortem fate in heaven with ascetic practices aiming at spiritual liberation. In this way, Caraka downplayed the differences between the two alternative religious orientations.

Caraka did not only accept spiritual liberation as a legitimate human pursuit. In Śārīrasthāna 1.137–155, a passage that Rahul Peter Das (1993), Oliver Hellwig (2009), Dominik Wujastyk (2012 and 2023), and several previous scholars have analyzed, he also described how liberation is attained through yogic mindfulness.<sup>65</sup> In addition, Caraka provided a comprehensive account of the means for attaining spiritual liberation in the fifth chapter of the Śārīrasthāna, which has attracted less scholarly attention than the first chapter.

In this regard, we shall teach the means for ascent available to those desirous of liberation. Among these, first of all, the means for a man who desires liberation because he is aware of the faults of the world are

1. approaching a teacher,
2. following his teaching,
3. kindling his fire,
4. seeking a corpus of knowledge on social and ritual obligations (Dharmaśāstra),
5. understanding its meaning,
6. relying on it,
7. performing actions as they are taught in it,
8. conversing with the good,
9. avoiding the bad,
10. not having contact with people,<sup>66</sup>

65 For a comprehensive and critical assessment of earlier scholarship on CS Śārīrasthāna 1, see Hellwig 2009.

66 Cf. “To achieve success, [the wandering ascetic (*parivrāja*)] must always wander alone, without any companion.” *eka eva caren nityam siddhyartham asabāyavān* (*Mānavadharmasāstra* 6.42ab, ed. and transl. Olivelle 2005b, p. 601, and 150).

11. speaking what is true, beneficial to all beings, not harsh, at the right time, after having considered it,<sup>67</sup>
12. caring for all beings like for oneself,
13. not remembering, not thinking about, not desiring, and not speaking to any woman,<sup>68</sup>
14. giving up all property,<sup>69</sup>
15. a loincloth for covering,<sup>70</sup>
16. a red-colored garment,<sup>71</sup>
17. a needlecase for sewing the patched garment,<sup>72</sup>

- 67 Cf. the regulations of speech mentioned in the early Buddhist description of the way to liberation that frequently occurs within the *Dīgha-* and *Majjhimanikāya* (see Frauwallner 1953: 162–170). See below, p. 90.
- 68 In the *Mahāparinibbānasuttanta* of the *Dīghanikāya* (vol. 2, p. 141, lines 12–17), the Buddha instructs his disciple Ānanda not to look at and not to speak to women. If a conversation with women cannot be avoided, Ānanda shall set up mindfulness (*sati*, Skt. *smṛti* “mindfulness, memory”). It is conceivable that Caraka was aware of this passage, considering the usage of the term *sati/smṛti* (mindfulness/memory) in both texts. Strict rules of conduct in relation to women are also prescribed for Brahmana ascetics. See Oberlies 1997: 195.
- 69 Cf. “A mendicant shall live without possession” *anicayo bhikṣuḥ* (*Gautamadharmasūtra* 3.11, Olivelle 2000: 128f.; 2005a: 165f.).
- 70 Cf. “And wear a garment to cover his private parts” *kaupīnācchādānārthaṃ vāso bibhryāt* (*Gautamadharmasūtra* 3.18, Olivelle 2000: 128f.; 2005a: 165f.). For further references to the loin cloth of Brāhmaṇa ascetics in Dharmasāstra literature, see Oberlies 1997: 189, n. 120.
- 71 The exact meaning of *dhātūrāga* is challenging to determine. Kālidāsa used the word in *Meghadūta* 102 to refer to a mineral substance for drawing a portrait on a stone surface. The tenth-century commentator Vallabhadeva glossed *dhātūrāga* with *sindūrādirāga*, “colors like red lead and so on,” suggesting that the implied color is red or reddish (ed. Hultzsich, p. 53). *Baudhāyanadharmasūtra* 2.11.21 describes the color of the garment of a *parivrājaka* as *kāṣāya* (*kāṣāyavāsāḥ*, ed. Olivelle 2005: 165), i.e., brown-red or ochre. The garment of the medical student at the time of initiation has apparently the same color (in spite of the different spelling of the word with a first short *-a-* as *kaṣāya*), according to CS *Vimānasthāna* 8.8 in Preisendanz *et al.*, forthcoming, corresponding to 8.9 in Jādvji Trikmji Ācārya’s edition, p. 263a: “wearing an ochre garment” *kaṣāyavastrasaṃvītaḥ* (cf. n. 104). Oberlies (1997: 1990, referencing Kern 1884: 45) also takes the word *kāṣāya* to designate a reddish hue.
- 72 The compound *sūcīpippalaka* is problematic, too. Cakrapāṇidatta glossed the term with “a case for storing needles” (*sūcīsthāpanapātra*), but the meaning “case, receptacle” for *pippalaka* apparently is not attested elsewhere in Sanskrit literature. The lack of parallel usage suggests that the commentator provided an ad-hoc explanation from the context. Caraka also used the compound *sūcīpippalaka* in Śārīrasthāna 8.34, where the term appears together with the attribute “made of gold and silver” (*sauvarṇarājatau*). At this instance, Cakrapāṇi suggested that the compound either means “two knives in the shape of a needle” or “two cases for storing needles” (*sūcīyākāre śāstre sūcīpippalakau, kiṃ vā sūcī yatra sthāpyate sa sūcīpippalakau*, p. 347a), thus confirming his semantic insecurity. Finally, *pippalika* occurs at CS Śārīrasthāna 8.53 in a description of the perfect female

18. a water pot for washing,<sup>73</sup>
19. carrying a staff,<sup>74</sup>
20. a bowl for begging food,<sup>75</sup>
21. taking food only to maintain life – once a day – that was not prepared in the village, as it becomes available,<sup>76</sup>
22. having a cover for the night consisting of withered dry leaves and straw to recover from fatigue,
23. binding the body for meditation,
24. living in a forest without a house,<sup>77</sup>
25. giving up all acts of lassitude, sleep, and sloth,
26. restraining attachment and trouble concerning sense objects,
27. acting with preceding mindfulness concerning undertakings that involve the activities of each limb of the body concerning food and physical activities, whether one sleeps, stands, or walks,
28. patience when being venerated, praised, censored, or discredited,
29. being able to endure hunger and thirst, exertion, exhaustion, cold and heat, and pleasant and unpleasant contact with wind and rain,
30. not being shaken by sorrow, affliction, agitation, greed, craving, envy, fear, and anger,
31. being conscious that egoism and so on are miserable,

breast, referring to the nipple. A needle (*sūci*) is one of the “requisites” that Buddhist monks are allowed to possess. Also, the possession of needle case (*sūciḡhara* or *sūcināḷikā*) is admissible for Buddhist monks, see Upasak 1975: 240, s.v. *Sūci* and *Sūciḡhara*.

- 73 *Baudhayanadbarmasūtra* 2.17.11 lists a waterpot (*kamaṇḍula*) as one of the insignia of *brāhmaṇa* renouncer (*saṃnyāsīn*): *yaṣṭayaḥ śikhyam jalapavitram kamaṇḍulam pātram iti* (Olivelle 2000: 292f.; 2005a: 168f.).
- 74 *Baudhayanadbarmasūtra* 2.17.11 also mentions staffs (*yaṣṭayaḥ*) as an emblem of *brāhmaṇa* renunciators (*saṃnyāsīn*). See the preceding note. Buddhist monks were allowed to possess a staff (*kbakbara*), according to the quite late *Mañjuśrīmūlakalpa*. For references, see Edgerton 1953, vol. 2: 202a, s.v. *kbakbara*.
- 75 The begging bowl (Skt. *pātra*, Pāli *patta*) is an item that both *brāhmaṇa* renunciators and Buddhist monks possess; see *Baudhayanadbarmasūtra* 2.17.11 (Olivelle 2000: 292) and Upasak 1975: 133.
- 76 Eating only as much as necessary to survive is prescribed for the *parivrājaka* in *Vasiṣṭhadbarmasūtra* 10.22 “Let him take only as much as would sustain his life, . . .” *prāṇayātrikamātra syān . . .* (Olivelle 2000: 386f.; 2005a: 166f.). Eating a single meal per day is also an observance of Buddhist monks. For additional references, see Oberlies 1997: 193.
- 77 Cf. *Vasiṣṭhadbarmasūtra* 10.15 “living always in the wilderness” *aranyanityaḥ* (Olivelle 2000: 386f.; 2005a: 166f.). On the abidences of *brāhmaṇa* ascetics, Jaina and Buddhist monks, see Oberlies 1997: 192–196.

32. observing the identity of the creation and so on concerning the world and the individual person,<sup>78</sup>
33. fearing that the moment for action may pass,
34. permanently having regard for the undertaking of yoga,
35. firmness in character,
36. applying his intellect, will, mindfulness, and power for the sake of liberation,
37. controlling the sense faculties within the mental faculty, the mental faculty within the self, and also the self,
38. constantly being aware that the body consists of bodily elements,
39. realizing that everything with a cause is painful, not the self, and impermanent,
40. recognizing evil in all activities, and
41. clinging to the conviction that joy results from the renunciation of everything.

This is the way toward liberation; in the opposite direction, one is bound. Thus the means for ascent have been taught.<sup>79</sup>

This passage lists forty-one means, i.e., activities and items, that help a mendicant attain spiritual liberation. The mendicant is described as living in the forest with minimal personal

78 Cf. CS Śārirasthāna 5.6–7, p. 325b.

79 *tatra mumukṣūṅām udayanāni vyākhyāsyāmaḥ. tatra lokadoṣadarśino mumukṣor ādīta* (1) *evācāryābhigamanam*, (2) *tasyopadesānuṣṭhānam*, (3) *agner evopacaryā*, (4) *dbarmaśāstrānugamanam*, (5) *tadārtbhāvabodhaḥ*, (6) *tenāvaṣṭambhaḥ*, (7) *tatra yathoktāḥ kriyāḥ*, (8) *satām upāsanam*, (9) *asatām parivarjanam*, (10) *asaṃgatir janena*, (11) *satyam sarvabhūtatitam aparūsam anatikāle parikṣya vacanam*, (12) *sarvaprāṇiṣu cātmanivāvekṣā*, (13) *sarvāsām asmarānam asaṃkalpanam aprārthanam anabhībhāṣānam ca strīṅām*, (14) *sarvaparigrabatyāgaḥ*, (15) *kaupīnam pracchādanārtham*, (16) *dhāturāganivasanam*, (17) *kanthāsivanabetoḥ sūcīpīpalakam*, (18) *śaucādbhānetor jalakuṅḍikā*, (19) *daṇḍadhāraṇam*, (20) *bbaikṣacaryārtham pātram*, (21) *prāṇadhāraṇārtham ekakālam agrāmyo yathopapanno 'bhyavahārah*, (22) *śramāpanayanārtham śirṇaśuṣkaparṇatṛṇāstarāṇopadhānam*, (23) *dhyanabetoḥ kāyanibandhanam*, (24) *vaneṣu aniketavāśaḥ*, (25) *tandrānidrālasyādikarmavarjanam*, (26) *indriyārtheṣu anurāgopatāpanigrabaḥ*, (27) *suptastbitagataprekṣitābhāravīhārapratyaṅgaceṣṭādikeṣu ārambheṣu smṛtipūrvikā pravṛttiḥ*, (28) *satkārastutigarbhāvamānakṣamatvam*, (29) *kṣutpīpāsāyāsāsrāmāśitoṣṇavātavarṣāsukhaduḥkhasaṃsparśasabatvam*, (30) *śokadainya mānōdvagamadalobharāgersyābbhayakrodhbādibhir asaṃcalanam*, (31) *abamkārādiṣūpasargasamjñā*, (32) *lokapuruṣayoḥ sargādisāmānyāvekṣānam*, (33) *kāryakālātyayabhayam*, (34) *yogārambhe satatam anirvedaḥ*, (35) *sattvoisābaḥ*, (36) *apavargāya dbīdhṛtismrtibalādhānam*, (37) *niyamanam indriyāṅām cetasi cetasa ātmany ātmanaś ca*, (38) *dhātubhedena śarirāvayavasamkhyānam abhikṣnam*, (39) *sarvaṃ kāraṇavad duḥkham asvam anityam ity abhyupagamaḥ*, (40) *sarvapravṛttiṣu aghasamjñā*, (41) *sarvasamnyāse sukham ity abhiniveśaḥ. eṣa mārgo 'pavargāya, ato 'nyathā badhyate; ity udayanāni vyākhyātāni.* (CS Śārirasthāna 5.12, p. 327a).

belongings and practicing an ascetic lifestyle, meditation, and yoga. The list is remarkable in various respects, the most notable of which is the lack of references to metaphysical or religious doctrines that would provide the backdrop of the path toward spiritual liberation. The only allusion to a specific conceptual framework for the outlined soteriological path is “observing the identity of the creation and so on concerning the world and the individual person” (no. 32), which refers to Śārirasthāna 5.6–7, where Caraka explained that knowledge of the identity between the world and the person (*puruṣa*) is key for attaining liberation.

Although Caraka designated the list as “the way towards liberation,” the text does not sketch a systematic and consecutive ascent towards spiritual liberation like we find in the *Pātañjalayogaśāstra*’s eight means or ancillaries of Yoga or the Buddhist noble eightfold path. However, Caraka’s list is not entirely without a logical structure. Its interpretation allows for conclusions concerning Caraka’s conception of ascetics aiming at spiritual liberation, considering the abundant parallels of this passage with the early Dharma literature, Buddhist, and Jaina sources.

The initial three activities, i.e., approaching a teacher for instruction, following his teaching, and kindling his fire, are reminiscent of the rules for Vedic students (*brahmacārin*) as prescribed, for example, in the *Baudhāyanadharmaśūtra*.<sup>80</sup> According to Āpastamba, living in the teacher’s house is a common prerequisite for all orders of life.<sup>81</sup>

The following four activities (4–7) expressively refer to the knowledge of the corpus on *dharma* (Dharmaśāstra), which prescribes rules of conduct for different types of ascetics. Caraka’s list refers to ascetics similar to those wandering ascetics that the Dharmaśūtras designate as *parivrāja(ka)s* or *bhikṣus*.<sup>82</sup> According to Caraka, this corpus of knowledge provides the basic instructions for realizing spiritual liberation. He thus suggested an intimate relationship between the listed means for spiritual liberation to forms of asceticism sanctioned by the Dharma literature of his time. However, as Johannes Bronkhorst convincingly argued in *The Two Sources of Indian Asceticism* (1998), the mendicant and wandering ascetics of the *dharmaśūtras* “show no signs of having any inherent connection with the Vedic sacrificial tradition.”<sup>83</sup>

Activities no. 8–14 refer to the social interaction of the ayurvedic ascetic, involving the conception that karmically relevant actions can be performed with body, speech, and mind.

80 Cf. “Every day he should fetch firewood from a wild tract and offer it in the sacred fire” *sadāranyāt samidha ābrtyādadhyaāt* (*Baudhāyanadharmaśūtra* 1.3.19, Olivelle 2000: 202f.; 2005a: 62). For further references to the Vedic student’s kindling of his teacher’s fire, see Kane 1941: 307, and Oberlies 1997: 173.

81 Cf. *sarveṣām upanayanaprabhṛti samāna ācāryakule vāsaḥ* (*Āpastambadharmaśūtra* 2.21.3, Olivelle 2000: 104f.; 2005a: 51f.).

82 *Āpastambadharmaśūtra* (2.21.7) uses the term *parivrāja*, Gautama (3.11) called the homeless beggar *bhikṣu*, whereas Baudhāyana (2.11.16) and Vasiṣṭha (10.1) referred to the same group of ascetics as *parivrājakas*.

83 Bronkhorst 1998: 33.



Caraka prescribed being committed to truthfulness (*satya*), chastity (*brahmacārya*), and not harming living beings (*ahiṃsā*, here positively formulated in activity no. 12 as “caring for all beings like for oneself”), which are paralleled in the list of five obligations (*yama*) for yogis in *Pātañjalayogaśāstra* 2.30. These regulations figure already in the ancient Buddhist description of the way to liberation that frequently occurs in the *Dīgha-* and *Majjhimanikāya* (translated in condensed form by Erich Frauwallner 1953: 162–170) with a literal terminological agreement to Caraka’s list regarding “abstaining from harsh speech” (*pharusam vācam*) and “being someone who speaks at the right time” (*kālavādi*).<sup>84</sup> Also, Caraka’s means no. 14, “giving up all property” (*sarvaparigrabatyāga*), has a parallel in Patañjali’s list of commitments (*yama*), and is identical to one of the five great vows (*mahāvratas*) of Jainism, namely “not having property” (*aparigraha*).<sup>85</sup>

The few possessions that, according to Caraka, are admissible for ascetics are listed as item no. 15–22, where the restriction of food consumption (no. 21) slightly interrupts the structural coherency of the list. This reference was associatively prompted by the preceding reference to the begging bowl. The listed items, i.e., the loincloth, the red-colored garment, the needlecase, the waterpot, the staff, and the begging bowl, are in general emblematic of *brāhmaṇa* ascetics of the *parivrājkaka* and *bbikṣu* type, with several parallels in early Buddhism and Jainism.<sup>86</sup>

The commentator Cakrapānidatta interpreted item no. 23, “binding the body for meditation” (*dhyānahetoḥ kāyanibandhanam*), as a reference to a yoga strap, which is used to fix a meditation posture.<sup>87</sup> However, since the context suggests interpreting *nibandhana* as the action noun “binding” rather than a means for binding, i.e., a “band,” Cakrapāṇi’s explanation is not convincing. The word *kāyanibandhana* needs to be understood as referring to meditational posture practice in general, even if the systematic reason for the occurrence of the activity at its present position remains obscure.

Activities no. 26 and 27, i.e., “restraining attachment to the sense objects and acting with preceding mindfulness,” are further parallels with the early Buddhist description of the path toward liberation, which involves the protection of the sense faculties and the generation of mindfulness.<sup>88</sup>

The remaining part of the list, i.e., activities no. 28–41, refers to the development of mental attitudes conducive to spiritual liberation and the destruction of mental obstacles without

84 See, for example, *Majjhimanikāya* 27, Vol. 1, p. 179f. Cf. n. 67 above.

85 “The commitments are non-harming, truthfulness, not stealing, living chastely, and not having property” *ahiṃsāsatyāsteyabrahmacaryāparigrabhā yamāḥ* (*Yogasūtra* 2.30. Āgāṣe 1904: 102). The commitments are binding ethical prescriptions for ascetics aiming at spiritual liberation in Buddhism, Jainism, and Brahmanism. See Dundas 2002: 157–160. On the similarity concerning the ethical regulation of Buddhist, Jaina and Brahmanical ascetics, see Oberlies 1997: 180–188.

86 See notes 69–75 above and Oberlies 1997: 188–192.

87 *Āyurvedadīpikā*, Śārirasthāna 5.12, p. 327b.

88 See Frauwallner 1953: 165f. and *Sāmaññaphalasutta*, *Dīghanikāya* 2.64–65, vol. 1, p. 70.

indicating a specific logical structure. Most of the listed features are too general to allow for the identification of a particular ascetic community that may have influenced Caraka's composition. However, item no. 39, "realizing that everything with a cause is painful, not the self, and impermanent" is unmistakably an allusion to the Buddhist doctrine of impermanence and suffering as it is, for example, formulated in the *Aṅguttaranikāya* of the Pāli Canon.

Whether Tathāgatas appear or whether Tathāgatas do not appear, this world, this causal complex, the configuration of the things, always remains the same: all composite entities are impermanent, all composite entities are painful, all composite entities are not the self.<sup>89</sup>

On the whole, Caraka fused in his list elements of ascetic practices that are characteristic of ascetics as described in the Dharmasāstras of his time with early Buddhist and Jaina ethics and conceptions. The metaphysical backdrop of Caraka's soteriology was a worldview based on the identity of the world and the human body as outlined in Śārīrasthāna 5.6–7, which is otherwise rare in early South Asian literature.<sup>90</sup> However, in the first chapter of the Śārīrasthāna, Caraka's soteriology, which does not amount to a coherent philosophical theory, is influenced by various early currents of philosophical thinking that later developed into Vaiśeṣika, Nyāya, Sāṅkhya, and Yoga with a palpable additional influence of early Buddhist philosophical conceptions.<sup>91</sup>

At no point in his work did Caraka spell out his theory of spiritual liberation in detail. Any assessment of his position concerning the question of whether liberation may occur during the lifetime of an ascetic or whether it is attainable only at the moment of physical death, can only to be based on stray references.<sup>92</sup> A particularly relevant passage occurs, however, in CS Vimānasthāna 8.37, where, in the context of the theory of debate, Caraka defines the term "established teaching on a subject matter" (*adbikaraṇasiddhānta*).

[That] is called established teaching on a subject matter with regard to which also other subject matters are established when the subject matter is brought up. For example [when one brings up the subject matter] "A [living] liberated person does not perform binding actions, because he is free from desire," then karma, its result, liberation, and the rebirth of a person become established.<sup>93</sup>

89 *Upādā vā bhikkhave Tathāgatānaṃ anuppādā vā Tathāgatānaṃ t̥hitā vā sā dbātu dhammaṭt̥hitatā dhammaniṃyāmatā: sabbe saṅkharā aniccā . . . sabbe saṅkharā duḥkḥā . . . sabbe saṅkharā anattā* (*Aṅguttaranikāya*, 3.134, vol. 1, p. 286).

90 See Robertson 2017.

91 See Hellwig 2009: 62–65.

92 On different attitudes towards the conception of "liberation in life" in pre-modern Brahmanism, Buddhism and Jainism, see Bronkhorst 2010.

93 *adbikaraṇasiddhānto nāma — yasminn\* adbikaraṇe prastūyamāne siddhāny anyāny apy adbikaraṇāni bhavanti. yathā: "na muktaḥ karmānubandhikam kurute, nisprhatvāt" iti prastute siddhāḥ karma-*

By choosing the particular example of a living liberated person as a subject matter that may be brought up in a debate, Caraka revealed that at least some ayurvedic philosophers accepted liberation while living. Whether or not Caraka himself would have subscribed to this view is not entirely clear from this passage.

Additional information on Caraka's position concerning the question of whether liberation from rebirth can be attained during one's lifetime is provided in the first chapter of the Śārirasthāna, where Caraka outlines "the path to liberation through yogic mindfulness."<sup>94</sup> Towards the end of this remarkable passage, Caraka provided a final characterization of his soteriological method.

The power of recollecting the truth (*tattva*) is the one path of liberation, the one that is revealed by liberated people. Those who have gone by it have not returned again. Yogins call this the way of yoga. Those sāmḅkhyas who have reckoned the dharmas and who are liberated call it the way of liberation.<sup>95</sup>

This passage, according to Wujastyk, raises questions concerning the early history of Sāḅkhya and its relationship to Abhidharma Buddhism (2012: 38). It also reveals that Caraka considered at least some liberated persons (*mukta*) able to teach the way towards liberation. This implies that liberated sages must have been alive, which is exactly the way in which the eleventh-century commentator Cakrapāḅidatta interpreted this passage when he glossed the word *muktair* in stanza 150b with "One needs to understand the expression 'liberated persons' to mean 'liberated while living' because those who are liberated in every respect cannot be teachers since they do not have bodies."<sup>96</sup>

It thus emerges from the two above-quoted passages that the concept of living liberation (*jīvanmukti*) was current in the early Ayurveda of the first century CE, even though a similar terminology is first attested in the early fifth-century *Pātaḅjajalayogaśāstra* (4.30), while a comparable two-level conception of spiritual liberation is also attested in the roughly contemporaneous *Sāḅkhyakārikā* (65–70).

Based on the above analyses of Caraka's sketches of the path toward spiritual liberation and the previous investigation into the religious horizon of the *Carakasamhitā*, the worldview of early Ayurveda can be described as a skilled combination of conceptions that, according

*phalamokṣapurusaḅpretyabhāvā bhavanti* (Vimānasthāna 8.37; variant reading: \**jasmin*] *sa yasmin* Bo8<sup>E</sup> p. 238a).

94 Dominik Wujastyk 2012.

95 *etat tad ekam ayanam muktair mokṣasya darṣitam | tattvasmṛtibalaḅ yena gatā na punarāgatāḅ ||150|| ayanam punar ākhyātam etad yogasya yogibhiḅ | samḅkhyātadbarmaiḅ sāmḅkhyaiṣ ca muktair mokṣasya cāyanam ||151||* (CS Śārirasthāna 1.150f, p. 301a, transl. Dominik Wujastyk 2012, p. 41).

96 *Āyurvedadīpikā* ad CS Śārirasthāna 1.150 (p. 301a): *muktair iti jīvanmuktair iti jñeyam, sarvathā-muktānām śarirābhāvenopadeśakatvābhāvāt.*

to Bronkhorst, originated in the cultural complex of Greater Magadha with those of Vedic Brahmanism. However, the cultural and religious hybridity of early Ayurveda probably does not necessarily result from the Brahmanization of a current of medical knowledge that originated in Greater Magadha. As will be argued in more detail below, the hybridization of a *śramaṇa* worldview with Vedic Brahmanism is the result of more complex developments leading Caraka to fuse various currents of medical knowledge with different cultural, philosophical, and religious backgrounds in his medical compendium.

## 6. The self-representation of early classical Ayurveda

The following section of this article analyzes Caraka's mythological account of the origin of rejuvenation therapy in the first chapter of the *Cikitsāsthāna*. This self-portrait should not be read as an historical report but as a narrative description of early Ayurveda's self-understanding.

1–2. The venerable Ātreya said: Now, from hereon, I shall proclaim the chapter on *rasāyana* [entitled] “The Recovery of Ayurveda.” 3. The Rishis lived as householders, sometimes of the *śālīna* type and sometimes of the *yāyāvara* type.<sup>97</sup> In general, they consumed village herbs, lived a life of luxury, became weary, and were not very healthy. When the great Rishis Bhṛgu, Aṅgiras, Atri, Vasiṣṭha, Kaśyapa, Āgastya, Pulastya, Vāmadeva, Asita, Gautama, and so on were unable to perform all their duties properly, they realized that they themselves had committed the fault of living in villages. Then they went to their previous home, which was free from rural defects, to the fortunate, meritorious, and great Himalayas, the perfect refuge, which is suitable for sacrifices and impenetrable for people of bad conduct, to the source of the Ganges, attended by gods, heavenly musicians, and singers, to the storehouse of countless gems, which is filled with unimaginable and marvelous beauty, attended by Brahma-Rishis, accomplished saints and celestial singers, where herbs grow at heavenly places of pilgrimage, protected by the Lord of the Gods. 4. The god with a thousand eyes, the immortal teacher, Indra, spoke to them: “Welcome to you, Brahma-Seers, who know the Brahman and are rich in knowledge and austerities. Are you not tired, weak, voiceless, and pale – which is uncomfortable and leads to uncomfortable final consequences – because you lived in the village? Living in villages is known to be the root of all evil. Since you, the Seers, who act meritoriously, have done

97 *Baudhāyanadharmaśūtra* 3.1.1–3 differentiates three types of householders, *śālīnas*, *yāyāvaras*, and *cakracaras* without providing much additional information, except that the “name ‘Śālīna’ is derived from their living in houses (*śāla*). ‘Yāyāvara’ is derived from the fact that they follow (*yā*) an excellent (*vara*) means of livelihood, ...” *śālāśrayatvāc chālīnatvam. vṛtīyā varayā yātīti yāyāvaratvam* (Olivelle 2000: 302f.; 2005a: 160). See also Kane 1941: 641f.

this as an act of favor for the living beings, the time has come [for you] to care for your own bodies, and the time has come [for me] to teach Ayurveda to you Brahma-Rishis. The Aśvins passed down Ayurveda to me to favor myself as well as the living beings in the same way as Prajāpati had to the Aśvins and Brahmā to Prajāpati. The life of living beings is short, full of old age and disease. This is uncomfortable and leads to uncomfortable final consequences. Since life is short, little is the amount of asceticism, religious commitments, and observances that can be practiced, few gifts can be provided, and little can be studied.

After you have realized this, you are entitled to hear from me, to comprehend and to disseminate for favoring the living beings what is highly meritorious, extends the life span, cures old age and disease, provides strength, is imperishable, fortunate, protective and illustrious, a sacred text (*brahman*) appropriate for seers, related to benevolence and compassion as well as to your own highest merit, the illustrious imperishable [medical] action (*karman*) derived from Brahmā.”

5. After they had heard this speech of the Lord of the Gods, they all praised the best of the immortals with Rigvedic verses, were exceedingly delighted, and applauded his speech.<sup>98</sup>

The origin myth of rejuvenation therapy (*rasāyana*), which is also an account of a second transmission of Ayurveda from the divine realm to humans, starts with a description of the mythological founders of Ayurveda, the great seers (*maharṣis*), who, according to the first origin myth of Ayurveda that occurs at the very beginning of the *Carakasamhitā*, had received

98 *athāta āyurvedasamutthānīyaṃ rasāyanapādaṃ vyākhyāsyāmaḥ, iti ha smāha bhāgavān ātreyaḥ. ṛṣayaḥ khalu kadācīc chālīnā yāyāvarāś ca grāmyauśadhyābārāḥ santaḥ sāmpannikā mandaceṣṭā nātikalyāś ca prāyeṇa babbūvuh. te sarvāsām itikartavyatānām asamarthāḥ santo grāmyavāsakṛtam ātmadoṣaṃ matvā pūrvanivāsam apaḡatagrāmyadoṣaṃ śivaṃ puṇyam udāraṃ medhyam aḡamyam asukṛtibhir gaṅgāprabhavam amaragandharvakinnarānucaritam anekaratnanicayam acintyādbhutaprabhāvaṃ brahmarṣisiddhacāranānucaritaṃ divyatirthauśadhiprabbavam atīśaraṇyaṃ himavantaṃ amarādhipatiguptaṃ jagmur bhṛḡvaṅgiro’trivasiṣṭhakaśyapāḡastyapulastyavāmadedvāsitagautamaḡbrhṛtayo maharṣayaḥ. tān indraḡ sabasradḡ amaragurur abravīt – svāgataṃ brahmadevīdāṃ jñānataḡpodhānānāṃ brahmarṣīnām. asti nanu vo glānir aprabhāvatvaṃ avaiśvaryaṃ vaiśvaryaṃ ca grāmyavāśakṛtam asukham asukhānubandhaṃ ca? grāmyo hi vāśo mūlam aśastānām. tat kṛtaḡ puṇyākṛdbhir anugrahaḡ prajānām, vāśarīram avekṣitūṃ kālaḡ kālāś cāyam āyurvedopadeśasya brahmarṣīnām; ātmanaḡ prajānām cānugrabārthaṃ āyurvedam aśvinau mahyaṃ prāyacchatām, prajāpātir aśvibhyaṃ, prajāpātye brahmā, prajānām alpam āyur jarāvyaḡdhibabulam asukham asukhānubandham. alpatvād alpatapodamaniyamadānādhyayanasaṃcayam, matvā puṇyatamam āyuhprakarṣakaraṃ jarāvyaḡdhibiprasamanam ūrjaskaram amṛtaṃ śivaṃ śaraṇyam udāraṃ bhavanto mattaḡ śrotum arhatāḡtopadhārayitūṃ prakāśayitūṃ ca prajānugrabārthaṃ ārṣaṃ brahma ca prati maitrīṃ kāruṇyam ātmanaś cānuttamaṃ puṇyam udāraṃ brāhmanam akṣayaṃ karmeti. tac chrutvā vibudhapativacanam ṛṣayaḡ sarva evāmaravaram ṛḡbbis tuṣṭvuh prabrṣṭāś ca tadvacanam abhinanandūś ceti (CS Cikitsāsthāna 4.1.1–5, p. 387a).*

medical knowledge from the gods.<sup>99</sup> More specifically, the Great Seers were afflicted by disease because they had given up their natural living as ascetics, had become Vedic householders, and nourished themselves with plants grown in villages (*grāmyauśadhi*). Being in bad health, they became incapable of practicing Ayurveda. When they realized that their suffering was related to their unnatural habitat, they went to their previous home (*pūrvanivāsa*), to the source of the river Ganges in the Himalayas, where Indra confirmed that their village life had affected their health. Indra, who according to the origin myth at the very beginning of the *Carakasamhitā*, had already instructed the seer Bhāradvāja in Ayurveda, explained to the congregation of ṛṣis the cause of their suffering and imparted ayurvedic knowledge again for the benefit of the seers and all humans. This benefit extends human lifespans, enabling people to accumulate increased religious merit through practicing austerities, religious commitments, and other practices to improve their post-mortem fate. The seers were profoundly grateful and praised Indra with Ṛgvedic hymns, thus revealing through their intimate knowledge of the Vedic religion that they belonged to the class of *brāhmaṇas*.

This narrative is remarkable in several respects. First, it depicts the life of a householder as unnatural for prototypical ayurvedic physicians who have to live as homeless ascetics in the wilderness outside of villages. Indra indicates that the seers deserve a second chance because they lived as householders not out of egoistical motives but to “favor the living beings.” The narrative thus depicts the ideal physician as an ascetic with an altruistic attitude that can be related to the theory of karma and rebirth, who avoids villages, not to speak of the cities that were characteristic of the culture of Greater Magadha. The homeland of these ascetics is neither depicted as the region of Greater Magadha nor *āryāvarta*, the homeland of Vedic Brahmanism, but the Himalayas.<sup>100</sup> This region is also where the ṛṣis had originally received the corpus of ayurvedic knowledge, according to the origin myth of Ayurveda at the beginning of the Sūtrasthāna. The present narrative explicitly mentions the source of the river Ganges as the specific region of the Himalayas that is Ayurveda’s home, located in the present-day state of Uttarakhand.<sup>101</sup>

Caraka’s identification of Ayurveda’s home in the Himalayan region may be purely fictional and topical. However, it is also possible that Caraka’s identification points to a historical fact, the faint memory of which was narratively transformed into a glorification of this region as a semi-divine realm. To the best of my knowledge, a comparable appraisal of the Himalayas is lacking from the literature of Vedic Brahmanism and early Buddhism. It may occur for the first time in the epics and roughly contemporary literature such as the *Carakasamhitā*.<sup>102</sup>

99 CS Sūtrasthāna 1.1–40, see above, p. 72.

100 On various demarcations of *āryāvarta* in the literature of late Vedic Brahmanism, see Bronkhorst 2007: 1–3.

101 Based on what Meulenbeld considered “meager evidence,” several scholars have attempted to determine North Western India or Kashmir as the region of the *Carakasamhitā*’s composition. See Meulenbeld 1999–2002, Vol. 1A: 100.

102 On the Himalayas and other mountains in Epic mythology, see Hopkins 1915: 8–10.

## 7. Early South Asian physicians in Strabo's *Geography*

The hypothesis that early Ayurveda may have entertained a special relation to the Himalaya region is supported by a description of South Asian healers by the Greek historian Strabo, who lived approximately between 63 BCE and 24 CE and was thus an older contemporary of Caraka. Strabo never visited South Asia, however, and based his account of India in his *Geography* on information provided by previous authors. The respective passage, which Zysk and Bronkhorst have analyzed, reads as follows.

In classifying philosophers, [the writers on India] set the Pramnai (i.e., Śramaṇas) in opposition to the Brachmanes (i.e., Brahmins). [The Pramnai] are captious and fond of cross-questioning; and [they say that] the Brachmanes practice natural philosophy and astronomy, but they are derided by the Pramnai as charlatans and fools. And [they say that] some [philosophers] are called mountain-dwelling, others naked, and others urban and neighbouring, and [the] mountain-dwelling [philosophers] use (i.e., wear) hides of deer and have leather pouches, full of roots and drugs, claiming to practice medicine with sorcery, spells, and amulets.<sup>103</sup>

Strabo initially differentiated two classes of Indian philosophers, namely *brāhmaṇas* and Pramnai, i.e., *śramaṇas* or ascetics who are not affiliated with Brahmanism. He then introduced a second classification, comprising mountain-dwelling, naked, and urban philosophers, which cannot be related to any ancient Indian systematization. However, Bronkhorst identified the healers mentioned at the end of the quoted section as *brāhmaṇas* through their characteristic fur clothing.<sup>104</sup> Unfortunately, the *Carakasamhitā* neither confirms nor disproves this identification since it does not describe the clothing of physicians. Referring to the initiation of the medical student, Caraka mentioned an ochre robe.<sup>105</sup> If Strabo indeed referred to *brāhmaṇa* physicians, these *brāhmaṇas* were natives of a mountain region, practicing magico-ritual healing. However, Strabo's account does not indicate, as Bronkhorst maintains, following Zysk, that the medicine of these *brāhmaṇa* mountain healers was exclusively based on ritual means. The fact that Strabo mentioned medicinal plants and roots in the physicians' possession suggests that their medical practice will have combined ritual methods with drug-based treatments. If this is correct, Strabo's description of the mountain-based Brahmanic healers fits quite well with the description of the early ayurvedic physicians in the *Carakasamhitā*, who, as mentioned above, practice both "medicine depending on destiny or karma" (*daiuavyāpāśraya*)

103 Strabo, *Geography* 15.1.70; Trl. Bronkhorst 2007: 78. Harry Falk (2022: 168) confirms that the word *Pramanai* represents an original *śramaṇa* "through the misreading ... *ṣ* from *ś*."

104 Bronkhorst 2007: 57.

105 *mūṇḍaḥ kaṣāyavastrasaṃvītaḥ* CS Vimānasthāna 8.8 (8.10, according to Jādvaji Trikamji Ācārya's edition, p. 263a). See above, n. 77.

and “medicine depending on combination” (*yuktivyāpāśraya*).<sup>106</sup> Like the healers that Strabo described, ayurvedic physicians located their homeland in a mountain region, the Himalayas, and claim membership to the class of *brāhmaṇas*.

The fact that Strabo identified the healers living in the mountains as a separate category of Indian philosophers suggests that this group may also have held a discrete worldview. This would be a further characteristic that Strabo’s healers share with early ayurvedic physicians, as can be concluded from a text passage from the eighth chapter of the *Vimānasthāna*, in which Caraka explained the term *samaya* in the context of the theory of debate. This technical term designates a foundational or core belief. Within a debate, the followers of a particular worldview may not contradict any core belief of their respective worldview to avoid an error of speech (*vākyaḍoṣa*) leading to their defeat in the debate.<sup>107</sup>

The [term] “core belief,” in turn, means the following: There exists a core belief of ayurvedic physicians, a core belief of ritualists (*yājñika*), and a core belief of specialists in soteriological knowledge (*mokṣāśāstrika*). Of these, the core belief of ayurvedic physicians is that “success arises from the four constituents [of Ayurveda, i.e., the physician, the assistant, medicine, and the patient].<sup>108</sup> “The sacrificial animals have to be killed” is the core belief of the ritualists. “For all beings, non-harming” is the core belief of specialists in soteriological knowledge.<sup>109</sup>

This passage refers to three foundational or core beliefs, each belonging to a specific religiously defined group. The first group are the followers of Vedic Brahmanism, who practice sacrificial rituals associated with animal sacrifices. The second group, which consists of soteriologists, i.e., representatives of the *śramaṇa* worldview that originated in Greater Magadha, believes in a fundamentally different effectiveness of human action than the followers of Vedic ritualism. Crucial for reaching religious goals are not ritual actions but avoiding bad karma caused by ethically bad actions such as harming living beings. The third core belief, i.e., that of Ayurveda, is the conviction that ayurvedic medicine leads to success, i.e., the successful cure of the patient. All three core beliefs are related to a specific aim, which in the case of Vedic Brahmanism consists in the attainment of a favorable post-mortem fate in heaven, in the case of ascetics in the attainment of spiritual liberation by overcoming transmigration, and for Ayurveda in the fourfold aim that Caraka formulated in the context of the initiation of the medical student in the eighth chapter of the *Carakasamhitā* *Vimānasthāna*.

106 See above, p. 73.

107 See Oberhammer *et al.* 2006: 226.

108 On the four constituents of Ayurveda, see Dagmar Wujastyk 2012: 26–67.

109 *samayaḥ punar yathā — āyurvedikasamayaḥ, yājñīyasamayaḥ, mokṣāśāstrikasamaya iti. tatrāyurvedikasamayaś catuspādasiiddbiḥ. ālabhyāḥ paśavaḥ, iti yājñīyasamayaḥ. sarvabhūteṣv abhiṃsā, iti mokṣāśāstrikasamayaḥ* (CS *Vimānasthāna* 8.54, crit. ed. in Preisendanz *et al.* forthcoming, for variants, see Appendix, below, p. 101).



The physician who desires (1) success in treatment and (2) wealth, (3) the acquisition of fame, and (4) heaven after having deceased should make cows and Brahmins his primal concern and care for the well-being of all living beings, striving for and devoting himself to this aim day after day.<sup>110</sup>

By formulating a core belief of the ayurvedic worldview that deviates from those of the ritualists and the *śramaṇas*, Caraka coined Ayurveda as a religious and philosophical current that considers itself distinct from ascetic soteriology and Vedic ritualism.

## 8. Conclusion

The self-representation of early classical Ayurveda, as discussed in section 7, matches the results of the previous sections of this article, according to which the early classical Ayurveda of the *Carakasamhitā* combined conceptions of Vedic Brahmanism with those of the *śramaṇa* religions. The Ayurveda of the *Carakasamhitā* is, on the one hand, orientated towards the religious and socio-political conceptions of Brahmanism, without, however, making class membership the defining criterion for admission into the medical profession. On the other hand, the *Carakasamhitā* unreservedly accepted and promoted conceptions that Bronkhorst identified as specific characteristics of the culture of Greater Magadha, such as the theory of karma, rebirth, spiritual liberation, and cyclic time. However, early classical Ayurveda possessed a discrete cultural identity that set itself apart from that of Vedic Brahmanism and the *śramaṇa* religions. The fact that Caraka neither presented the region of Greater Magadha as the geographical homeland of Ayurveda nor *āryāvarta*, the center of Vedic Brahmanism, but the Himalayas and, more specifically, the river headwaters of the Ganges fits neatly into this picture. The *Carakasamhitā* accordingly provides, on the one hand, virtually no evidence in support of the hypothesis of Ayurveda's geographical origin in Greater Magadha. On the other hand, the materials discussed in the present article do not contradict Bronkhorst's hypothesis. It is evident that defining elements of the religious worldview of Ayurveda are alien to Vedic Brahmanism, whereas they figure prominently in Jainism, Buddhism, and other religions that originated in the eastern Gangetic plain.

In a final analysis, Caraka may have intentionally created an ambiguous image of the religious orientation and cultural identity of Ayurveda to satisfy audiences with different cultural identities and religious orientations. His principal aim would then have been to promote Ayurveda to as wide a range of audiences as possible, living in a religiously diverse society in which Brahmanism was developing into the hegemonic socio-political ideology. If this is granted, Caraka's creative approach may explain the lack of logical coherence in

110 *karmasiddhim arthasiddhim yaśolābham ca pretya ca svargam icchatā bhīṣajā gobrāhmaṇam ādau kṛtvā sarvaṣṭābhīṣatām śarmāśāsītavyam abar abar uttiṣṭhatā copaviśatā ca.* (CS Vimānasthāna 8.13 in Preisendanz *et al.* forthcoming, for variants, see Appendix, below, p. 101).

philosophical-orientated passages like Śārīrasthāna 1 and elsewhere as resulting from the specific authorial intention of promoting Ayurveda.<sup>111</sup>

### Appendix: A critical edition of passages from *Carakasamhitā* Vimānasthāna 8.8

The critically edited text presented here is identical to the one in Karin Preisendanz, Philipp A. Maas & Cristina Pecchia forthcoming. However, the present edition differs from the forthcoming one concerning the documentation of variant readings. The present edition reports relevant variants only for the printed edition of Jādavji Trikamji Ācārya (1941) and the ten manuscripts that are crucial in reconstructing the earliest reachable text version of the *Carakasamhitā* (see Figure 4.1, below).<sup>112</sup> In contrast, the critical apparatus of the forthcoming edition documents readings from a set of fifty-two manuscripts and eight printed editions.

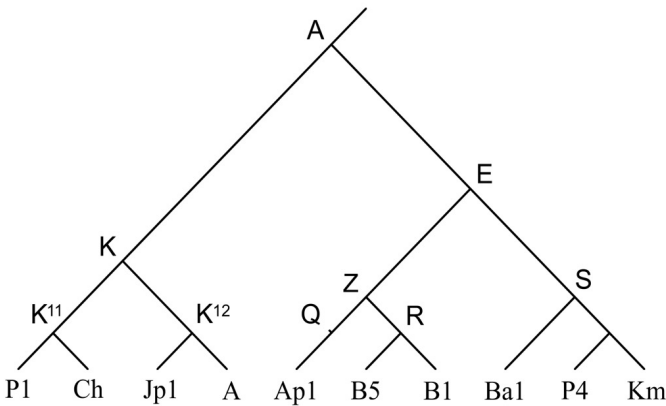


Figure 4.1: A hypothetical stemma of *Carakasamhitā* Vimānasthāna 8 for ten genealogically decisive manuscripts<sup>113</sup>

111 Oliver Hellwig (2009: 63f.) suggests three alternative explanations for the lack of logical coherence in Śārīrasthāna 1 when he says that this “may be a sign of different redactions or indicate an author who was either not really interested in this part of the Ca[rakasamhitā] or simply not able to compose the chapter in a coherent manner.”

112 Maas 2009–2010: 33f. On a further stage of redactorial intervention that must have occurred after Dṛḍhabala’s completion of the *Carakasamhitā*, see Maas 2010: 1–22.

113 The stemma is identical with the rooted cladogram presented in Maas 2009–2010: 95.

The critical apparatus records variant readings in lemmata that quote the critically edited text. These quotations, printed in bold and terminated by a closing square bracket, are preceded by the number of the line from which the critically edited text is extracted into the lemma. Next, all sigla of witnesses reading the critically edited text are listed. Following a semicolon, the (first) variant to the lemma text appears, which again precedes the list of sigla of witnesses that support this variant reading, etc.

In the critical apparatus, the following abbreviations and symbols are used:

<i>om.</i>	omits	text missing from the respective witness(es)
( <i>vl</i> )	<i>varia lectio</i>	variant reading recorded in the printed edition <i>Bo8<sup>E</sup></i>
xy	wavy underline	the reconstruction of the archetypal reading is uncertain
†	dagger	text not available due to a lacuna or damage of manuscript

## A Critical Edition of Passages from *Carakasambhitā* Vimānasthāna 8

### 8

- 1 athādhyāpanavidhiḥ — adhyāpane kṛtabuddhir ācāryaḥ śiṣyam āditaḥ parikṣeta, tadyathā,  
 2 praśāntam āryaprakṛtim akṣudrakarmāṇam ṛjucakṣurmukhanāsāvamaṣaṃ tanuviśadajihvam  
 3 avikṛtadantauṣṭham amiṇmiṇaṃ dhṛtimantam anahaṃkṛtiṃ medhāviṇaṃ vitarkasmṛtiṣaṃ-  
 4 pannaṃ udārasattvaṃ tadvidyakulajam athavā tadvidyavṛttaṃ tattvābhiniveśinam avyaṅgam  
 5 avyāpanendriyaṃ nibhṛtam anuddhatam avyasaninaṃ śīlaśaucānurāgadākṣyaprādakṣiṇyo-  
 6 papannaṃ adhyayanābhikāmam atyarthaṃ vijñāne karmadarśane cānanyakāryam alubdham  
 7 anālasaṃ sarvabhūtahitaiṣiṇaṃ ācāryasarvānuṣṭīpratīkaram anuraktam. evaṃguṇaṃ samu-  
 8 citam adhyāpyam āhuḥ.

8.1 **athādhyāpanavidhiḥ]** athādhyāpanavidhiḥ K **adhyāpane]** Bo8<sup>E</sup> Ba1<sup>d</sup> Km<sup>d</sup> P1<sup>ś</sup> P4<sup>d</sup>; adhyāpana A<sup>d</sup> B1<sup>d</sup> B5<sup>d</sup> Ch<sup>d</sup> Jp1<sup>d</sup>; athādhyāpane Ap1<sup>d</sup> **āditaḥ]** evāditaḥ E Bo8<sup>E</sup> 2 **ārya]** ācārya B1<sup>d</sup> **-prakṛtim]** prakṛtikam Ap1<sup>d</sup> **-viśada-]** *em.*; viśada K; raktaviśada Bo8<sup>E</sup> E 3 **amiṇmiṇaṃ]** Z; aminmiṇaṃ Bo8<sup>E</sup>; amirmiṇaṃ K; *om.* Ap1<sup>d</sup> **dhṛtimantam]** atimantam Ap1<sup>d</sup> **anahaṃkṛtiṃ]** anahaṃkṛtaṃ Bo8<sup>E</sup> R; anahaṃkṛtamati P1<sup>ś</sup> 4 **-kulajam]** kulakam B1<sup>d</sup> **tadvidyavṛttaṃ]** tadvidyavṛtaṃ K; ≈ tadvidyavṛtta Ap1<sup>d</sup> **tattvābhiniveśinam]** tattvābhiniveśanam S 5 **avyasaninaṃ]** avyasaninaṃ akopanaṃ E; arthattattva-bhāvakaṃ akopanaṃ avyasaninaṃ Bo8<sup>E</sup> **-śaucānurāga- ]** śaucācārānurāga S 6 **adhyayanābhikāmam]** adhyānābhikāma Ap1<sup>d</sup> **atyarthaṃ]** *em.*; atyartha K; artha Bo8<sup>E</sup> E **vijñāne]** vijñāna K 7 **anālasaṃ]** analasaṃ E **-bhūtahitaiṣiṇaṃ]** bhūtahitekṣaṇam Ap1<sup>d</sup>; bhūtaiṣaṇam K **-sarvānuṣṭī-]** sarvānuṣṭīṣṭa Z; sarvānuṣṭīṣṭa S **-pratīkaram]** K; pratīpattikaram Bo8<sup>E</sup> E **-guṇaṃ]** P1<sup>ś</sup>; guṇa Bo8<sup>E</sup> E A<sup>d</sup> Ch<sup>d</sup> Jp1<sup>d</sup> **samucitam]** K; samuditam Bo8<sup>E</sup> E 8 **adhyāpyam āhuḥ]** *om.* Ap1<sup>d</sup>

- 1 karmasiddhim arthasiddhiṃ yaślābhaṃ ca pretya ca svargam icchatā bhiṣajā gobrāhmaṇam  
2 ādau kṛtvā sarvapraṇabhṛtām śarmāsāsītavyam ahar ahar uttiṣṭhatā copaviśatā ca.

13.1 arthasiddhiṃ] om. Ba1<sup>d</sup> Km<sup>d</sup> P4<sup>d</sup> ca1] om. E ca svargam] cāpavargam P1<sup>ś</sup> bhiṣajā] om. Ap1<sup>d</sup> B1<sup>d</sup> B5<sup>d</sup> 2 śarmāsāsītavyam] A<sup>d</sup> Ap1<sup>d</sup> Ch<sup>d</sup> Jp1<sup>d</sup> P1<sup>ś</sup>; śarmāsamsītavyam Z

- 1 samayaḥ punar yathā — āyurvedikasamayaḥ, yājñīyasamayaḥ, mokṣaśāstrikasamaya iti.  
2 tatrāyurvedikasamayaś catuṣpādasiddhiḥ. ālabhyāḥ paśava iti yājñīyasamayaḥ, sarvabhūteṣv  
3 ahimseti mokṣaśāstrikasamayaḥ. tatra svasamayaviparitam ucyamānaṃ viruddham iti.

54.1 yathā āyur-] tridhā yathā bhavaty āyur Ba1<sup>d</sup> Km<sup>d</sup> P4<sup>d</sup>; tridhā bhavaty āyur Ap1<sup>d</sup> B1<sup>d</sup> B5<sup>d</sup> yājñīya] A<sup>d</sup> Jp1<sup>d</sup>; yājñika E Ch<sup>d</sup>; † P1<sup>ś</sup> 2 -vedikasamayaś catuṣpādasiddhiḥ] vedikasamayaḥ catuṣpādam bheṣajam iti Ap1<sup>d</sup>; vedikasamayaḥ catuṣpādam ṣoḍaśakalaṃ bheṣajam iti R; vedasamayaḥ catuṣpādam ṣoḍaśakalaṃ bheṣajam iti S ālabhyāḥ paśava iti yājñīyasamayaḥ] A<sup>d</sup> Jp1<sup>d</sup> P1<sup>ś</sup>; ālabhyāḥ paśava iti yājñīkasamayaḥ Ch<sup>d</sup>; yājñīkasamayaḥ ālabhyāḥ paśava iti E sarvabhūteṣv 3 ahimseti mokṣaśāstrikasamayaḥ] mokṣaśāstrikasamayaḥ sarvabhūteṣv ahimseti E iti] K; bhavatīti vākyadoṣaḥ Ap1<sup>d</sup>; bhavatīti vākyadoṣaḥ R

## Sigla of witnesses for the *Carakasamhitā*

### 1. Available witnesses (manuscripts and printed edition)

Superscripts <sup>d</sup> Devanāgarī; <sup>ś</sup> Śārādā; <sup>E</sup> Printed Edition

A <sup>d</sup>	Alwar, Rajasthan Oriental Research Institute 2498
Ap1 <sup>d</sup>	Alipur, Bhogilal Leherchand Institute of Indology 5283
B1 <sup>d</sup>	Bikaner, Rajasthan Oriental Research Institute 1566
B5 <sup>d</sup>	Bikaner, Anup Sanskrit Library 3996
Ba1 <sup>d</sup>	Baroda, Oriental Institute 12489
Bo8 <sup>E</sup>	Text of the <i>Carakasamhitā</i> in the printed edition of Jādavji Trikamji Ācārya 1941
Ch <sup>d</sup>	Chandigarh, Lal Chand Research Library 2315
Jp1 <sup>d</sup>	Jaipur, Maharaja Sawai Man Singh II Museum 2068
Km <sup>d</sup>	Kathmandu, Nepal-German Manuscript Preservation Project E-40553
P1 <sup>ś</sup>	Pune, Bhandarkar Oriental Research Institute 555 of 1875-76
P4 <sup>d</sup>	Pune, Anandashram 1546

## 2. Reconstructed witnesses

- E Hyparchetype of the Eastern Version of the *Carakasamhitā*, most recent common exemplar of Ap1<sup>d</sup>, B1<sup>d</sup>, B5<sup>d</sup>, Ba1<sup>d</sup>, P4<sup>d</sup>, and Km<sup>d</sup>
- K Hyparchetype of the Kashmir Version of the *Carakasamhitā*, most recent common exemplar of P1<sup>s</sup>, Ch<sup>d</sup>, Jp1<sup>d</sup>, and A<sup>d</sup>
- R exemplar of B1<sup>d</sup>, and B5<sup>d</sup>
- S exemplar of Ba1<sup>d</sup>, Km<sup>d</sup>, and P4<sup>d</sup>
- Z exemplar of R and S

## Abbreviations

CS *Carakasamhitā*

SS *Suśrutasaṃhitā*

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- Baudhayanadharmasūtra* see *Āpastambadharmasūtra*
- Cakrapāṇidatta, *Āyurvedadīpikā* see *Carakasamhitā*
- Carakasamhitā* for *Vimānasthāna* 8: Preisendanz, K., Maas, P. A. & Pecchia, C. (forthcoming). *A Critical Edition of Carakasamhitā Vimānasthāna Chapter 8*. Vienna.
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*Gautamadharmasūtra* see *Āpastambadharmasūtra*

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*Vasiṣṭhadharmasūtra* see *Āpastambadharmasūtra*.

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## The Doctor, the Patient, and Their Interaction: Reading the *Carakasamhitā*\*

*Cristina Pecchia*

### 1. Introduction

It was at the 14th World Sanskrit Conference in Kyoto, in 2009, that I first attended a paper by Dominik Wujastyk and listened to him sharing his vast knowledge on different aspects of Ayurveda during the questions-and-answers sessions of the conference panel, which was on “Physicians and Patients: Textual Representations in Pre-Modern South Asia.” In honor of Professor Dominik Wujastyk and his life-long engagement with the study of Ayurveda, I present a study on the interaction between doctor and patient as it emerges from the *Carakasamhitā*.<sup>1</sup> In this foundational work of Ayurveda, the modes and goals of such an interaction are mostly a matter of inference. Information can be gathered from passages about values, obligations, and expectations of the doctor and the patient, as well as from discussions of topics concerning not only diseases but also situations that may lead somebody to suffer from a disease. These passages and discussions suggest that communication has an important role in the interaction between doctor and patient. But first and foremost, they show that the preventive and therapeutic framework of Ayurveda values the interaction between doctor and patient, and that the doctor’s agency is also dependent upon a set of emotional-relational skills. These skills are not seen in isolation from ethical values, which are sometimes specific to Ayurveda and motivated by its primary aims of maintaining and restoring health. The paternalistic model that characterizes the relationship between the ayurvedic doctor and the patient seems to be, in fact, quite nuanced, especially in consideration of a doctor’s caring attitude to address patients as agents of their own health.

### 2. Doctor and patient: two factors in the “quartet” for the cure of diseases

#### 2.1. The doctor, the main factor

All major ayurvedic classics devote a specific section to the essential factors required for the cure of diseases, which are identified as the “quartet” formed by doctor, remedies, attendant,

\* Research for this article was generously supported by the Austrian Science Fund (FWF): Project No. P 35906-G, “Ayurveda and Philology: Gangadhar Ray Kaviraj and His Legacy.” I would like to thank Anthony Cerulli and Philipp Maas for their careful editing and their discussion of some critical points, which helped me to improve the article.

1 At the above-mentioned panel I first presented some of the ideas elaborated in this study.

and patient.<sup>2</sup> In the *Carakasamhitā*, the “quartet” is illustrated in chapter 9 of the Sūtrasthāna. Here, a set of sixteen fundamental qualities characterizes the four factors,<sup>3</sup> each of them being described by four qualities in four distinct stanzas (Sūtrasthāna 9.6–9). The doctor’s four main qualities are (1) being impeccable in medical knowledge, (2) having extensive practical training, (3) skill, and (4) purity.<sup>4</sup> Other stanzas in the same chapter emphasize that the doctor is the chief factor of the quartet because a successful medical treatment depends on his action<sup>5</sup> relating to the knowledge of remedies, the direction of attendants, and the prescriptions to the patient.<sup>6</sup> As remarked by the commentator Cakrapānidatta (ca. 11th cent.), all four factors are described as causes (*kāraṇa*) of successful treatment, but, while remedies, assistant, and patient are auxiliary causes (*upakāraṇam*), the doctor is the independent agent (*svatantra*).<sup>7</sup> On the whole, Sūtrasthāna 9 is mostly devoted to the doctor, whose competence is illustrated by more than twenty properties and also described in contrast to the charlatan.<sup>8</sup> Most of the doctor’s properties belong to two main categories, namely knowledge and practical skills. This is confirmed by passages of the *Carakasamhitā*, such as Sūtrasthāna 1.123, where it is said that the best physician (*bhiṣag uttamaḥ*) knows the principles of the correct application of drugs according to place, time, and individual variation.<sup>9</sup> Or by Sūtrasthāna 29.7 and Vimānasthāna 8.4, which explain the characteristics of the ayurvedic teacher and begin with qualities that are almost identical with the four essential qualities ascribed to the doctor in Sūtrasthāna 9.6.<sup>10</sup>

## 2.2. Another set of skills

However, the range of qualities that characterize a doctor’s attitude as well as a doctor-teacher’s attitude also comprises another set of skills consisting of emotional-relational qual-

- 2 Sūtrasthāna 9.3: *bhiṣag dravyāṅy upasthātā roḡī pādacatuṣṭayam* (p. 61b). A paraphrase of Sūtrasthāna 9 and comments on it are offered in Dagmar Wujastyk 2012: 27–31 and Cerulli 2022: 175–79. Some of the studies mentioned in Dagmar Wujastyk 2012: 7–15 include translations or summaries of this chapter as well as remarks on it.
- 3 On number sixteen in South Asian culture see Gonda 1965: 115–130.
- 4 Sūtrasthāna 9.6: *śrute paryavadātatvaṃ babuṣo dṛṣṭakarmatā | dākṣyaṃ śaucam iti jñeyaṃ vaidye guṇacatuṣṭayam* || (p. 63a).
- 5 Sūtrasthāna 9.10: *kāraṇam ... siddhau ... pradbānam bhiṣag atra tu* (p. 63a).
- 6 Sūtrasthāna 9.10c: *vijñātā, śāsītā, and yuktā* (p. 63a).
- 7 *Āyurvedadīpikā* on Sūtrasthāna 9.10: *vaidyas tu svatantraḥ* (p. 63a).
- 8 See Dagmar Wujastyk 2012: 29f. To this list, the three properties in Sūtrasthāna 9.10c can be added (see note 6 above).
- 9 Sūtrasthāna 1.123: *yogam āsam tu yo vidyād deśakālopaḡaditam | puruṣaṃ puruṣaṃ vikṣya sa jñeyo bhiṣag uttamaḥ* || (p. 22b).
- 10 Vimānasthāna 8.4: *paryavadātaśrutam paridṛṣṭakarmāṇam dakṣam dakṣiṇam śuciṃ* (p. 262a). The list in Sūtrasthāna 29.7 (p. 182a, ll. 8–9) is in the nominative case and does not have a term correspondent to *dakṣiṇam*.

ities. One such quality is being fully engaged in curing diseases (*tatparatā*, “engagement”; Sūtrasthāna 9.21).<sup>11</sup> This is explained by the commentator Cakrapānidatta as striving for the best of one’s own possibilities to cure diseases.<sup>12</sup> Together with the five properties of knowledge, reasoning, discernment, memory, and accomplishment (which amount to a compact description of the doctor’s intellectual and practical skills), engagement contributes to make the doctor one who does not fail with what can be cured.<sup>13</sup> It is neither a knowledge nor a practical skill, though. Rather, it is a mode that makes the doctor assiduous in applying knowledge and skills to perform one’s activity optimally and obtain the best results from it, which in the case of medical science correspond to the cure of diseases.

Another emotional-relational quality appears in Vimānasthāna 4.12, where it is explained that,

one who, being a knower of the matter, does not enter the inner nature of the patient through the light of knowledge and intelligence does not cure diseases.<sup>14</sup>

11 P. V. Sharma (p. 64) translates *tatparatā* with “devotion”, while Sharma & Dash (p. 190) have “promptness.”

12 *Āyurvedadīpikā* on Sūtrasthāna 9.21: *vyādhicikitsāyām prayatnātīśayatvam* (p. 64a).

13 Sūtrasthāna 9.21: *vidyā vitarko vijñānam smṛtis tatparatā kriyā | yasyaite ṣaḍ gunāḥ tasya na sādhyam ativartate* || (p. 64a) – “Knowledge, reasoning, discernment, memory, engagement, and accomplishment: The one [i.e., the doctor] who has these six qualities does not fail with what can be cured.” As regards *tasya na sādhyam ativartate*, my translation “one does not fail with what can be cured” is close to the translations by P. V. Sharma (p. 64) and Sharma & Dash (p. 190), who respectively have “nothing remains unachievable for him” and “he can never miss the target, that is the cure of diseases.” Cerulli instead translates *tasya na sādhyam ativartate* as “they do ‘not turn away from anything that is curable’” (2022: 175), which suggests the specific attitude of the doctor of not neglecting (*na ... ativartate*) any kind of curable disease, with the six qualities making him not disregarding what can be cured. In this way, the sentence also seems to allude to the opposite action of turning away from what is not curable, which doctors are advised to do, for example, in Sūtrasthāna 10.8 and 21–22 (on this topic see Dagmar Wujastyk 2012, chapter 4). This is a viable and even attractive interpretation of *tasya na sādhyam ativartate*; nevertheless, it seems more plausible to me that the six qualities mentioned in the same stanza characterize a doctor who has the ability of not passing by (*na ... ativartate*) anything curable because his competence and attitude enable him to do so. In other words, *tasya na sādhyam ativartate* indicates the result of the entire set of qualities that characterize the doctor who accomplishes the aim of medical practice, which is curing the curable, rather than not neglecting what is curable. It can also be noted that the general meaning of the word *sādhyā* is “what can be accomplished.” Therefore, in general terms, *na sādhyam ativartate* in Sūtrasthāna 9.21 expresses the non-failing in anything that can be accomplished, provided that one has certain qualities. A similar idea is conveyed by Nidānasthāna 2.22: *sādhyatvam kaścid rogo ’tivartate* – “some diseases fail to be curable” – which is preceded by a list of ablatives indicating the causes for such cases.

14 Vimānasthāna 4.12: *jñānabuddhipradīpena yo nāvīṣati \*tattvavit | āturasyāntarātmānam na sa rogāṃś cikitsati* || (p. 249a). \**tattvavit* is the reading in Trikamji’s edition, which records the variant *yogavit*. The latter is attested in Gangadhar Ray Kaviraj’s edition of the *Carakasambhitā* (see *Jalpakaḥpataru*, Part 3, p. 1486).

The contents of Vimānasthāna 4.12 are close to Sūtrasthāna 9.24, one of the concluding stanzas in the chapter. Here it is said that a doctor endowed with both the light provided by the body of knowledge in the present treatise and the eye of one's own intelligence (which resembles "through the light of knowledge and intelligence," *jñānabuddhipradīpena*, in the stanza from the Vimānasthāna) does not err in curing a patient.<sup>15</sup> The main difference between the two stanzas is that Vimānasthāna 4.12 mentions the inner nature (*antarātmānam*) of the patient, or in P. V. Sharma's translation, the patient's "inner self,"<sup>16</sup> as what the doctor should enter in order to make his knowledge of diseases effective in terms of cure. It should be noted that Cakrapāṇidatta explains *antarātmānam* by saying that in the case of the doctor it means *antaḥśarīram*, by which I understand that the patient's inner nature (in the sense of P. V. Sharma's inner self) is to be treated as if it were a physical body.<sup>17</sup> So, considering that the preceding verses are about the doctor's knowledge and practical skills, Vimānasthāna 4.12 may describe another factor that contributes to the doctor's success in curing the patient's disease, namely emotional-relational skills that enable the doctor to enter the inner nature of the patient and understand the sick conditions not only through the eye-based observation of the physical body. It should be noted that the compound *antaḥśarīra* elsewhere refers to the physical inside of the body. In Sūtrasthāna 11.55, for example, the internal body is mentioned in connection with internal cleansing therapies used as remedies against disorders related to diet. Accordingly, Vimānasthāna 4.12 may instead describe the doctor's ability to understand the conditions of what cannot be directly seen through eye-sight and, therefore, emphasize the importance of the doctor's competence in interpreting various types of signs, which are not limited to the visible physical data.

Sūtrasthāna 9 closes with the mention of a set of emotional-relational skills: kindness, empathy, joy, and detachment (*maitrī, kāruṇya, prīti, upekṣaṇa*), which are presented as having distinct scopes: kindness and empathy (or compassion, which is the most common translation of Sanskrit words such as *karuṇā, kṛpā, or dayā*) are directed towards all sick persons; joy towards the one whose illness can be cured; and detachment towards those beings who are going to die.<sup>18</sup> Their mention in the chapter on the quartet of therapeutics is quite significant as it forms a statement on the emotional qualities that (ideally) characterize the doctors' approach towards the patients, and thus their interaction with them.

Both the fact that the set of kindness, empathy, joy, and detachment are prominent in Buddhist literature<sup>19</sup> and the fact that the stanza devoted to them appears towards the end of

15 Sūtrasthāna 9.24: *śāstraṃ jyotiḥ prakāśārthaṃ darśanaṃ buddhir ātmanaḥ | tābhyāṃ bhiṣak suyuktābhyāṃ cikitsan nāparādhyati ||* (p. 64a).

16 Sharma, *Carakasamhitā*: 328.

17 *Āyurvedadīpikā* on Vimānasthāna 4.12: *antarātmānam iti vaidyaṣakṣe antaḥśarīram* (p. 249b).

18 Sūtrasthāna 9.26: *maitrī kāruṇyam ārteṣu śakye prītir upekṣaṇam | prakṛtistheṣu bhūteṣu vaidyavṛttis caturvidheti ||* (p. 64b).

19 See Maithrimurthi 1999 for a comprehensive study on the topic.

Sūtrasthāna 9 do not make these feelings somehow spurious and less important contents of the Ayurvedic tradition.<sup>20</sup> In fact, as is well-known, kindness, empathy, joy, and detachment are not only the object of important meditative practices in Buddhism,<sup>21</sup> but later also appear in Brahmanical texts such as the *Yogasūtra*,<sup>22</sup> where, under the label of the four divine or immeasurable states, they indicate feelings with partially different nuances and scope. Thus, describing through these terms the domain of the doctor's emotional and relational competence, the authors of the *Carakasamhitā* adopt a set of feelings that – despite the slightly different ways of interpreting them – are part of a shared ethical view linked to ascetic practices of various traditions. This domain of competence is an integral part of medical activity as it guides the doctor in approaching different types of patients and developing a constructive relationship with them. Another reason for considering the text on kindness, empathy, joy, and detachment genuinely part of the Ayurvedic tradition is connected to the history of the composition of the *Carakasamhitā*, which at the end of each chapter is said to be a work composed by Agniveśa and revised by Caraka. This phrasing confirms that, on the whole, the present shape of the text goes back to Caraka's revision (and for some parts to Dṛḍhabala's restoration of missing sections), whose version, with some variations, circulated for approximately the last two millennia. So, unless a critical edition of the *Carakasamhitā* shows that the verses on kindness, empathy, etc. are missing in early witnesses of the text, we can safely assume that, since Caraka's edition of the text, those who practised Ayurveda knew the verses regarding the doctor's emotional and relational competence.

This entails that the doctor's skills should include a competence to some extent similar to that of modern psychologists, and not of yogins (as it has been recently suggested).<sup>23</sup> Since the yogins' practices are concerned with cognitive habits as well as personal mental and emotional qualities in connection with the attainment of a liberated state, it is quite unlikely that the training of an ayurvedic doctor should include yogic practices, *stricto sensu*, and the consequent development of yogic abilities, again *stricto sensu*. In fact, a doctor-to-be and a doctor-in-action should embrace an ethical approach to the patient that includes the adoption of a set of virtuous emotional qualities, rather than meditative practices based on such qualities.

Joy towards the patient whose illness is curable is plausibly due to the possibility of the patient's recovery. It can be considered a special feeling of the doctor who, possessing the six required qualities, is said not to fail in anything that is curable.<sup>24</sup> However, compassion seems

20 In fact, this is the interpretation given in Dagmar Wujastyk 2012: 31.

21 As explained by Maithrimurthi (1999: 39), a few places of early Buddhist literature relate the meditative practices on kindness etc. to pre-Buddhist and non-Buddhist ascetics, too. I thank Philipp Maas for drawing my attention to Maithrimurthi's remarks.

22 Relevant references are provided in Dagmar Wujastyk 2012: 31 and related footnotes.

23 See Robertson 2023.

24 See n. 13.



to be the most desired emotional quality of a doctor. It is explicitly mentioned in different parts of the *Carakasamhitā* as a virtuous feeling possessed by the doctor and it appears to be a special component of his competence. In *Vimānasthāna* 3.15, compassion (*dayā*) appears in the list of therapies that can be adopted to save the life of human beings during epidemics. In *Cikitsāsthāna* 1.4.58, compassion for living beings, rather than wealth or pleasures, is what makes the Ayurvedic doctor able to excel in his medical practice.<sup>25</sup> Further, in *Cikitsāsthāna* 1.4.62 compassion for living beings is said to be the highest *dharmā* and the fundamental ethical standard for the doctor who is successful in his medical practice.<sup>26</sup> *Cikitsāsthāna* 1.4.56 precedes these verses with a statement on *dharmā* as the motivating factor in the doctor's practice: "Yet the doctor should strive to rescue from adversities all the patients as if they were his sons, he who aspires to the supreme *dharmā*,"<sup>27</sup> which shows the broader ethical framework of the medical activity as well as of the doctor's individual engagement (*tatparatā*) in saving the sick from pain.

I find interesting to compare the ideal in *Cikitsāsthāna* 1.4.56 with the property of "seeking the benefit of all living beings" (*jagaddhitaṣin*) that the Buddhist philosophers Dignāga and Dharmakīrti (5th to 7th century) ascribe to the Buddha, with Dharmakīrti explaining at length this property in relation with compassion.<sup>28</sup> The universal scope (*jagad*) of the Buddha's aspiration (*eṣin*) to do what is beneficial (*hita*) can be compared with the totality of the patients (*āturān sarvān*) that is the scope of the doctor's striving (*yatnavān*) to protect them from adversities (*ābādhebhyo hi samrakṣet*), namely any kind of disease. Furthermore, this striving relates to the scope of the supreme *dharmā*, which is the object of the doctor's aspiration (*icchan dharmam anuttamam*). In drawing this comparison, I see a way to interpret the ideal of perfection concerning the doctor as an ideal that possibly circulated within South Asian culture across religious and cultural boundaries. I am not suggesting that the *Carakasamhitā* proposes the ideal of a Buddha-like doctor (or that, later, Dignāga and Dharmakīrti propose the ideal of a doctor-like Buddha), but, rather, that it outlines an ideal characterized by a morally good implication with a universal scope, namely protecting from adversities all beings. Precisely because of its ethical weight, this ideal is likely connected with ideals typical of environments that specialized in technologies of the mind and heart, which are part of religious traditions.

25 *Cikitsāsthāna* 1.4.58: *nārthārtham nāpi kāmārtham atha bhūṭadayāṃ prati | vartate yaś cikitsāyāṃ sa sarvam ativartate* || (p. 389b).

26 *Cikitsāsthāna* 1.4.62: *paro bhūṭadayā dharmā iti matvā cikitsayā | vartate yaḥ sa siddhārthaḥ sukham atyantam aśnute* || (p. 390a).

27 *Cikitsāsthāna* 1.4.56: *bhīṣag apy āturān sarvān svasutān iva yatnavān | ābādhebhyo hi samrakṣed icchan dharmam anuttamam* || (p. 389b). On this and the previously mentioned stanzas see Cerulli 2022: 121f.

28 For references, see Pecchia 2015: 53–56.

As we have seen, the doctor's *dharmā* and his approach to the patient are explicitly connected with compassion, which is indicated as the motivation for curing patients and the rationale behind medical practice as an action that may not correspond to a material compensation.<sup>29</sup> Furthermore, different terms indicate compassion as the motivating factor in the transmission of Ayurveda to humankind: *anukrośa* and *anukampā* are mentioned in connection with the sages,<sup>30</sup> while *dayā* is used in the case of Agniveśa.<sup>31</sup> So, the narration of the history of Ayurveda offers the doctor an ideal model of perfection that importantly includes compassion. As an ideal, no "real" doctor can perfectly embody it. But the implication is that each should strive to approximate to it, with compassion as motivation in the treatment of a patient and as the feeling tone that ideally informs the encounter with the patient.

Various places of Sūtrasthāna further characterize the ideal doctor as a savior of life (*prāṇābbhisara*) and one who ensures the well-being of living beings (*prāṇisukhaprada*),<sup>32</sup> and even an impersonal ayurvedic knowledge is said to give happiness to living beings (*loka-sukhaprada*).<sup>33</sup> In a longer passage (Sūtrasthāna 29.7), Ātreya explains to Agniveśa the qualities that characterize good doctors, who are saviors of lives and destroyers of diseases: they have knowledge on a variety of medical subjects, they know how to apply their knowledge, and they are benevolent with all living beings, just like mother, father, brother and relatives are.<sup>34</sup> It is interesting to note that, in the Buddhist context, great compassion is also described as typical of those great beings whose love is without cause,<sup>35</sup> where *vatsala*, the word for "love," has the connotation of being loving towards a child or offspring and, thus, suggests a kind of love similar to the love of a mother, a father, or other close family members.

### 2.3. The patient, or how to cooperate with the doctor

Returning to the factors of the quartet of therapeutics in Sūtrasthāna 9, the patient is here described as (1) having recollection (*smṛti*), (2) following prescriptions (*nirdeśakāritva*), (3) being fearless (*abbīrutva*), and (4) being informative about one's own disease (*jñāpakatva*).<sup>36</sup>

29 On this topic and its complex implications, see Dagmar Wujastyk 2012, Chapter 5, and Cerulli 2022: 120–126.

30 See, respectively, Sūtrasthāna 1.7 and 35; and Sūtrasthāna 1.30. See Dagmar Wujastyk 2012: 110 with n. 354.

31 Sūtrasthāna 1.39.

32 Sūtrasthāna 9.18 and 23; Sūtrasthāna 11.53; and Sūtrasthāna 29.4.

33 Śārīrasthāna 6.19.

34 Sūtrasthāna 29.7: ... *sarvaprāṇiṣu cetaso maitrasya mātāpitṛbhrātṛybandhubud evaṇyuktā bhavanty agniveśa prāṇānām abhisarā bantāro rogānām iti* (p. 182b, ll. 20–22).

35 Reference is made to Devendrabuddhi's (7th cent.) and Manorathanandin's (11th–12th cent.) commentary on Dharmakīrti's *Pramāṇavārttika* II.198; see Pecchia 2015: 140, l. 10, for Manorathanandin's text and note c-c in the second level of the apparatus for the text of Devendrabuddhi.

36 Sūtrasthāna 9.9: *smṛtir nirdeśakāritvam abbīrutvam athāpi ca | jñāpakatvam ca rogānām āturyasya guṇāḥ smṛtāḥ* || (p. 63a).

These qualities show how the patients can contribute to the cure of their diseases and are expected to assume an active role in the steps to be taken for restoring their good health. The quality of *smṛti* indicates the patients' reflexive ability to recollect and recognize their own condition, what happened and is happening in their mind and body. This kind of knowledge is a prerequisite for the patients' ability to make their own disease known to the doctor (*jñā-pakatva*) by describing effectively how it manifests itself. This involves translating the results of self-reflection for the doctor, who is there to receive such results in the form of a narrative which tells him the patient's conditions and his/her representation of those conditions. The two abilities concerning knowledge<sup>37</sup> address the inner world and the outer world of the patient, and are accompanied by the qualities of not being fearful (*abhirutva*) and following the doctor's prescriptions (*nirdeśakāritva*), which respectively concern the patient's inner world and outer world. Both qualities support a successful application of the therapy, the one avoiding anything from inside that might prevent or negatively affect the cure itself and the other one linking the patient to the doctor and the means that he provides from outside to make the curative process happen.

This description of the patient shows how the qualities of observing and controlling oneself as well as being in a constructive relation with the doctor enable the sick person to cooperate towards re-establishing and maintaining his/her good health. Additionally, the patient's quality of effectively describing one's own disease implies that a doctor is there to listen to the patient's narrative and must be able to transform it into useful information. This implied quality of the doctor corresponds to what Michel Foucault called the "speaking eye."<sup>38</sup> After observing the patient and listening to him, the speaking eye of the ayurvedic doctor enables him to translate into a medical narrative the visual and verbal information that he received through and from the patient. Although Foucault mentions the aspect of listening to the patient,<sup>39</sup> this seems to be secondary if compared with the act of seeing. For the ayurvedic doctor, the speaking eye is instead importantly complemented by a "speaking ear." It is through his speaking eye-and-ear that the doctor is able to render the patient's natural language into the medical language and retell the patient his/her own narrative by naming a pathology, articulating a diagnosis, and adding the therapy to be adopted. The patient ideally responds by following the doctor's indications and not panicking, which correspond to the second and third quality of the patient mentioned above.

37 It is to be noted that *jñāpakatva* derives from the causative form of the verb *jñā*, "to know."

38 Foucault 1973: 111–113.

39 Foucault 1973: 112.

### 3. Interaction between doctor and patient

#### 3.1. Communication as part of a therapeutic process

The interaction between patient and doctor described so far is based on an unspoken underlying act of communication. The importance of communication is confirmed by the study of a case of ayurvedic practice in Kerala conducted by Anthony Cerulli, who says that,

[t]o the onlooker, the only thing that appears to move between the physician and patient is information, and their confab and re-presentation of facts and perceptions move in relaxed yet semi-formulaic ways.<sup>40</sup>

Since the *Carakasamhitā* hardly depicts the everyday reality of medical practice, we might look in vain for representations of acts of communication in the text itself (or, for that matter, in other foundational works of Ayurveda). However, some topics are explained in such a way that they seem to also serve the purpose of illustrating how the doctor should address certain issues and communicate about them with the patient. This is especially the case with explanations concerning well-being and healthcare, rather than specific diseases. The section on good conduct (*sadvṛtta*) in Sūtrasthāna 8 is a case in point. Its contents are about how to maintain good health and say more than informing about what needs to be done to modify unhealthy behavior. They are evidence of a type of knowledge that the doctor can and, to some extent, should share with patients in general, be they patients who recovered from disease or individuals whose unhealthy lifestyles will potentially lead to disease. The text does not explicitly thematize the importance of the doctor's skill in communication regarding preventive or curative therapies and, more in general, the modification of unhealthy habits. However, it can be assumed that in such cases the language of the doctor will not be merely referential, but it will also have an emotive and conative function,<sup>41</sup> aiming to persuade the patient to act at least temporarily according to the doctor's indications. The doctor's capacity to skilfully communicate and, thus, appeal to the patient's emotional and imaginative world will largely determine the effectiveness of the interaction between doctor and patient. The doctor will not simply transmit to the patient information that comes from medical knowledge, but he will adopt appropriate rhetorical strategies and refer to social and cultural models that provide a rationale for individual and social behaviors. In doing so, the doctor will present some diseases in a complex, multi-layered way – a way that he presumably learned during his study of Ayurveda and is to some extent reflected in the texts of Ayurveda.

#### 3.2. The case of drinking alcohol

Cikitsāsthāna 24, the chapter on the treatment of alcoholic intoxication (*madātyaya-cikitsita*), is arguably an example of a text that presents its general topic, namely drinking intoxicant

40 Cerulli 2022: 105.

41 Here, I refer to Roman Jakobson's functions of language (1960).

beverages, in a multi-layered way.<sup>42</sup> Although Sūtrasthāna 8.25 condemns alcohol (*madya*) together with gambling and intercourse with prostitutes as something in which one should not indulge,<sup>43</sup> Cikitsāsthāna 24 is not disapproving of the consumption of intoxicant beverages. On the contrary, the text presents the topic discussing its different layers, from medical knowledge on alcoholic excess, alcoholism, and the related therapies (stanzas 88 to the end) to a description of how to drink alcoholic beverages and what their effects are (stanzas 1–87).<sup>44</sup>

The first ten stanzas of Cikitsāsthāna 24 are about *surā*, described as an intoxicating divine drink that has the power to eliminate grief, depression, fear, and agitation,<sup>45</sup> and that should be consumed according to prescriptions.<sup>46</sup> The mention of *soma* and the *sautrāmaṇī* rite makes clear that *surā* here indicates the drink used during a ritual of Vedic origin in which the Aśvins and Sarasvatī, by means of *surā*, save Indra from the consequences of drinking *soma*.<sup>47</sup> With this description, the text presents drinking alcoholic beverages squarely as ritual drinking, also assigning the term *surā* to this kind of drinking, and using *madya* and *mada* as general terms for intoxicant beverages in the chapter.<sup>48</sup> Cikitsāsthāna 24.11–20 delineates an etiquette for drinking alcoholic beverages: purity of the body and mind is the first requirement. The setting for consuming alcohol forms the second set of requirements, which refer to the place, the way of sitting, the company, and the food that should accompany alcohol. The third requirement is to be wealthy, as can be inferred by the fact that the rules for drinking are for wealthy people or those who will become rich. For these people drinking alcohol in an appropriate manner is even beneficial.<sup>49</sup> This resembles the connection between richness and *surā* that appears in the *R̥gveda*<sup>50</sup> and arguably mirrors what Patrick Olivelle has observed in relation to technologies of immortality, namely that

42 McHugh 2021 provides a comprehensive overview of alcoholic beverages in ancient South Asia. The older Mitra 1873 and Aalto 1963 still offer important remarks on the topic.

43 Sūtrasthāna 8.25: *na madyadyūtaveśyāprasāṅgaruciḥ syāt* (p. 60b).

44 An extremely succinct version of this description of drinking alcohol is presented in Sūtrasthāna 27.194–195ab, which is the end of the section (*varga*) on alcoholic beverages (*madya*). In these three verses, alcohol is again compared with *amṛta* and, among other characteristics, is said to remove fear, sorrow, and fatigue (*bhayaśokaśramāpaham*, Sūtrasthāna 27.194b [p. 163a] and Cikitsāsthāna 24.62d [p. 585b]).

45 Cikitsāsthāna 24.9ab: *śokāratibhayodveganāśini yā mahābalā* (p. 583a).

46 Cikitsāsthāna 24.10d: *tām surām vidhinā pibet* (p. 583a).

47 On *surā* and the *sautrāmaṇī* rite see Malamoud 1991: 21–31 and references therein. *Surā* is the main oblation in the *sautrāmaṇī* rite, which is devoted to Indra as *sutrāman*, “the one who protects well.” As observed by Malamoud, the *sautrāmaṇī* is an anomaly because the brahmins who celebrate the rite are confronted with drinking alcohol, which is prohibited for members of their class (*ibid.*, p. 21f).

48 McHugh 2021: 150–161.

49 Cikitsāsthāna 24.24: *vidhir vasumatām eṣa bhaviṣyadvibhavās ca ye | yathopaṣatti tair madyam pātavyam mātrayā hitam ||* (p. 583b).

50 This connection is pointed out in Sannino Pellegrini 1997: 437f.

the possession of wealth was regarded as a prerequisite for performing any rite, many of which were quite expensive to conduct.<sup>51</sup>

The serene scene of wealthy people drinking alcohol together with the right friends, with good manners and in a nice environment presumably corresponds to the first stage of intoxication, when alcohol gives one pleasure (Cikitsāsthāna 24.42–43). This is in stark contrast with the subsequent horrifying depictions of the effects of alcohol in the second and third stages of intoxication (Cikitsāsthāna 24.44–57). No wise person would like to reach the second stage, “just as no pedestrian would like to walk on a path that leads to an unhappy destination and with many drawbacks.”<sup>52</sup> The third stage makes one unable to act, just like a piece of wood.<sup>53</sup> Another simile compares the strong agitation of the mind caused by alcohol with that of a tree on the river bank caused by the impetus of a strong wind.<sup>54</sup> However, the text emphasizes that drinking alcohol, in principle, does not generate bad effects; in fact, alcohol is also beneficial (Cikitsāsthāna 24.61–67). If taken appropriately, it is like ambrosia (*amṛta*), whose special property is giving vitality (rather than immortality, as explained by Paul Thieme).<sup>55</sup> But if not taken according to the rules, alcohol causes sickness; just like food, which is life for living beings, but if taken inappropriately destroys life.<sup>56</sup> It stimulates and shows the nature of all living beings, just as rain stimulates the growth of crops and fire shows the pure nature of gold.<sup>57</sup> The fact that alcohol can turn into poison depends on several variables, from the quantity of alcohol to the situation and personal conditions in which alcohol is drunk, namely, whether it is consumed in the appropriate quantity and manner, at the right time, together with wholesome food, according to one’s own strength, with a cheerful mind, and with the right company.<sup>58</sup> Furthermore, drinking alcohol has different effects according to the *doṣa*-based type to which one belongs.<sup>59</sup>

51 Olivelle 1997: 437; see p. 447, n. 29, where Olivelle quotes *Mānavadharmasāstra* 11.7–8 saying, “A man who possesses a supply of food sufficient to maintain his dependents for three years or more is entitled to drink Soma [i.e., to perform a Soma sacrifice]. If a twice-born man possessing less wealth drinks Soma, he derives no benefit from it, even though he has drunk Soma.”

52 Cikitsāsthāna 24.47cd: *gacched adhvānam asvantam babudoṣam ivādhvagah* (p. 584b).

53 Cikitsāsthāna 24.48b: *bbagnadārv iva niṣkriyah* (p. 584b).

54 Cikitsāsthāna 24.53: *madyena manasās cāsya samkṣobhaḥ kriyate mabān | mabāmārutavegena taṭasthasyeva śākbinaḥ* (p. 585a).

55 Thieme 1952: 15–34. Especially at p. 24–27, *amṛta* is explained in relation to ancient Greek *ám-brotos* as “immortal” (“unsterblich”) and “that gives vitality” (“Lebenskraft spendend”).

56 Cikitsāsthāna 24.59–60ab: *kimtu madyam svabhāvena yathāivānnam tathā smrtam | ayuktiyuktaṃ rogāya yuktiyuktaṃ yathāmr̥tam || prāṇāḥ prāṇabhṛtām annam tadayuktyā nibhanti asūn |* (p. 585a).

57 Cikitsāsthāna 24.72: *sasyasaṃbodhakaṃ varṣam hemaṃprakṛtidarśakaḥ | butāśaḥ sarvasattvānām madyam tūbbayakārakam* (p. 586a).

58 Cikitsāsthāna 24.27, 68, and 79–85.

59 Cikitsāsthāna 24.21–25, and 74–78.

In describing ritual and social aspects of drinking alcohol as well as healthy modes of drinking, the narrative that covers the first part of Cikitsāsthāna 24 informs the specialist of Ayurveda about the possible effects of drinking alcohol, the variables that determine such effects, and how to prevent disorders related to alcohol. In other words, the text is about “situations that are not emergencies,”<sup>60</sup> in which somebody consumes alcohol but is not in a state of “patient.” So, there is not a specific treatment to be prescribed and the doctor’s knowledge on the topic is useless unless effectively communicated to the person. This presupposes considering the patient an agent in the sense of “someone who is capable of action and activity,” “who makes choices, behaves in a certain way, and thereby contributes to, but is also able to change, conditions that lead to the susceptibility.”<sup>61</sup> As shown by Cikitsāsthāna 24, in the case of alcohol consumption, individual behavior happens in a social context, which increases the complexity of the conditions that determine the agent’s choices. Now, the text offers the doctor a model for “properly behaving” that he can communicate to an agent/patient who consumes alcohol. Moreover, the text displays a narrative model for speaking about specific contents. Especially the similes that we have seen above provide the doctor with a useful tool for summarizing his explanations and strengthening the efficacy of his dialogue with the agent/patient. They are the “pills” that the individual can resort to when confronted with drinking alcohol.

### 3.3. Communication and ethical concerns

Communication about drinking alcohol may not be as neutral as it appears to be in Cikitsāsthāna 24 (or the final section on the types of alcoholic drinks in Sūtrasthāna 27). Precisely the general absence of polemical tones or judgmental statements on the consumption of alcohol puts the text in flagrant contrast to the negative connotation that alcohol has in different pre-modern traditions of South Asia, from the Brahmanical tradition to the Buddhist and Jaina ones.<sup>62</sup>

The *Mānavadharmaśāstra*, for example, clearly prohibits the consumption of alcohol and expounds on the negative consequences of drinking alcohol, especially for Brahmins.<sup>63</sup> Abstinence from alcoholic beverages is typical of Buddhist monastic rules. The Theravāda tradition indeed developed a detailed classification of the prohibition of alcoholic drinks.<sup>64</sup> The

60 I take the phrase from Walach & Loughlin 2018: 1–2, where smoking and drinking too much alcohol are examples of “situations that are not emergencies” and typically require a new narrative that can complement the dominant story of the patient as someone in a state of emergency or acute disease.

61 Walach & Loughlin 2018: 2.

62 For a useful overview, see McHugh 2021: 198–213, 213–228, and 228–233, respectively.

63 *Mānavadharmaśāstra* 11.54 and 93–98, 147, 151. Only *surā*, however, is prohibited to all *dvija* castes.

64 See Kieffer-Pülz 2005.

transgression of such a prohibition is largely attested in various types of sources, though. In the *Āgamaḍambara*, for example, Jayanta Bhaṭṭa (9th–10th cent. CE) depicts a meal at a Buddhist monastery saying that, “some drink is being served in a spotless jar” and “[t]here is wine here masquerading as ‘fruit juice.’”<sup>65</sup> According to the *Abhidharmakośabbāṣya*, lay practitioners, too, should abstain from alcoholic drinks, which is one of the five vows lay practitioners take.<sup>66</sup> Abstention from alcohol is in their case due to the fact that alcoholic drinks make people inattentive and non-vigilant, and therefore prone to break the other observances.<sup>67</sup>

The ban on drinking alcohol raised by the major traditions of South Asia poses the question of the origin of a different approach in classical Ayurveda and how such an approach (or even the textual presentation of it) could remain unaltered over the centuries, overcoming ethical concerns of those traditions.<sup>68</sup> An answer to this question entails investigating, among other aspects, historical developments of ritual drinking in connection with deep transformations in society – which is beyond the scope of this study. Here, I only reflect on another order of questions, namely how, in the interaction with the patient, the doctor would handle the tension between *dharm*a-based constraints (be they Brahmanic, Buddhist or Jaina) against alcohol and the positive framing of controlled drinking in Ayurveda. It can be assumed that the doctor would advise or treat patients who are not subjected to strict *dharm*a-injunctions against drinking alcohol. But he might find himself in the situation of treating Brahmins or Buddhist and Jaina practitioners who, in fact, are subjected to such injunctions. The absence of any pertinent indication in the *Carakasamhitā* (or, to my knowledge, elsewhere in classical ayurvedic literature) suggests that the doctor would explain to all types of patients how to deal with alcohol in a “healthy” way, which is a way that does not turn it into poison. In doing so, he is in a moral dilemma because (borrowing from B. K. Matilal, who speaks in general terms) he “cannot do everything that is obligatory for him to do in that situation” from the viewpoint of the *dharm*a.<sup>69</sup> The doctor will act as a moral agent who gives priority to the specific paradigm of Ayurveda, where, as confirmed by several passages of the *Carakasamhitā*, the first place is given to maintaining and restoring healthy conditions of life. To this end, the doctor will temporarily put aside concerns related to the *dharm*a and “cooperate” to the perpetuation of behaviors whose acceptability, within a *dharm*a-based view, ranges from a low degree to the total negation. Indeed, the doctor seems to be called to order priorities in consideration

65 Dezső 2005: 58f.

66 *Abhidharmakośabbāṣya*, p. 206, l. 25 – p. 207, l. 2 (on *Abhidharmakośa* 4.15): *viratisamādānād upāsakasamvarastho bhavati | . . . surāmaireyamadyapānāc ca |*.

67 See *Abhidharmakośa* 4.34c as well as the relevant discussions in the *Abhidharmakośabbāṣya* and the *Tattvārthā Abhidharmakośaṣikā* (for the latter, see Kano & Kramer 2020: 119–127).

68 A partially similar question is posed by ayurvedic prescriptions to eat meat, and more in particular beef. For some reflections on the problematic use of meat in Ayurveda, see Dagmar Wujastyk 2012: 133–137 and 148f.

69 Matilal 2002: 6; see also p. 23–27.



of the natural inclinations of human beings<sup>70</sup> and act in the name of a practical approach to them, which, by the way, the *Mānavadharmasāstra* too, takes into account.<sup>71</sup> Although the doctor's act will not rigidly comply with the paradigm of a *dharma* based on Dharmasāstras or other religious traditions, it will be morally good as it will reach "a pragmatic ad hoc resolution" that results from "a disposition to act and react appropriately with moral concerns."<sup>72</sup> So, rather than pointing at the ban on alcohol, the doctor would speak with the patient (even the one for whom alcohol is forbidden) about controlled drinking, the effects of alcohol, and healthy ways of drinking.

#### 4. Conclusion: The doctor with a caring attitude

Looking at a selection of passages from the *Carakasamhitā*, the attempt here has been to investigate the interaction between doctor and patient as it emerges from the outline of their qualities and how both contribute to preventing and curing diseases. Sūtrasthāna 9, the chapter on the quartet of therapeutics, shows that the Ayurvedic doctor is expected to be in dialogue with the patient at different levels. While the patient describes his/her symptoms and conditions, the doctor gives advice and instructions whose implementation also depends on his persuasive capacity. Therefore, a good doctor should possess not only solid medical knowledge and the ability to apply such knowledge but also another set of skills, which enable him to adequately interact with the patient. Explicit mention is made of kindness, empathy, joy, and detachment, which closely remind of the Buddhist tradition, but may also derive from non-Buddhist trends, such as those later represented in the *Yogasūtra*. Moreover, a few places describe the doctor's attitude towards the patient by comparing it with the care devoted to one's own children. In view of all this, a doctor in the ayurvedic tradition should cultivate not only knowledge and practical abilities concerning the more specific, technical aspects of Ayurveda, but also a set of emotional and relational abilities that can be conceptualized as a "‘way of being’ in relation to others."<sup>73</sup> They determine the doctor's caring attitude in the interaction with the patient and his ability to carefully listening to the patient's narrative about his or her conditions, which is a task of the patient in the therapeutic process.

Although there is hardly any description of doctor and patient in dialogue in the entire *Carakasamhitā*, the first part of Cikitsāsthāna 24 arguably presupposes a substantial interaction between them. In dealing with ritual and social aspects of the consumption of alcohol as well as its effects, the text presents a situation that invites the intervention of a doctor who aims to modify the course of unhealthy habits or prevent their development, although in the

70 Here, I borrow again from Matilal's reflections on the topic of ethics, as articulated in "Dharma and Rationality" (2002, Ch. 5, in particular, p. 60–69).

71 *Mānavadharmasāstra* 5.56 (quoted in Matilal 2002: 64).

72 Matilal 2002: 8 and 33.

73 I adopt here the terminology used in Zoppi & Epstein 2002.

absence of any state of emergency or severe illness. On the practical ground that communication is the doctor's only tool, it is his interaction with an agent of alcohol consumption who is not (yet) a patient that should persuade the agent to modify his habits and make drinking alcohol a pleasant rather than poisoning event. In this connection, the emotional-relational skills of the doctor enhance the quality of his caring attitude, which will be especially important towards an effective communication with the patient.

Cikitsāsthāna 24 shows another aspect of the interaction between doctor and patient. Since, unlike major traditions of South Asia (Hinduism, Jainism, and Buddhism), it does not present alcohol consumption with a negative connotation, it poses the question of how the doctor, in interacting with the patient, could/should relate to the shared moral order of the society. A practical approach to behaviors and natural inclinations of human beings arguably helps the doctor order priorities around maintaining and restoring health, and deal with possible moral concerns. In doing so, the doctor embodies the specificity of the ayurvedic paradigm and his behavior is morally good because it adheres to that paradigm.

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## The Forge and the Crucible: Images of Alchemical Apparatuses on Manuscripts of the *Rasendramaṅgala*

*Dagmar Wujastyk*

In 1984, Dominik Wujastyk's article "An Alchemical Ghost: The Rasaratnākara by Nāgārjuna" was published in *Ambix* (vol. 31, part 2, July 1984). In this article, Wujastyk clarified a mistake made by P. C. Ray in his *History of Hindu Chemistry* concerning the conflation of three different texts: the *Rasaratnākara* of Nityanātha Siddha, the *Rasendramaṅgala* of Nāgārjuna Siddha, and the *Kakṣapuṭa*, also of Nāgārjuna Siddha. Wujastyk's article drew on a number of manuscripts of these three texts. For the *Rasendramaṅgala*, he referred to a manuscript in the Bibliothèque Nationale in Paris. After the article's publication, Wujastyk started collecting digital images of surviving manuscripts of the *Rasendramaṅgala*. He described these in "The Surviving MSS of the Rasendramaṅgala of Nāgārjuna Siddha."<sup>1</sup> He also began work on transcriptions and collations of the manuscripts, and a critical edition of the fourth chapter of the text.<sup>2</sup> A first translation of the fourth chapter of the *Rasendramaṅgala*, based on this critical edition, will be published in an anthology of Indian alchemical texts.<sup>3</sup>

One of the interesting features of several of these manuscripts is the presence of line drawings of various apparatuses (*yantra*) used in alchemical processes. Dominik Wujastyk brought these to my attention a few years ago, when I was conducting research on Indian alchemical devices.<sup>4</sup> In this article, I will draw on Dominik Wujastyk's archive of digital images of *Rasendramaṅgala* manuscripts to examine and identify these images and to discuss the implications of their presence in an alchemical manuscript.

1 Dominik Wujastyk 2022.

2 Wujastyk *et al.* (2022). Wujastyk's transcriptions of manuscripts of the *Rasendramaṅgala* by Nāgārjuna are deposited on github. See: <https://doi.org/10.5281/zenodo.6484115>. These transcriptions are being collated and processed through Charles Li's Saktumiva platform (<https://saktumiva.org/wiki/wujastyk/rasendramangala/start>) for producing and publishing critical editions of Sanskrit texts. See also the *Rasendramaṅgala* start page at that site. Research assistants who have worked on this project include Madhusudana Rimal, Deepto Chakraborty, Jane Allred, Vandana Lele and Harshal Bhatt. The project has received funding through the Singhmar Chair endowment grant and the Kule Institute for Advanced Study, both at the University of Alberta.

3 Dominik Wujastyk (forthcoming) in Dagmar Wujastyk (forthcoming a).

4 I used one of the images from 07 Jaipur 1 (J1) to illustrate the various forms apparatuses with the same name can take in my project blog at <http://ayuryog.org/blog/fourth-procedure-bringing-mercury-rise-utth%C4%81pana>.



Figure 5.1: A map of manuscripts of the *Rasendramaṅgala* held in archives in India as recorded in the NCC and in Dominik Wujastyk's private records. Map created by Keith Cantú for AyurYog, 2019.

## The *Rasendramaṅgala*

References to alchemical, or transmutational practices occur in various Indic texts that pre-date alchemical literature proper by several centuries. These older texts refer to a metallurgical discipline called *dhātuvāda* that seems to have been devoted to making gold.<sup>5</sup> From about the tenth century, a new literature arose, dedicated fully to a practice called *rasavāda*, *Rasaśāstra*, or *rasavidyā*. As these names suggest, this discipline focused on uses of mercury. Its early texts describe the making of mercurial elixirs which could be employed in the making of gold, but whose ultimate purpose was the transmutation of the human being. The *Rasendramaṅgala* is one of the foundational texts of this alchemical tradition. Opinions about its date vary widely,

5 Or the Apabhraṃśa *dhāuvāo*, as it is found in various Jain texts, such as the eighth-century *Kuvalayamālā*. See Balbir (1990 and 1992), Chojnacki & Nagarajaiah (2018), and Dagmar Wujastyk (forthcoming b).

with some scholars dating it as early as the seventh, eighth, or ninth century, which would make it the earliest of the currently known alchemical treatises.<sup>6</sup> The early dates are partly contingent upon the attribution of the *Rasendramaṅgala*'s authorship to a Siddha Nāgārjuna. A reference in Al Biruni's *Kitāb al-Hind* (eleventh cent. CE) to an alchemist of that name could, for example, position the work in the ninth or tenth century.<sup>7</sup> However, it is not clear which Nāgārjuna authored the *Rasendramaṅgala* or even whether the attribution to a Nāgārjuna may have been added later.<sup>8</sup> David Gordon White considers the *Rasendramaṅgala* a "derivative source which borrows extensively from other Hindu alchemical tantras" and places it in the thirteenth to fourteenth centuries.<sup>9</sup> Meulenbeld notes that the quotations from the *Rasendramaṅgala* in the *Rasasindhu* prove that the *Rasendramaṅgala* is earlier than the third quarter of the fourteenth century.<sup>10</sup> Correspondences between the commentary (*tippana*) of the *Rasendramaṅgala* and Āḍhamalla's commentary (ca. fourteenth cent. CE) on *Śārīṅgadharasamhitā* 2.11.44–45<sup>11</sup> and 2.12.4cd–13ab corroborate this upper limit.

The opening verses of the *Rasendramaṅgala* state that the work consists of eight chapters. However, the manuscripts of the work that have been examined so far only give the first four, comprising about 400 verses.<sup>12</sup> The four chapters of the *Rasendramaṅgala* are called

1. The section on the purification of mercury and subsidiary mineral substances (*rasoparasasodhanādbhikāra*)
2. The section on the calcination and extraction of essences of diamonds, the liquefaction of mica and other substances, and the calcination of metals (*vajramāraṇasattvaṭṭānābbrakādīdrutidrāvaṇalobamāraṇādbhikāra*)
3. Mercurial calcines (*bhasmasūtaka*)
4. The solidification of mercury into pills through the liquefaction of essences, "leech" (binding procedure), calcination, etc. (*guṭīkāsattvadrutījalūkāmāraṇādirasabandhana*).

6 See Meulenbeld 2000b: 717, n. 93.

7 See Sachau 1910: 189 for Al-Biruni's brief reference to Nāgārjuna in his chapter "On Hindu sciences which prey on the ignorance of people." Al-Biruni notes there that Nāgārjuna lived one hundred years before his time.

8 See White 1996: 66–70 on the difficulties of differentiating between the various Nāgārjunas.

9 White 1996: 104.

10 Meulenbeld 2000a: 717.

11 The reference in Āḍhamalla's commentary on *Śārīṅgadharasamhitā* 2.11.44–45 only indirectly refers to the commentary of the *Rasendramaṅgala* here. Āḍhamalla gives a list of eighteen types of iron, stating that these are referred to by Nāgārjuna. Most, but not all of these are mentioned in a paragraph of the *Rasendramaṅgala*'s commentary that begins with "*atha rasāyane lobhādityādi*" and ends with "*evam aṣṭādaśalohajātayaṃ*." See Meulenbeld 2000b: 717, n. 98 on the types of iron mentioned by Āḍhamalla, but not in the *Rasendramaṅgala*'s commentary. Āḍhamalla on *Śārīṅgadharasamhitā* 2.12.4cd–13ab, however, contains a direct quote from the *Rasendramaṅgala*'s commentary.

12 Dominik Wujastyk 2022.



The titles of the missing chapters imply that they dealt with the treatment of diseases, the preparation of perfumes and ointments, poisons, and groups of substances.<sup>13</sup>

About half of the manuscripts collected by Wujastyk contain the commentary, which is sometimes anonymous, and sometimes attributed to a Govinda (Govindācārya, Govindacandra) and typically found appended to the main text after chapter four.<sup>14</sup> Several of the manuscripts that include the commentary also add another section dedicated to an iron tonic (*loharasāyana*) formulated by Nāgārjuna. Meulenbeld reads this section as part of the commentary.<sup>15</sup> But the manuscripts all clearly mark the end of the commentary with *iti raseṁdramam-gale ṭīpaṅakam samāptam*. The iron tonic section follows this and, in turn, it concludes with the words *iti śrīmannāgārjuno viracitāyām raseṁdramamgalaṁ sampūrṇam*. It is not clear to which chapter this section belongs.

### Alchemical devices

Probably the earliest mention of alchemical devices in Indic texts occurs in Sanskrit medical literature: The ninth-century *Kalyāṅakāraka* by Ugrāditya, a Jain medical treatise, mentions the use of a cradle-device (*dolāyantra*), and different kinds of crucibles (*mūṣa*) in its twenty-fourth chapter, which deals with the preparation and application of mercurials. The early alchemical treatises, such as the tenth-century *Rasabṛdayatantra* or the eleventh-twelfth-century *Rasārṇava* mention several alchemical devices in the context of their descriptions of the processing of mercury and other substances. However, they mostly refer to the devices by name and often do not provide any further description of them other than mentioning them in the context of particular steps in the processing of materials. The *Rasārṇava* does list a number of devices as equipment an alchemist must have in its fourth chapter and there, we are given brief descriptions of them. The twelfth-thirteenth-century *Rasendracūḍāmaṇi* is the first of the alchemical works to provide detailed descriptions of the characteristics and functions of alchemical equipment. It lists a series of instruments and apparatuses in its third chapter, which describes the setup of the alchemical laboratory, and devotes its fifth chapter to the description of the apparatuses, giving measurements, descriptions of their shapes, the materials they are made of, and their functions. Its descriptions are reiterated in later alchemical works such as the *Rasaratnasamuccaya* and the *Rasakāmadhenu*.<sup>16</sup> Similar to the *Rasabṛdayatantra* and the *Rasārṇava*, the *Rasendramāṅgala* mentions the use of various alchemical devices through-

13 See Meulenbeld 2000a: 714–715 for an overview of contents.

14 Of the manuscripts described in Dominik Wujastyk 2022, Goṅḍal BP 34 (G), Udaipur IRS 1136 (U), Patan HJ 8930 (Pa), Koba GB 19113 (Ko 1), and Koba GB 26264 (KO 2) do not contain the commentary.

15 Meulenbeld 2000a: 718.

16 See Sauthoff (forthcoming a and b) on the set up of the laboratory in the *Rasendracūḍāmaṇi* and on alchemical devices in the *Rasakāmadhenu*.

out, but does not describe the apparatuses themselves.<sup>17</sup> The commentary (*tippaṇa*) of the *Rasendramaṅgala* provides a list of alchemical equipment, including some twenty-six devices (*yantra*).<sup>18</sup> Quite a few of these devices – or at least their names – seem to be unique to the *Rasendramaṅgala*'s commentary and are neither found in the *Rasendramaṅgala*'s chapters nor in other alchemical works that describe alchemical equipment. The images found in four of the *Rasendramaṅgala* manuscripts represent these devices.

## The images

The use of images in several of the manuscripts of the *Rasendramaṅgala* is very striking, since technical drawings seem to be rare in Indian manuscripts altogether. Medical manuscripts of the ayurvedic tradition, for example, never contain illustrative drawings.<sup>19</sup> There has been very little work to date on the history of technical drawings and diagrams in manuscripts of South Asian scientific works. J. Losty's *The Art of the Book in India* (1982) does not refer to diagrams or technical drawings at all. A. Keller's article "Making diagrams speak in Bhāskara I's commentary on the Aryabhatiya" (2005) offers a first exploration of geometrical figures in manuscripts of a seventh-century Sanskrit mathematical commentary. The manuscripts of this commentary probably date to the eighteenth century or later. It thus remains uncertain when such diagrams were first integrated into the text, though the way the text is formulated implies that drawings were an integral part of the text.<sup>20</sup> Early line drawings of tantric dia-

17 The *Rasendramaṅgala* mentions a *dolāyantra* in chapter 1 (1.32), an *adbordbhvāpātānāyantra* in 1.36, a *yātānāyantra* (or *pātānāyantra*?) in chapter 2.38, a *cakrayantra* in chapter 3 (3.64), a *pātānāyantra* in 3.80, a *śarkkaryantra* in 3.106, and a *garbhayantra* in 3.163 and 3.164. The text of the *Kaṣapaṭa*, which is part of the fourth chapter, mentions an *ūṣmayantra* in verses 37 and 46, and a *dhūmakulāyantra* in verse 63. The numbering here is based on Dominik Wujastyk's provisional edition at <https://saktumiva.org/wiki/wujastyk/rasendramangala/start>, consulted on May 2, 2022.

18 There is some variation in the lists of apparatuses in the commentaries, both in the numbers and names of apparatuses and the sequence in which they appear. See the Appendix. The manuscripts use the *anusvāra* for the nasal in *yantra* (*yaṃtra*). I use the more standard class nasal here instead.

19 This statement is somewhat anecdotal and relies on querying the members of the CATS working group and those of the Suśruta project at a meeting at the department of South Asian, Tibetan and Buddhist Studies at the University of Vienna (July 7–9, 2022). None of the people we asked, all of whom have worked extensively with Sanskrit medical manuscripts, ever saw technical drawings of any kind in the particular ayurvedic manuscripts they worked with. Some had seen images on medical works for horses and elephants. The famous "Ayurvedic Man" painting, with labeling using text passages from the sixteenth-century *Bhāvaprakāśa* (Dominik Wujastyk 2008) is an exception, though also technically not a manuscript of a full text.

20 Keller (2005: 284) describes how the orientation of geometric figures ("front," "left," "right") is given within the written text of Bhāskara's commentary, rather than as part of the diagram, which indicates that the author assumed a diagram was part of the text on the manuscript.

grams (*yantra*) accompanying tantric texts may date to the twelfth century.<sup>21</sup> However, to date, there is no study of their first appearance in manuscripts.

Two articles by Fabrizio Speziale (2006, 2019) make note of two undated Perso-Indian manuscripts of medico-alchemical texts with images of apparatuses on them. The manuscripts refer to Sanskrit alchemical works, though not to the *Rasendramaṅgala*. The images of the Perso-Indian manuscripts are similar to the ones in the *Rasendramaṅgala* in that they are also diagrams consisting of line drawings and text. However, they are integrated into the text rather than added on as a separate section as in the manuscripts of the *Rasendramaṅgala*. In this, they are more similar to images I found in manuscripts of another Sanskrit alchemical text, the *Rasaratnākara*.<sup>22</sup> This work also happens to be one of the Sanskrit alchemical works referred to in the Perso-Indian manuscripts, pointing to a possibly shared history of technical diagrams. The topic of diagrams on Indian manuscripts and on alchemical manuscripts specifically, deserves to be the subject of a larger study.

The images I will discuss here, which are line drawings of apparatuses (*yantra*), are found in the commentary section of four of the manuscripts of the *Rasendramaṅgala* collected by Dominik Wujastyk. These are:

1. Bombay BBRAS S.C.19/2
2. Ahmedabad LDI 9442
3. Bikaner RORI 1455/4099
4. Jaipur UIOMI 184: I.14.ii.2

Two of the manuscripts are dated: Ahmedabad LDI 9442 to 1681 CE, and Bikaner RORI 1455/4099 to 1777 CE. My conjecture is that the Bombay manuscript is the oldest of the four, due to the fact that the images of the Ahmedabad and Jaipur manuscripts seem to follow its sequence of images rather than the sequence of their own lists of devices, as will be discussed below.

The images of the apparatuses are not only placed within or adjacent to the commentary, but they also illustrate information given in the commentary rather than in the text of the *Rasendramaṅgala*. In the Bombay manuscript, the images are placed after a sentence from the commentary that lists the alchemical apparatuses shown in the drawings. In the Ahmedabad

- 21 In a personal communication (emails on July 7, 2022 and July 8, 2022), Prof. Diwakar Acharya pointed me to two manuscripts with tantric diagrams from the twelfth century held in the National Archives of Nepal in Kathmandu. One of them was a manuscript of the Jaina *Praśnavyākaraṇa*, the other from the Śaiva *saptāśatika Kālotara*.
- 22 Most of the *Rasaratnākara* manuscripts in question are held in the National Archives of Nepal in Kathmandu. Out of thirty-five manuscripts of the *Rasaratnākara* there, twenty-nine have images (albeit a few of tantric *yantras* rather than of apparatuses), and only six feature no images. There are two further *Rasaratnākara* manuscripts, held at Jamnagar and London respectively, that also feature diagrams.

manuscript, the images are found right at the end of the manuscript as a whole. In the Jaipur manuscript, the images are placed below a sentence following on from the list of apparatuses in the commentary. In the Bikaner manuscript, the images also follow the list of apparatuses in the commentary. However, the text that follows seems to first pick up an earlier section of the commentary, and then has some additional commentary not found in the other manuscripts.

The commentary provides quite extensive lists of laboratory equipment (*upaskara*<sup>23</sup>), including different types of vessels, tubes, stoves, fire pits, and apparatuses. This section in the commentary seems to refer to verse twenty-four in chapter one of the *Rasendramāṅgala*:

*tasmāt sūta vidā sārddham sabāyair nipuṇair yutaḥ |*  
*sarvopaskaram ādāya rasakarma samārabhet || 24 ||*

For that reason, one should commence the mercurial operations together with an expert on mercury, accompanied by skilled assistants, having assembled all equipment.

The commentary picks up on the topic of equipment, admonishing that success in alchemical operations necessitates knowledge about equipment. It then gives an inventory of equipment, listing names and the materials that instruments are made of (such as clay, iron, stone, termite mound clay, etc.), but not their measurements or uses.<sup>24</sup> In turn, the line drawings on the manuscripts do not seem to refer to the entirety of the commentary's list of equipment, but just to the sentences on apparatuses (*yantra*). There are no separate images of individual instruments like pots, plates, ovens, mortars, pits, etc.

The images of the Bombay manuscript broadly follow the sequence of apparatuses given in its commentary. The Bikaner manuscript features a very similar list of apparatuses in its version of the commentary. However, its twenty-eight images of apparatuses do not entirely follow the sequence of its own list or that of the Bombay manuscript. The Ahmedabad and Jaipur manuscripts both have a shorter list of apparatuses in their version of the commentary that also differ in their sequence from the Bombay one. However, for the images, they seem to initially draw on the list found in the Bombay manuscript, or otherwise, on the images of

23 The term *upaskara* is less common in alchemical literature than its synonym *upakaraṇa*. A keyword search in the Digital Corpus of Sanskrit only brings up three occurrences of *upaskara* in alchemical literature: once in the *Rasendracūḍāmaṇi* (chapter 3, verse 31), stating that good assistants should be wealthy, affable, and equipped with all instruments (*dhanavanto vadānyās ca sarvopaskarasamnyutāḥ*). This statement is repeated in *Rasaratnasamuccaya* 7.33. And *Rasaratnasamuccaya* 11.26 repeats *Rasendramāṅgala* 1.24 (*sarvopaskaram ādāya rasakarma samārabhet*).

24 The commentary's full section on equipment is repeated almost verbatim in Āḍhamalla's commentary on *Śārṅgadharasamhitā* 2.12.4–13. The *Śārṅgadharasamhitā*'s passage describes a method for cleansing mercury (*rasasōdhanakarman*), using a cradle device (*dolāyantra*) and an unnamed distillation device, consisting of two pots. It also describes a method for purifying sulphur using an iron vessel. Āḍhamalla's commentary elaborates on the idea of processing mercury, quoting from various alchemical works.

the Bombay manuscript more directly rather than on the lists given in their commentary. The images are not a total match, but Ahmedabad and Jaipur both show a *piṭḥayantra* and a *bhūdbharayantra*, for example, neither of which are featured in their commentary, but are part of the Bombay manuscript's. The Jaipur manuscript also features images of additional apparatuses (an *iṣṭikāyantra* and a *dābhikāyantra* on the final folio with images) that are not found on the Bombay or Ahmedabad manuscripts and are not mentioned in either the *Rasendramaṅgala*'s main text or in the commentary.

The images are schematics, i.e., representations of the elements of a system. They consist of two main elements: (1) a line drawing of the apparatus, and (2) text.

The line drawings (1) are diagrammatic representations of apparatuses that show the combination of various vessels and instruments, assembled into an integrated group to perform a particular function. They also show where various ingredients are placed within the equipment. Most of the line drawings seem to depict a cross-section, showing the inner workings of an apparatus. In some cases, the apparatus seems to be depicted from above, though the change of perspective is not always clear. There are different levels of abstraction in the diagrams: Some images show easily recognizable shapes of vessels, while others provide a representation of the principle of the apparatus rather than a mimetic depiction of what it looks like. The drawings are therefore less descriptive of what an apparatus looks like, and more about how all its elements relate to each other. They show a moment in time of dynamic processes.

Vertical lines between apparatuses visually mark a division between the images of apparatuses and in some cases indicate that the apparatus is inside a pit or larger vessel.<sup>25</sup> Double lines in the outlines of vessels may indicate a coating on the surface of the vessel, though this is not entirely clear.

The textual elements (2) fulfill three different functions: The first is a kind of heading or caption that gives the name of the depicted apparatus. It is in most cases placed above the drawing, though not all images are provided with such a caption. In the second function, the text gives information about where substances (e.g., mercury, water, sulphur) are placed within the apparatus. The word for the substance, sometimes abbreviated to just the first syllable, replaces an image of it within the apparatus. Hollow spaces (*gartā*) are marked in this way, too. In the Bombay manuscript, fire is sometimes represented by the word "fire" (*agni*), and sometimes represented graphically, through vertical wavy lines. Similarly, water is in one case represented by wavy horizontal lines, but more typically represented by the word "water" (*udaka*). In the third function of the text, the text gives additional information about the parts of the apparatus.

Although the images on the manuscripts are all found in or adjacent to the commentary section and three sets of images are placed in almost identical locations within the commen-

25 The image of the *kacchāpāyantra* on the bottom right of folio 20 of the Bombay manuscript is an example of the lines indicating a pit or container, since the bottom shows lines referencing water.

tary, with similar numbers of apparatuses depicted, there are significant differences between the manuscripts in the sets of images. These differences include which apparatuses are featured, the sequence of apparatuses, as well as the ways in which they are graphically represented.

In the following, I will give a brief description of each of the four manuscripts, and the sequences of images presented in them.

### Bombay BBRAS S.C.19/2

This manuscript is held by the Bombay Branch of the Royal Asiatic Society, Mumbai, Maharashtra. It has been described by Velankar (1925–30: appendix B, p. 494) and by Dominik Wujastyk (2022). The undated manuscript names Govindacandra as the author of the commentary. The writing is Devanāgarī from western India, with *pr̥ṣṭhamātrā* vowels. The illustrations are found on folios 20v–21r, positioned within the commentary, underneath two lines of text from the commentary. The text at the top of folio 20v completes a section of the commentary in which various devices are listed.

The commentary lists the following twenty-six devices, which it numbers:

1. *śilāyantra* – rock device
2. *piṭḥayantra* – plinth device
3. *paṣāṇayantra* – stone device
4. illegible (probably *bbūdharayantra*) – in-ground device
5. *nalikāyantra* – tube device
6. *gajadaṃṭāyadānayanayantra* (?) – elephant tooth device
7. *dolāyantra* – cradle device
8. *adbaḥṣpātanayantra* – downward distillation device
9. *urdbvapātanayantra* – upward distillation device
10. *pātālayantra* – hole device
11. *niyāmakayantra* – restraint device
12. *ḍamarukayantra* – hourglass drum device
13. *tulāyantra* (?) – balance device
14. *kacchapayantra*<sup>26</sup> – tortoise device (still)
15. *cakratrayaṃ cākiyantra* – three-plate disc device
16. *vālukāyantra* – sand device
17. *agniṣomāyantra* – fire and water device
18. *gandhakakoyantra* – sulphur device
19. *mūṣāyantra* – crucible device

26 The manuscript reads *kacchapa-* here, which is the spelling one typically finds in print editions of alchemical texts. However, in other places, the alternative spelling of *kachapa* is found.

20. *baṇḍikāyantra* – earthen pot device
21. *kāṃsabbhājanayantra* – brass vessel device
22. *ghāṇāyantra* – nose (?) device
23. *gaḍuś cakrayantra* – water pot disc device
24. *sāraṇayantra* – potentiation<sup>27</sup> device
25. *jālikāyantra* – leech device
26. *vāraṇayantra* – elephant/strong (?) device

The existence of further apparatuses is acknowledged by ending the list with “etc.” (*ādayaḥ*).

These devices are represented by the line drawings on folios 20v to 21v. The images are presented in two rows on each folio. Most, but not all, images are labeled and numbered. Most of the diagrams have minimal text, with a few featuring more extensive written explanations. The writing that accompanies the images seems to be in the same hand as the rest of the text, albeit with slightly larger spacing between syllables. Read left to right, and top to bottom, the sequence of images broadly follows the sequence of the list of apparatuses given in the commentary. There are exceptions: For example, the *śilāyantra* is shown twice, once in profile at the beginning of the top row on folio 20v, then again, from above in the fourth image from the left.<sup>28</sup> The *nalikāyantra*, which should be the fifth image, is only featured after the *ḍamarukayantram* on folio 20r. The text beneath the third image from the left in the second row on folio 20v, which is identified as a *pātālayantra* above, reads *nalikāyantra* at the bottom, together with the number 13.<sup>29</sup> However, in the commentary’s list of devices, number 13 corresponds to the *tulāyantra*.<sup>30</sup>

- 27 The term *sāraṇa* is used for one of the alchemical procedures applied to mercury. In this step, mercury is empowered or potentiated further to enable it to transmute metals.
- 28 I would like to thank Dr. Borayin Larios, who pointed out the perspectives of the two images. This is somewhat clearer when comparing it with the image of the *śilāyantra* of Ahmedabad, which shows a larger stone at the bottom and a smaller one above in profile.
- 29 The appearance of alchemical apparatuses is not standardized across alchemical works. Different treatises can have quite different takes on what an apparatus should look like. See Hellwig 2009: 259–261 on the *nāḍikāyantra*, which I take to correspond to the *nalikāyantra* of the *Rasendramāṅgala*’s commentary. However, also see Hellwig 2009: 283–284 on the *Rasakāmadbenu*’s (1.1.37–42 and 64–65) description of two types of *pātālayantra*, which are similar to the image on folio 20v. The *Rasaratnākara*’s *Rasakhaṇḍa* (7.54–56) seems to describe the use of a tube (*nālikā*) in a *pātālayantra* (Hellwig 2009: 230). Notably, however, this device is used to extract the essence of chalcopyrites (*mākṣika*), whereas the image on folio 20v gives mercury (*rasarāja*) as the content of the vessel.
- 30 This identification is somewhat uncertain, as the text is barely legible at that spot.

## Bombay BBRAS S.C.19/2, folio 20v

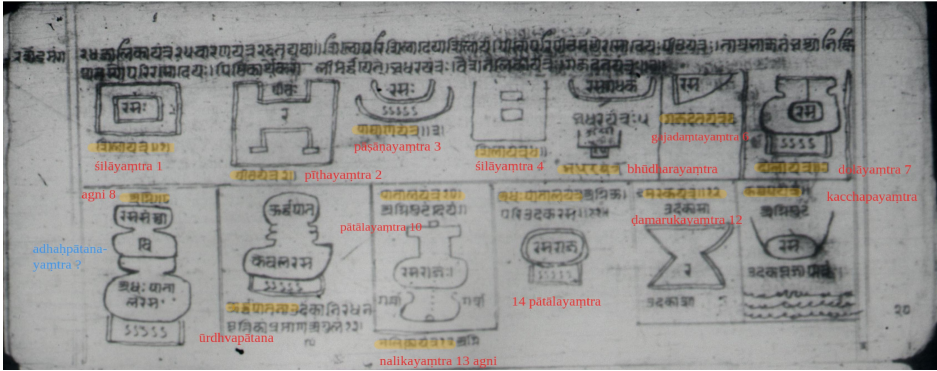


Figure 5.2: Folio 20v (Bombay BBRAS S.C.19/2)

The text at the top of folio 20v is part of the commentary. It begins with the end of the list of apparatuses and then gives some basic information on their use:

24 jālikāyantraṃ 25 vāraṇayantrādayaḥ 26 tadyathā | śilopari silādeyā śilāyantraṃ  
 pīṭhopari pāṭhaṃ madhye rasādaya pīṭhayantraṃ | tāmrabhājanam bhūmyāṃ  
 nikṣīpya tasyopari raso deyaḥ | piṣṭhikārthe karāṅguḥli marḍdayet |

The final three words of the line are not found in the commentary of the other manuscripts:

bbūḍharayantraḥ | vaṃśa<sup>31</sup> nalikāyantraḥ | gajadantayantraḥ || o<sup>32</sup>||

The top row on folio 20v shows the following from left to right: 1. *śilāyantra*, 2. *pīṭhayantra*, 3. *pāśāṇayantra*, 4. *śilāyantra* 5. *bbūḍharayantra*, 6. *gajadantayantra*, and 7. *dolāyantra*. The bottom row shows 8. [*adbhāṣṭātanayantra*]<sup>33</sup>, 9. [unnumbered and not clearly labelled] *ūr-dhvapātānanayantra*, 10. *pātālayantra* (underneath, a label additionally reads *nalikāyantra*, which may refer to the bottom vessel of the apparatus). The image to the right seems to feature another variant or way to use a *pātālayantra*. The list in the commentary would call for a *niyāmakayantra* as the eleventh apparatus here. This is followed by 12. *ḍamarūyantra* and 13. [albeit unnumbered] *kacchāyantra*.

31 I would like to thank Dr. Andrey Klebanov for suggesting this reading.

32 The text seems to give a number here, which, however, is illegible. I have marked illegible parts of the texts with the symbol “o”.

33 The number 8 is given, but it does not follow the label *adbhāṣṭātanayantra*. However, the bottom part of the depicted apparatus reads “*adbhāṣṭānārasa*”, so that the designation of *adbhāṣṭātanayantra* seems reasonable.



The rendering of what seems to be an *adbahpātayantra* is somewhat odd, in that it appears to be set on top of a fire at first glance (the graphic representation of this corresponds to that of the *dolāyantra*), but the text on top indicates that the fire was placed on top, making it more likely that the lines at the bottom indicate water to aid in the condensation of the mercury.

*Bombay BBRAS S.C.19/2, folio 20r*

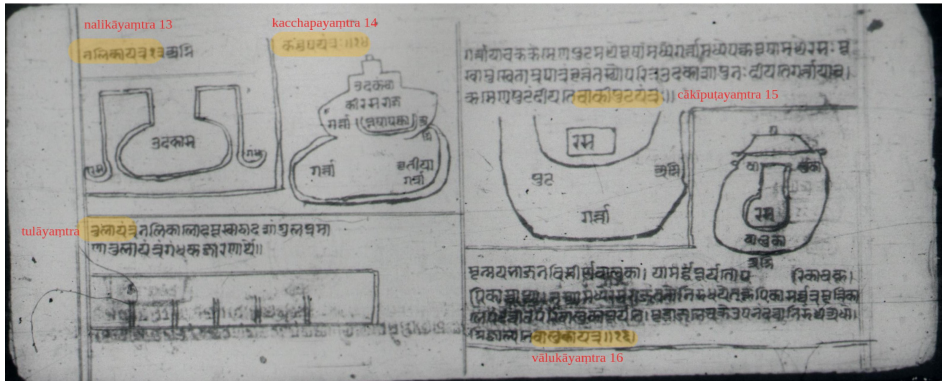


Figure 5.3: Folio 20r (Bombay BBRAS S.C.19/2)

Folio 20r presents five apparatuses. The folio is divided in half by a vertical line. The left half shows two apparatuses on top and one on the bottom; the right shows two further apparatuses, each with longer sections of added text. The apparatus on the top left is identified as a *nalikāyantra* and numbered 13. Apparatus 13 in the commentary's list of this manuscript is hard to decipher: I have surmised *tulāyantra*. The *nalikāyantra* is featured as the fifth apparatus in the commentary's list, so there is a discrepancy here in the sequence of the commentary's list and that of the images. However, it is notable that the image of the Ahmedabad manuscript that most closely resembles the *nalikāyantra* image here is labelled *tulāyantra*.<sup>34</sup>

The apparatus to its right is labeled *kacchapayantra* and numbered 14, conforming to the commentary's list. The apparatus below is not labelled. The text above it reads:

*tulāyaṃtraṃ nalikā lobamūkbā dvādaśāṅgulapramāṇā tulāyaṃtraṃ gaṃdha-kajāraṇārthe ||*

A balance device [consists of a] tube [and] an iron crucible measuring twelve fingerbreadths. The balance device is for digesting sulphur.

34 Ahmedabad manuscript, folio 24r, top row, second image from the right.

The image on the top right depicts a *cākīpuṭayantra*. Its numbering is only barely legible: it probably is a 15, which would conform with its numbering in the commentary list. The image on the bottom right is a *vālukāyantra* and numbered 16. Both devices have a longer textual description in lieu of a single label.

The text above the *cākīpuṭayantra* reads as follows:

*garttāyāṃ cakraṃ kraṃeṇa puṭamadhye mūṣā madhye garttā madhye pakvamūṣā  
madhye rasaḥ mūkbāmukhe tāmrapātraṃ vṛttaṃ tasyopari ca udakāsā punaḥ dīyate  
garttāyāṃ ca | kraṃeṇa puṭam dīyate cākīpuṭayaṃtraḥ ||*

Emendations: line 1: *garttāyāṃ*] *garttāyā* ms. *cakraṃ kraṃeṇa*] *cakra kraṃeṇa*  
ms. *mūṣā madhye*] *mūṣāṃ madhye* ms. line 2: *garttāyāṃ*] *garttāyā* ms.

Successively, a disc inside a hollow, a crucible inside a pit<sup>35</sup>, inside it a hollow, in that a fired crucible, inside that the mercury, a copper lid placed at the opening of the crucible. And on top of it, a space for water is further placed in the hollow. In this manner, an enclosed firing is applied; this is a disc-pit apparatus.

Notably, the illustration does not indicate the use of water, and there is also no symbol for a copper lid, though the mercury is shown within a box, which may signal a closed vessel.

The text below the *vālukāyantra* reads:

*mṛṇmayabbājanavistīrṇavālukāṃ | yāṃ arddhaṃ pūryetopari kācakūpikāṃ [o<sup>36</sup>]  
madhye rasarāja tato nirumdbayet kūpikā sarvatra mṛttikā lepadatvā upari vālukā  
pūryate mṛdbbājane cakre upane<sup>37</sup> datvā nirudhya adho gñijvālyate vālukayaṃtraḥ  
|| 16 ||*

Emendation: line 3: *vālukayaṃtraḥ*] *vālukayaṃtra* ms.

An earthen vessel strewn with sand, one should fill it by half, on top a glass bottle. [o] In that, [pour] mercury. Then, one should seal the bottle all over, having smeared it with clay. Pour sand on top of it. Place it into a disc in an earthen pot,<sup>38</sup> seal it and fire it from below; this is a sand device.

35 Or: “A crucible is enclosed.” A *puṭa* can be a firing pit; it may also designate the covering of a bowl with another bowl or lid, enveloping whatever is inside; and finally, *puṭa* may also refer to a roasting process in which the substance to be roasted is enclosed in a vessel (as opposed, for example, to being roasted in an open pan).

36 The illegible section comprises circa five syllables.

37 The text seems to read *upane* or *upanaṃ* here, but the meaning is not clear. Perhaps this is a misspelling for *upāne* “on a plinth”? However, no plinth is featured in the image.

38 This translation omits the word *upane*.

## Bombay BBRAS S.C.19/2, folio 21v

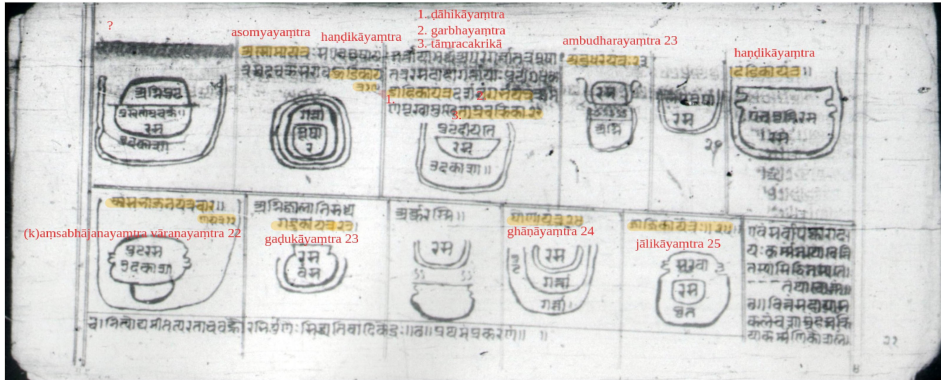


Figure 5.4: Folio 21v (Bombay BBRAS S.C.19/2)

Folio 21v returns to the two-row format of folio 20v, showing eleven devices. Here, however, the numbering and labelling of the devices no longer seems to follow the order of the commentary's list. The top row, from left to right depicts a device that is possibly a *vālukāyāntṛa* again, although the writing is too smudged to be certain. This identification relies on the similarity of this image with one from the Ahmedabad manuscript, which is clearly labelled *adbogñivālukāyāntṛa* 16.<sup>39</sup> This would mean that apparatus 17. *agnīṣomāyāntṛa* and apparatus 18. *gandhakakoyāntṛa* of the commentary's list were skipped. The next apparatus seems to be a *mūṣāyāntṛa* (19), which curiously is also is labeled *asomyāntṛa* (?) and *haṇḍikāyāntṛa*; or perhaps the image shows their combination in one device. The text above it reads:

*agnīṣomāyāntṛaḥ sa eva mūṣāyāntṛaṃ svedacakrasarāvahaṇḍikāyāntṛa* 19

Emendation: *agnīṣomāyāntṛaḥ] asomyāntṛaḥ* ms.

A fire and water device. This is in fact a crucible device, an earthen device for steaming [consisting of] a disc and a shallow plate. 19

To its right is a device that is numbered 21 (or 22?), which would make it a *kāmsabbhājanāyāntṛa*, or *haṇḍikāyāntṛa*, respectively, according to the commentary's list. However, in the explanatory text, neither a *kāmsabbhājanāyāntṛa* nor *haṇḍikāyāntṛa* are mentioned. The text above mentions a *ḍāhikāyāntṛa* and a *garbhāyāntṛa*, lidded with a copper disc:

*garttāyāṃ madhye aparagartā tatra mūṣā tatra rasadābhāgarttāyāḥ puṭiṃ eṣaka ḍāhikāyāntṛadarśanaṃ garbhāyāntṛaṃ krameṇa mūkhāmukhe tāmracakrikā* 21

39 Ahmedabad manuscript, folio 24r, bottom row, second image from the left.

Emendation: *garttāyām*] *garttāyā* ms.

In the hollow, another hollow, in that a crucible, in that the mercury-roasting space enveloped (covered). This shows the firing device, a womb device, successively, a copper disc [placed] at the opening of the crucible. 21

The next device is labeled *aṃbudharayantra* (“water holder device,” “cloud device”) – a name that is not featured in the commentary’s list of devices and that is also not found in the text of the *Rasendramāṅgala*. It is numbered 23, which corresponds to the *gaḍuścakrayantra* in the commentary’s list. Next to it is an unlabeled image with the number twenty-one, corresponding to the *kāṃsabhājanayantra* in the commentary’s list. The final image on the top row is labelled a *haṇḍikāyantra*.

In the bottom row, problems with identification continue. The first device is labelled *aṃsabhājanayantra* (for *kāṃsabhājanayantra*?), but also *vāraṇayantra*. The image to its right is labeled *gaḍukāyantra* 23. To its right is an unlabeled and unnumbered device, consisting of a bowl with mercury in it, labelled *lepamūṣā* (crucible with a coating). This is followed by a *ghāṇayantra*, numbered twenty-four, which in the commentary’s list is the *sāraṇayantra*. The commentary’s list gives the number 22 for the *ghāṇayantra*. The final image is labeled *jālikāyantra* and given the number 25, corresponding to the commentary’s list. The bottom right field is filled with text instead of an image. A further line of text is found underneath the two rows of images. Together, these read:

*evaṃ sarvopakārādayaḥ karmaṇaṃ na yo vetti tasyāṃ sidhi na syāt | ---<sup>40</sup> tathā  
coктаṃ || ॐ<sup>41</sup> || vittam sabāyab sakalaṃ ca śāstram bastakriyākarmaṇi kauśalaṃ  
| ca | nityodyamā tatparatā ca vabne ebbir guṇaiḥ sidhyati vārttikendraḥ ||<sup>42</sup> ॐ ||  
prathamam prakaraṇam ||*

Emendations: line 2 *sabāyab*] *sabāyā* ms. line 3 *ebbir guṇaiḥ*] *abbirguṇaḥ* ms.  
*vārttikendraḥ*] *vādikeṃdraḥ* ms.

Thus, all the instruments, etc. The one who does not know the work will not succeed. [gap indicated in the ms.] And so it is said. Wealth, assistance, the entire discipline, skilfulness in the execution of alchemical operations, as well as continuous effort and devotion to fire: with these qualities the alchemist succeeds. The first chapter.

40 The manuscript gives three horizontal lines here, indicating that the section was illegible to the scribe. See Einicke 2009: 115–116.

41 This symbol is a section marker. See Einicke 2009: 106.

42 A parallel passage is found in the *Yogarātnākara*, in the section on mercury. See Shetty, Suresh Babu 2011: 187, verse 3 and Kumari & Tewari 2010: 169, verse 1335; in the Digital Corpus of Sanskrit, it is given under YRĀ, Dh. verse 224. Unfortunately, Hellwig does not give the edition of the *Yogarātnākara* he used for his transcription.

Ahmedabad LDI 9442

This manuscript is held in the Lalbhai Dalpatbhai Institute of Indology, Ahmedabad and has been described by Puṅyavijayajī and Shah (1963–1938: v. 4, serial no. 1285, accession no. 9442) and by Dominik Wujastyk (2022). It is one of two manuscripts of our four exemplars that is dated: Folio 95v. notes that the manuscript was copied by the scribe Ratnavimāla, pupil of Varddhamāna Vimalagaṇi, in Ahmedabad, at Kālapura, on Saturday 6 śuklapakṣa of Māgha, samvat 1737, i.e., 1681 CE.<sup>43</sup>

Ahmedabad LDI 9442, folio 2r

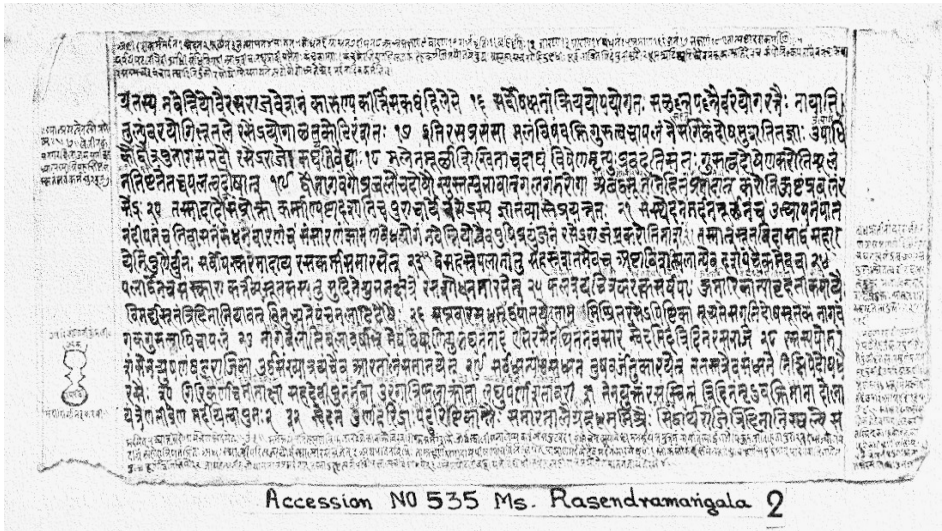


Figure 5.5: Folio 2r (Ahmedabad LDI 9442)

The illustrations are found on folios 2r (a single image on the left margin of the folio), and 24v–25v, positioned at the very end of the manuscript. The commentary seems to end on folios 23v–24r (*iti rasendramangale ṭṭipāṇakam samāptam*). A further section follows, dedicated to an iron tonic ascribed to Nāgārjuna (*vakṣye nāgārjunaproktaṃ lobasyaiva rasāyanam*).<sup>44</sup> The commentary’s list of apparatuses is significantly shorter than the list in the Bombay

43 See Dominik Wujastyk 2022: 5 for a transliteration and translation of the relevant passage on folio 24v (consulted on March 10, 2023).

44 Several medical works refer to an iron tonic recipe by Nāgārjuna. See *Cakradatta* 69,34; *Vaṅgasenasambhitā* Rasāyanādhikāra 474. There are some similarities between the *Rasendramangala*’s formula and those of the *Cakradatta* and *Vaṅgasenasambhitā*, but no intertextual overlap.

manuscript: it features only eighteen devices, omitting the *piṭhā-*, *pāṣāṇa-*, *bhūdhara-*, *pātāla-*, *gandbaka-*, *mūṣā-*, *haṇḍikā-* and *sāraṇayantras*, and adding a *pāṇayantra*.<sup>45</sup> Nevertheless, the images in this manuscript seem to follow the list of apparatuses given in the Bombay manuscript (or a list similar to it), rather than present a unique list of its own.

The image on folio 2r is part of a marginal note. It shows a distillation device with a mild fire below and a water container above. This corresponds to the text to its right on the folio (verse 26<sup>46</sup>), which mentions *ūrddhvaṇāṇam*, upward distillation. The style of drawing seems different from the one employed for the set of images of apparatuses on folios 24r–25v. And unlike the images at the end of the manuscript, this image is directly relevant to the content of the main text of the *Rasendramaṅgala*.

Ahmedabad LDI 9442, folio 24v

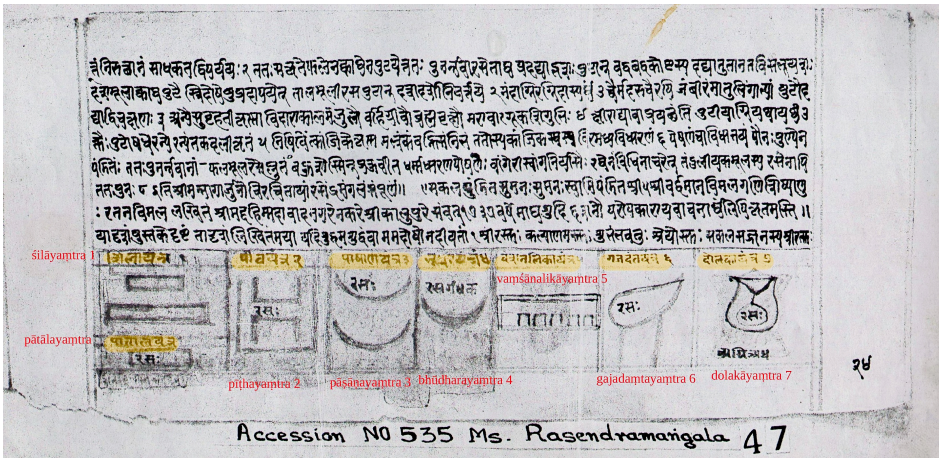


Figure 5.6: Folio 24v (Ahmedabad LDI 9442)

Folio 24v contains the final lines of the section dedicated to the above-mentioned iron tonic, starting with *t taṃ nirutbhānam sādḥaka tad viparyayaḥ* 2 and ending with *iti śrīrāmāgārjunō viracitāyāṃ rasendramamgalaṃ saṃpūrṇam*: The added section seems to count as part of the main text of the *Rasendramaṅgala*, though it is not clear which chapter it belongs to. The Bombay manuscript has a parallel reading, but the Jaipur manuscript does not and ends with the commentary, as does the Bikaner manuscript. The final lines on folio 24v contain the colophon and end with *śrīr astuḥ kalyāṇam astuḥ śubham bhavatuḥ śreyo stuḥ sakalajanasya śrīr*

45 This manuscript also has some variant spellings for some of the shared apparatuses, such as *jālikāyantra* for *jālikāyantra*, or *gaḍakayantra*, instead of *gaḍuścakrayantra*.

46 Verse 26 on this manuscript corresponds to verse 28 of chapter one in Wujastyk’s provisional edition.



*astuḥ*. A row of images of seven numbered apparatuses and one unnumbered one (*śilāyantra* 1, *piṭḥayantra* 2, *pāṣāṇayantra* 3, *bhūdarayantra* 4, *vaṃśanalikāyantra* 5, *gajadantayantra* 6, *dolakāyantra* 7 and *pātālayantra*) is positioned underneath. Devices 1 to 7 follow the list of apparatuses given in the Bombay manuscript. The inclusion of the *pātālayantra* is surprising here, since it is featured in its proper place as the tenth apparatus on the next folio. Perhaps the idea is that the *śilāyantra* is placed inside the *pātālayantra*.

Ahmedabad LDI 9442, folio 24r

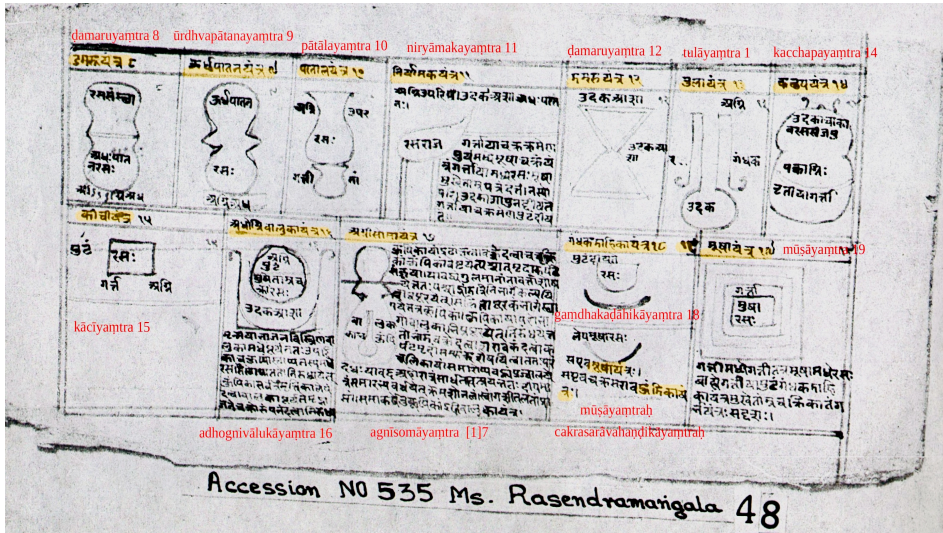


Figure 5.7: Folio 24r (Ahmedabad LDI 9442)

Folio 24r features two rows of images, with seven apparatuses in the top row, and six images in the bottom row. Reading them left to right, the top row’s devices are labeled and numbered as *damarūyantra* 8, *ūrdhvapātānanayantra* 9, *pātālayantra* 10, *niryāmakāyantra* 11, *damarūyantra* 12, *tulāyantra* 13, and *kacchāpāyantra* 14.

The labels on the second row give *kācīyantra* 15, *adhognivālukāyantra* 16, *agnisomāyantra* 17, *gandhakaḍāhikāyantra* 18, with an image of a *mūṣāyantra* (also identified as a *cakrasarāva-ḥaṇḍīkāyantra*) underneath, and *mūṣāyantra* 19 as the final image. There is quite a bit of text added to the images of the *niryāmakāyantra*, the *adhognivālukāyantra*, the *agnisomāyantra*, and the *mūṣāyantra*. The text underneath the *adhognivālukāyantra* seems to broadly correspond to the text accompanying the *vālukāyantra* found on folio 20r of the Bikaner manuscript. The text to the right of the *niryāmakāyantra* in turn corresponds to the text accompanying the *cākipuṭāyantra* on the Bikaner manuscript’s folio 20r, though it is not a complete match. Similarly, the text below the Ahmedabad manuscripts’s *mūṣāyantra* corresponds to folio 21v of the

Bikaner manuscript, middle of the top row, with some variation. The text for the Ahmedabad manuscript's *agnisomayantra*, however, has no parallel in the Bikaner or other manuscripts.

The *kācīyantra* is not featured in the Ahmedabad manuscript's list of apparatuses, nor indeed in any of the lists. However, a *cācīyantra* is found in the Bombay manuscript's list as the fifteenth apparatus, and the image of this apparatus on the Bombay manuscript (folio 20r, second image from the right) corresponds somewhat to that of the Ahmedabad manuscript's *kācīyantra*, albeit more in conceptual than graphic terms.

The numbering of the illustrations in the Ahmedabad manuscript corresponds to the numbering of apparatuses in the list of devices of the Bombay manuscript's commentary.

*Ahmedabad LDI 9442, folio 25v*

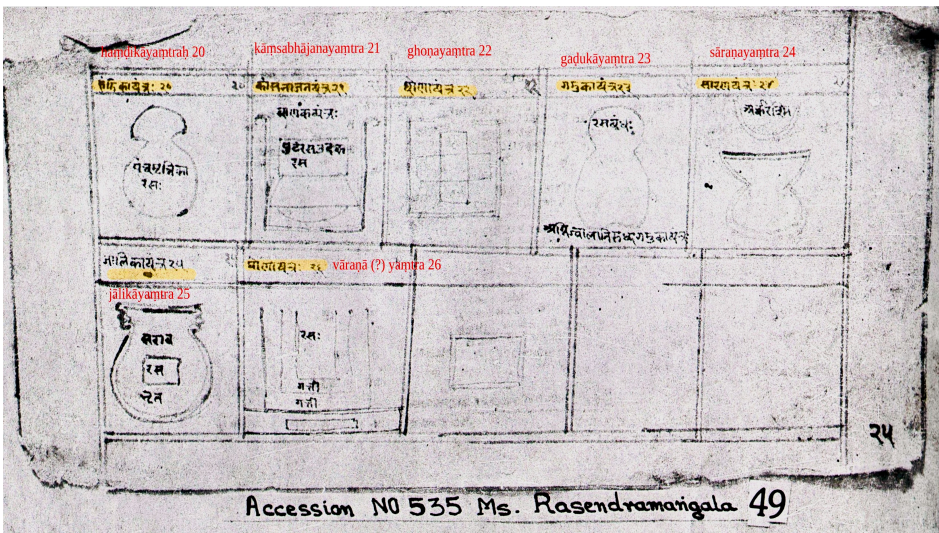


Figure 5.8: Folio 25v (Ahmedabad LDI 9442)

On folio 25v, a further seven apparatuses are shown in two rows. One image, which merely shows a rectangle, but gives no name, seems unfinished. And two spaces in the bottom row of the grid are left empty.

The top row (read left to right) gives the following labels and numbering: *haṇḍīkāyantra* 20, *kāmsabhājanayantra* 21, *ghoṇāyantra* 22, *gaḍukāyantra* 23, *sāraṇayantra* 24. The row below shows a *jālikāyantra* 25, and a *vāraṇāyantra* (or *ghoṇāyantra*?) 26. This is followed by an unlabeled image of a rectangle, and two more fields without images.

Notably, the images on the Ahmedabad manuscript follow the list given in the Bombay manuscript more closely than the images of the Bombay manuscript itself. There is one exception: on folio 24r, in the top row of images, apparatus 8 is designated *damarūyantra*, rather than *adbahpātānayantra*, as in Bombay's list. Here, the Ahmedabad manuscript follows its



own list of apparatuses, as the *ḍamaruyantra* is found in the eighth place in its list. However, the diagram actually is very similar to the Bombay manuscript's image of the *adhahṣpā-tanayantra* on folio 20v, bottom left. And the Ahmedabad manuscript shows a *ḍamaruyantra* that is properly numbered as the twelfth apparatus and placed accordingly in the top row on folio 24r.

### Bikaner BORI 4099

This manuscript is held at the Motichand Khajanchi Collection of the Rajasthan Oriental Research Institute, at Bikaner. It has been described by Yati and Bishnoi (1990: 166, #1455/4099) and Dominik Wujastyk (2022). The manuscript is dated to 1777 CE and is thus about a century younger than the Ahmedabad manuscript.

The list of apparatuses given in its commentary section is the longest of all the manuscripts with thirty devices. However, the *pāṣāṇayantra* and *tulāyantra* are both featured twice. If we remove the second *pāṣāṇayantra* and the first *tulāyantra* from its list, the sequence of the Bikaner manuscript follows that of the Bombay manuscript quite closely with some spelling variants. It adds a *pabakayantra* (meaning uncertain, perhaps the correlate to the *pānayantra* of Ahmedabad and Jaipur?), and omits the *ghāṇayantra*, while the Bombay manuscript's *vāraṇayantra* becomes a *cāraṇayantra*. The sequence of its illustrations is not entirely consistent with the sequence of apparatuses given in the list, but features almost all the named apparatuses, with the exception of the *pabakayantra*. It also adds another apparatus: the *iṣṭikāyantra* (brick device), which is not found on any of the apparatus lists. The Jaipur manuscript features a diagram of an *iṣṭikāyantra* as well, though its rendering of the apparatus differs from the Bikaner manuscript.

### Bikaner BORI 4099, folio 44v

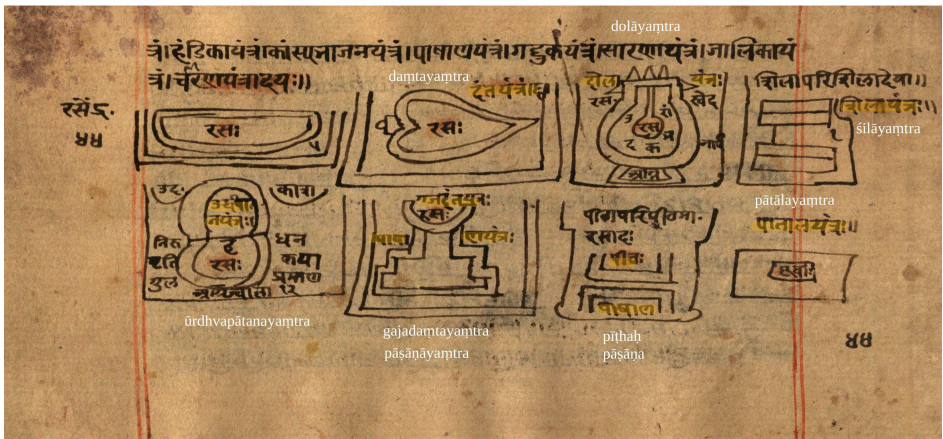


Figure 5.9: Folio 44v (Bikaner BORI 4099)

Folio 44v contains the final part of the commentary’s list of apparatuses at the top, from *baṇḍikā-* to *cāraṇayantra*. Below, illustrations of apparatuses are presented in two rows. The top left image is the only illustration not to receive a caption. It somewhat resembles Ahmedabad’s *pāṣāṇayantra* (folio 24v). On its right is a depiction of a *dantayantra*, presumably the *gajadantayantra*. Directly below it, an illustration of a *gajadantayantra* in combination with a *pāṣāṇayantra* is shown. Back in the top row, to the right of the *dantayantra*, there is an illustration of a *dolāyantra*. The final image on the right is a *śilāyantra*, similar in execution to Bombay’s second *śilāyantra* image, and most similar to the illustration of the *śilāyantra* in the Jaipur manuscript.

The bottom row shows an *ūrdhvaṣṭāyantra* on the left, with text that notes the device should be sealed with clay measuring a fingerbreadth (*aṅgulapramāṇa*), that there should be water above, and fire below. This image is followed by the above-mentioned combined *gajadanta-* and *pāṣāṇayantra*. The illustration to its right is not given a name, but is labelled with *pīṭha* and *pāṣāṇa*, while the text above instructs that a plinth is above a plinth, and that mercury is placed on this. The image resembles the illustrations of the *pīṭhāyantra* in the Bombay, Ahmedabad, and Jaipur manuscripts. The final image is a *pātālayantra*, which does not resemble that of the Bombay manuscript on folio 20v, or that of the Ahmedabad manuscript on folio 24r. If anything, it looks like the illustration of the *śilāyantra* on the Bombay manuscript, folio 20v.

*Bikaner BORI 4099, folio 45r*

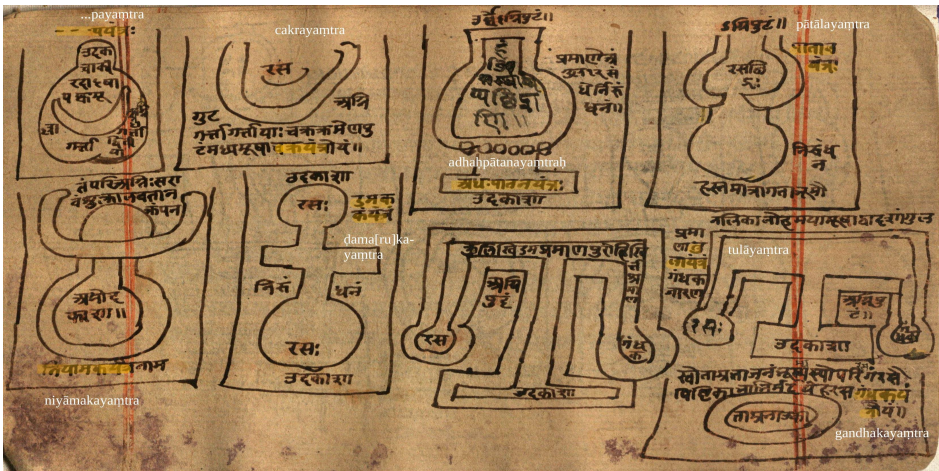


Figure 5.10: Folio 45r (Bikaner BORI 4099)

The illustrations on folio 45r are again presented in two rows. The image on the top left is incompletely labeled. If we follow the sequence of the list of apparatuses, this should be a *kaccchayantra* (spelled *kascapayamtra* in this manuscript), as the next image shows a *cakrayantra*.

The illustration somewhat resembles the *kacchapantra* of the Ahmedabad manuscript (folio 24r, top right).

The illustration of the *cakrayantra* is similar to the *cākipuṭayantra* of the Bombay manuscript, with an abbreviated version of its accompanying text. Next to it, a *ḍamarukayantra*<sup>47</sup> is featured. This is a fairly abstract rendering: the rims of the two vessels meeting in the middle are exaggerated. The illustration of the *ḍamaruyantra* in the Jaipur manuscript (folio 42v, top left) is similar in that respect.

To its right are two very similar illustrations. Only the one on the right is labelled as a *tulāyantra*. The accompanying text is the same as the text for the *tulāyantra* in the Bombay manuscript (folio 20r, bottom left), which is also found on Jaipur (folio 41v, top row middle). The Bikaner manuscript's image is very similar to the image labelled *nalikāyantra* in the Jaipur manuscript, folio 41r. The Ahmedabad manuscript presents a much less abstract form, though one can see how the illustrations on the Bikaner and Jaipur manuscripts relate to it. The image on the Bombay manuscript is the outlier here: its image seems to show something completely different.

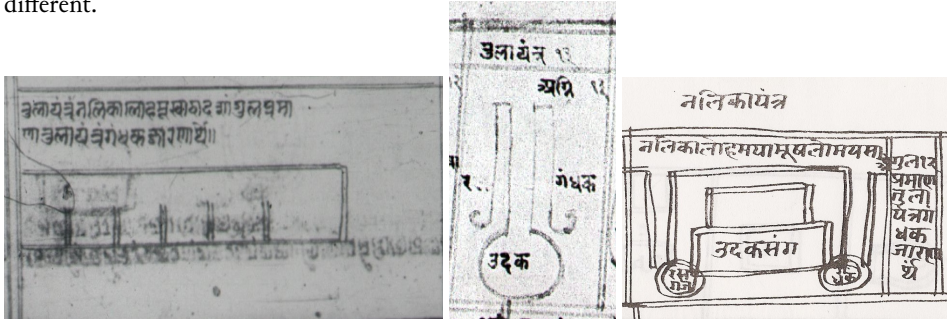


Figure 5.11: Images of a *tulā*- (or *nalikā*-)yantra on the Bombay, Ahmedabad, and Jaipur manuscripts

The bottom right shows a simple image of a *gandhakayantra*, accompanied by some explanatory text. The image corresponds to an image on the Bombay manuscript (folio 41v, second from the left, bottom row), which does not identify the device, but provides the caption “mercury and sulphur” (*rasagandhaka*) and labels the vessel as a copper pot (*tāmrabhājana*).

### *Bikaner BORI 4099, folio 45v*

Folio 45v gives two rows of images, with an additional image on the bottom left. The text at the bottom of the folio is a variation of the text found on the final folio of images on the Bombay manuscript.<sup>48</sup>

47 I assume that the label *ḍamakakayantra* is a misspelling for *ḍamarukayantra*.

48 *evaṃ sarvopaskārādayaḥ | karma ca yo na vetti tasya siddhir na syāt tathā - - vittam sabāyā nikhilam ca śāstram hastakriyākarmaṇi kauśalatvaṃ nityodyamas tanāratā [for tatparatā?] ca vabner ebhir guṇaiḥ sidhlyati sūtakemdraḥ || iti prathamam ---*



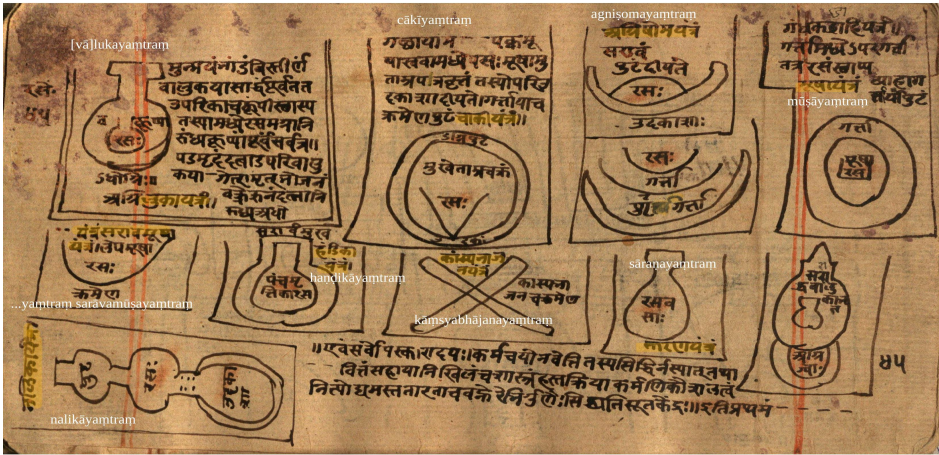


Figure 5.12: Folio 45v (Bikaner BORI 4099)

The illustration on the top left shows a *vālūkāyantra* (misspelled as *lūkāyantra*). The text next to it is a variation of the text found accompanying the image of the *vālūkāyantra* on Bombay, folio 201, and the *adhogñivālūkāyantra* on Ahmedabad, folio 24r. To its right is an illustration of a *cākīyantra*. This inverts the sequence of apparatuses in the commentary’s list, which gives the *cākīyantra* first, and then the *vālūkāyantra*. The rendering of the image of the *cākīyantra* is a little different from that of the Bombay manuscript’s *cākīputāyantra* (folio 24r), but the accompanying description is similar.

There are two images to the right, which are stacked above each other. The top one is labelled *agniṣomāyantra*. No image in Bombay manuscript (which does not label any apparatus an *agniṣomāyantra*) corresponds to it, and the image of the *agniṣomāyantra* in the Ahmedabad manuscript, folio 24r looks rather different. The image below, though unlabelled, corresponds to the Bombay manuscript’s *ghāṇāyantra* on folio 21v. The illustration on the far right seems to represent a *mūṣāyantra*.

The second row (from the left) features an apparatus that has a partial label (only *yantra* seems to have been legible to the copyist), followed by a label that reads *sarāvamūṣāyantraṁ* and *lepamūṣā*. To its right, a device that looks like a coated bottle in a pit is labeled *haṇḍīkāyantra*. The image differs from the devices labeled *haṇḍīkāyantra* on the Bombay and Ahmedabad manuscripts, but is similar to the one in the Jaipur manuscript (folio 42v, middle of bottom row). To the right of the Bikaner manuscript’s *haṇḍīkāyantra* is a *kāṁśyabhājanāyantra*. Here again, the image most resembles that of the Bombay manuscript’s *kāṁśyabhājanāyantra* on folio 42v, bottom left. The image to its right shows a *sāraṇāyantra*, which essentially seems to be a bottle containing mercury in a pit. This is akin to the Bombay manuscript’s *sāraṇāyantra*, though the latter specifies that the bottle should be made of glass, which is not mentioned in the Bikaner manuscript’s image. The final image on the bottom right shows a *nalikāyantra*. The image is somewhat similar to the device

in the Bombay manuscript, folio 20v labelled both a *pāṭalayantra* and a *nalikāyantra*. No tubes are shown on this image, but perhaps the dots between the lower and middle vessel signal that these are connected by a thick, perforated tube through which substances can pass.

*Bikaner BORI 4099, folio 46r*

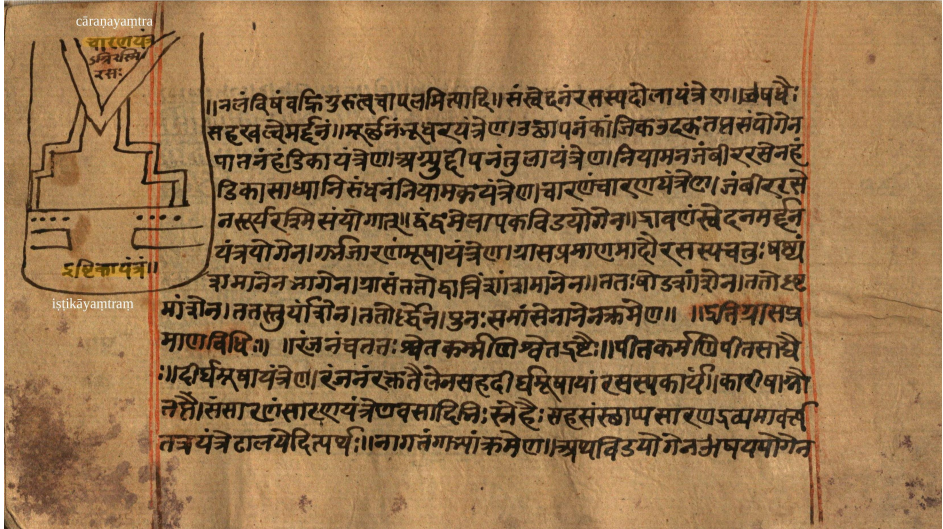


Figure 5.13: Folio 46r (Bikaner BORI 4099)

Folio 46r features one last illustration: a *cāraṇayantra*, combined with an *iṣṭikāyantra*. It is hard to tell from the image alone, but it seems that there are two bricks at the bottom, with something indicated by a row of dots above, and then a stepped plinth, which looks like the *pāṣāṇayantra* part of the combined *gajadanta*- and *pāṣāṇayantra* on folio 44v. The triangle on top holds the mercury and fire. The rest of the folio contains text, starting with a reference to the flaws of mercury listed in verse 18 of chapter 1 of the *Rasendramaṅgala*.<sup>49</sup> What follows is a part of the commentary that seems to be unique to this manuscript. It is a particularly interesting addition to the text, because it gives a concise delineation of what the various apparatuses are used for within the program of alchemical operations (*saṃskāra/rasakarman*)<sup>50</sup> – an explanation that is sorely missing in the other variants of the commentary: The steam-

49 This verse count refers to the provisional edition of Dominik Wujastyk (2022), which at this point (November 2022), does not take the text of the Bikaner manuscript into account.

50 On the program of alchemical operations, called *saṃskāra*, or *rasakarman* in the alchemical texts, see White 1996: 266–268 and Dagmar Wujastyk (forthcoming c). Some of these are listed in *Rasendramaṅgala* 1.22–23. The different readings in the manuscripts name between fourteen and eighteen of these procedures.

ing (*samsvedana*) of mercury happens in a *dolāyantra*; the rubbing (*mardana*) with herbs in a mortar (*kbalva*); thickening (*mūrchana*) in a *bbūdharayantra*; raising/evaporation (*utthāpana*) and condensation (*pātana*) in a *baṇḍikayantra*; kindling (*dīpana*) in a *tulāyantra*; *niyāmāna* (restraint) and *nirundhana* (countering)<sup>51</sup> in a *niyāmakayantra*; *cāraṇa* (feeding, i.e., adding materials) in a *cāraṇayantra*; *garbhajārana* (enclosed digestion/amalgamation) in a *mūṣāyantra* (crucible). The text then explains the procedure of *grāsapramāṇa* (measuring the morsel), another of the steps in the alchemical program. This concludes the systematic correlation of apparatuses with the *samskāras*. None of this is found in any of the other manuscripts.

**Jaipur UIOMI 184: I.14.ii.2**

This manuscript is held at the Universal Institute of Orientology and Museum of Indology, Prachya-Vidya-Path, 24 Gangwal Park, Jaipur, Rajasthan. It has been described by SRCPVPS Trust (Śarmā 1986: 63) and by Dominik Wujastyk (2022). The manuscript contains parts of the text of the *Rasendramāṅgala*, starting from chapter three, and the commentary. Folios 1–8 of this manuscript are from another work, but copied in the same hand as the whole manuscript. Illustrations of alchemical apparatuses are found on folios 41r–42v. These illustrations are rendered in abstract form: One cannot make out the actual shape of vessels in most cases, only their relations to each other. The style in drawing is most similar to the Bikaner manuscript, though the actual images diverge from each other.

*Jaipur UIOMI 184: I.14.ii.2, folio 41r*

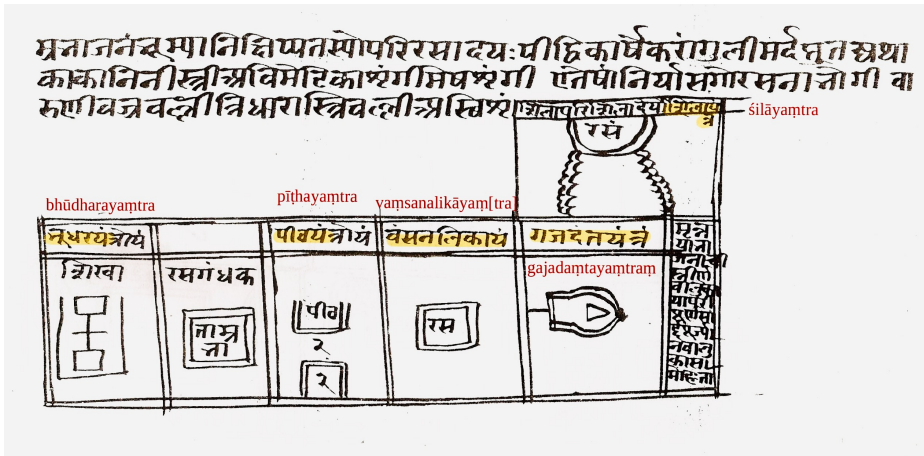


Figure 5.14: Folio 41r (Jaipur UIOMI 184: I.14.ii.2)

51 In other alchemical texts, this step in the alchemical procedures is called *rodhana* (countering) or *bodhana* (awakening). See White 1996: 267.

Folio 41r has three lines of text at the top, which are part of the commentary and refer to *Rasendramāṅgala* 2.11.<sup>52</sup>

The illustrations are presented in two rows: one image at the top on the right, five in the row below, and one section filled with text on the bottom right. The image on the top right of a *śilāyantra* may have been added as an afterthought – it appears somewhat inconveniently placed, as it interrupts the sentence of the commentary to its left. The image also does not follow the example of the other manuscripts’ depiction of the *śilāyantra*. It does not merely give *śilāyantra* as a heading, but rather “*śilopari silādeyā śilāyantram.*” This is the beginning of the next paragraph of the commentary following on from the list of apparatuses. The illustration also departs visually from the images of the other manuscripts, showing a bowl with the word *rasa* (mercury) inside on top of an unidentified structure.

The bottom row (from left to right) shows a *bhūdbharayantra*; an unnamed device involving a copper vessel, mercury, and sulphur; a *piṭhayantra*; a *vamṣanalikāyan[tra]*; and a *gajadantayantra*. The *piṭhayantra* is not featured in this manuscript’s list of apparatuses. If we follow the Bombay manuscript’s sequence of devices, it should appear before the *bhūdbharayantra*. The *vamṣanalika-* and *gajadantayantras* are, however, in their expected places.

*Jaipur UIOMI 184: I.14.ii.2, folio 41v*

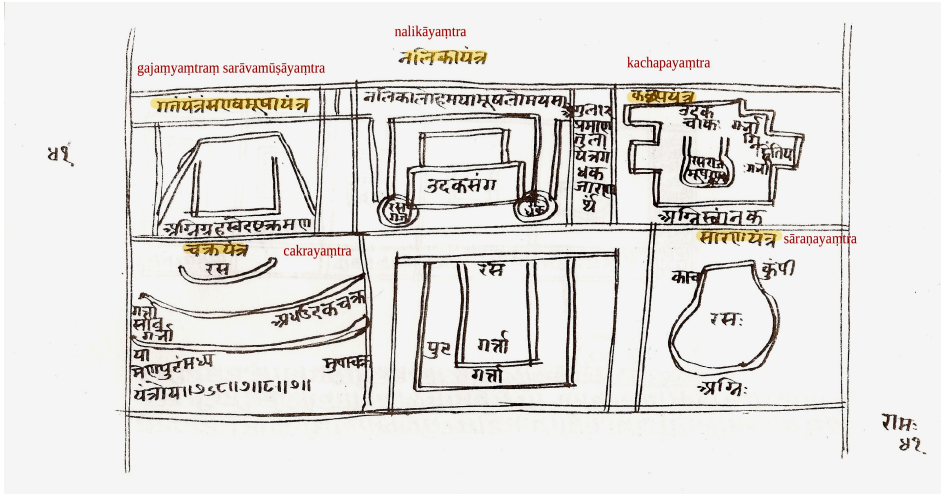


Figure 5.15: Folio 41v (Jaipur UIOMI 184: I.14.ii.2)

52 The final part of the sentence (*m̐khalā ity arthaḥ*) is missing. See the provisional edition by Dominik Wujastyk 2022. The text of the commentary picks up again on the folio after the images, but starts a line back with *-yasanā bboḡi vāruṇi vajravallī tridhārāstrivallī asthīr̥m̐khalā ity arthaḥ mabodadhi agastīḥ*.



The illustrations on this folio are presented in two rows, showing three apparatuses on top and three on the bottom. The top left image is labelled *gajayaṃtram sarāvamūṣāyaṃtra*. This illustration has no parallel on any of the other manuscripts as far as I can tell, even allowing for this manuscript's propensity for extreme abstraction. The text below (*agnigrahasvedaṣṭakramaṇa*) indicates that it has something to do with containing fire for a steaming (*sveda*) process, but it is impossible to tell from the image itself. The image to its right is labelled *nalikāyaṃtra*. It corresponds to the illustration of a *nalikāyantra* in the Bombay manuscript, top left on folio 20r. The text below the label reads *nalikālobamayā mūṣalomayasā* (*sic*. This should perhaps be read *mūṣalobamayā sā*). It is continued on its right with *aṃgulir pramāṇa tulāyaṃtra gaṃdhakajāraṇārtham*. This corresponds (more or less) to the text found below the *nalikāyantra* in the Bombay manuscript, folio 20r.

The final image on the top is labeled *kacchapaṃtra*, which again corresponds to the sequence of images in the Bombay manuscript. In terms of graphic representation, however, it is a challenge to derive the illustration on the Jaipur manuscript from the Bombay manuscript. The labeling inside the apparatus, indicating water (*udaka*) at the top, empty spaces (*gartā*, *dvitiya gartā*) below, and a vessel (*mūṣā*) filled with mercury (*rasarāja*) allows for the idea that the illustration in the Jaipur manuscript is based on the Bombay manuscript.

In the bottom row on the left, the illustration is labeled *cakrayaṃtra*. This corresponds to the image on the right of the Bombay manuscript, folio 20r, labeled *cākīpuṭayaṃtra* 15, giving an abbreviated version of the text found in the Bombay manuscript. The corresponding image in the Ahmedabad manuscript (folio 24r, bottom row on the left) is labeled *kācīyaṃtra* 15.

The illustration in the middle of the bottom is not labeled. It may show the same apparatus from another angle, or in a different way. The labeling does not seem quite right: the images in the Bombay and Ahmedabad manuscripts do not indicate a space (*gartā*) below the mercury (*rasa*), and also indicate fire (*agni*) to the right.

Finally, on the bottom right, the label on top states *sāraṇayaṃtra*, while the vessel depicted below is identified as a glass bottle (*kācakūpi*) with mercury (*rasa*) inside, and fire (*agni*) below. The corresponding image in the Bombay manuscript (folio 20r, bottom right) identifies the apparatus as a *vālukāyantra*, and provides a descriptive text. In the Ahmedabad manuscript, there is an *adbhognivālukāyantra*, but the image that corresponds most closely to the Bombay manuscript's *vālukāyantra* and therefore to the Jaipur manuscript's *sāraṇayaṃtra*, is the image of *agnisomayaṃtra* 17 (Ahmedabad manuscript, folio 24r, bottom row, third image from the left).

As we have seen, there is a certain correspondence between the sequences of images of the Bombay manuscript and the Jaipur manuscript. However, the Bombay manuscript's image sequence was disrupted by the Jaipur manuscript's folio 41r in that the latter skipped a number of apparatuses from Bombay's list: the *dolā-*, *ūrddhvaṣṭāna-*, *adbhṣṭāna-*, *ṣṭāla-*, and *niyāmakayaṃtra*. These are now found in the Jaipur manuscript's folio 42r, albeit with an added *cokīyaṃtra*. The difference in sequence would be resolved if folios 41v and 42r were



swapped. However, the numbering of the folios seems to be in the same hand as the text on these folios, so that a swap would have had to happen before the scribe numbered the folios.

Jaipur UIOMI 184: I.14.ii.2, folio 42r

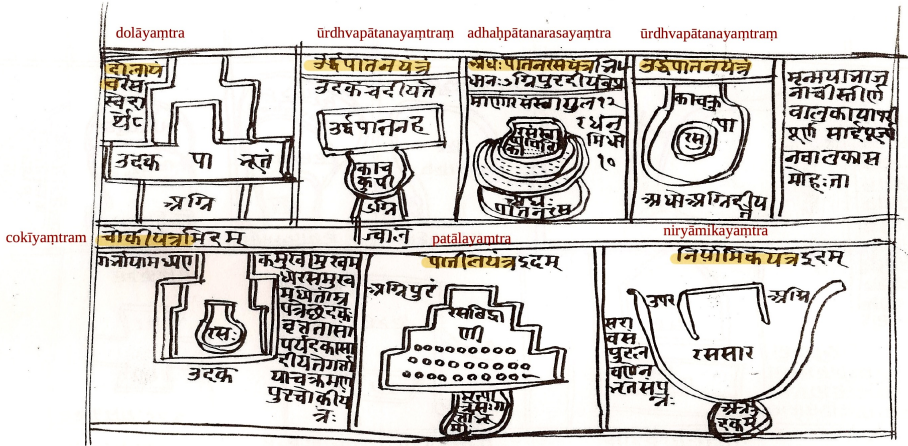


Figure 5.16: Folio 42r (Jaipur UIOMI 184: I.14.ii.2)

Here again, the execution of the illustrations is so abstract that the physical form of the depicted vessels cannot be discerned. The apparatuses can be identified through their labels, and their components are similarly communicated.

The top row (from left to right) shows an abstracted *dolāyantra*. The text to the left informs us that this is used to steam the mercury (*rasasvedārtha*), though the location of the mercury (normally in a pouch hanging from the rim of the vessel into the liquid) is not indicated. The abbreviation *pā* in the middle of the apparatus may be short for *pātra* (receptacle). This abbreviation is not used elsewhere in the images, however. Together with the *bbūtaṃ* next to it, it may mean “become a recipient,” perhaps in the sense that the mercury may drip into the vessel.

The next image is labeled an *ūrdhvaṣātanāyantra*. This deviates somewhat from the *ūrdhvaṣātanāyantra* of the Bombay manuscript, which shows two rimmed pots placed rim to rim, and set on top of a fire. The image on folio 42r of the Jaipur manuscript specifies that the lower vessel should be a glass container (*kācakūpi*) and notes that water should be placed on top. This is not shown in the Bombay manuscript’s illustration, but is mentioned in the text below.

To the right of this is a complicated illustration labeled *adhahṣātanārasāyantra*, which, according to the accompanying text, should be placed in a firepit (*agnipita*). At a stretch, one can concede some correspondence between this apparatus and the *adhahṣātanāyantra* of the Bombay manuscript, though the latter does not seem to be set in a firepit.

The next image seems to show another version of the *ūrdhvaṣṭāyantra*, though it corresponds most closely to the *vālukāyantra* on folio 20r of the Bombay manuscript. Additionally, the text next to it starts off the same as the text underneath the Bombay manuscript's depiction of the *vālukāyantra*. However, the text soon deviates from it.

The bottom row features a *cokīyantra* on the left. This seems to bear no relationship to the Bombay manuscript's *cākīyantra*, or the Ahmedabad manuscript's *kācīyantra*. The illustration in the field next to it is labeled *pātālayantra*. With this, the order of apparatuses as found in the list of devices in the Bombay manuscript is restored. However, the image does not seem to correspond to the image of the *pātālayantra* of the Bombay manuscript. There is some overlap in the labeling with the image of the *pātālayantra* in the Ahmedabad manuscript. The final image is labeled a *niryāmikāyantra*. The Bombay manuscript does not feature one, and the relevant image in the Ahmedabad manuscript does not resemble the Jaipur manuscript in the slightest. The *niyāmakāyantra* of the Bikaner manuscript (bottom left of folio 45r) is probably the closest match, but still not very similar.

Jaipur UIOMI 184: I.14.ii.2, folio 42v

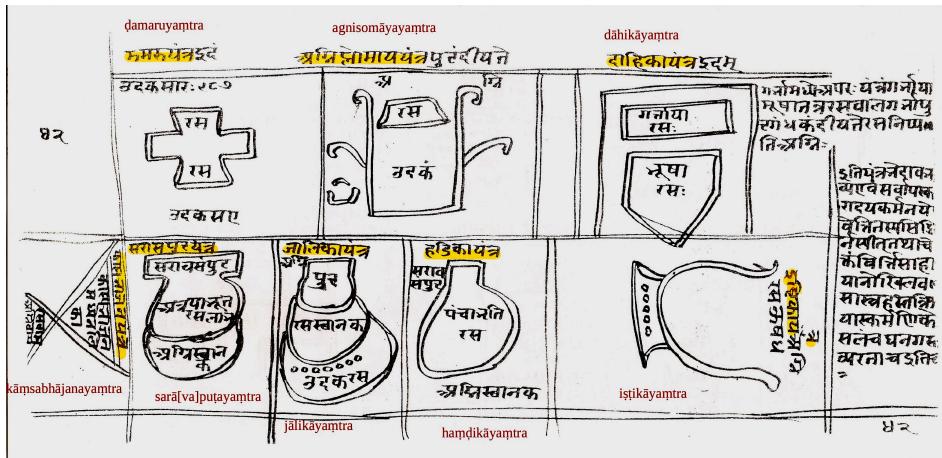


Figure 5.17: Folio 42v (Jaipur UIOMI 184: I.14.ii.2)

The final folio with illustrations continues the format of two rows of images, depicting eight different apparatuses. The top row begins with a *damaruyantra* on the left and an *agnisomāyantra*<sup>53</sup> in the middle. Since the final image on the folio before was labeled a *niryāmikāyantra*, this would seem to suggest the Bombay sequence of apparatuses is followed. After the *agnisoma* device, we would then expect a *gandhakāyantra*, a device for sulphur. Instead, we find a

53 The label reads *agnisomāyantra*, which I assume is just a misspelling.

*dābikāyantra*, which may be a different name for the *gandbakāyantra*. While the image for the *dābikāyantra* and its labels do not indicate the presence of sulphur, the text next to it does. Also, the other manuscript to refer to a *gandbakāyantra*, i.e., the Ahmedabad manuscript, calls it a *gandbakaḍābhikāyantra*. Its illustration is, however, very different from the one here.

The bottom row (from left to right) features a *kāṃsabhājanāyantra*, a *sarāvapuṭāyantra*<sup>54</sup>, a *jālikāyantra*, and an *iṣṭikāyantra*. This sequence skips the *mūṣāyantra* and *haṇḍikāyantra* listed in the Bombay manuscript's apparatus list, and also omits the *ghāṇāyantra* and *gaḍuścakrāyantra* that follow on from the *kāṃsabhājanāyantra* of this list. The image labeled *sarāvapuṭāyantra* here would be a *sāraṇāyantra* according to the Bombay manuscript's list. Perhaps there is simply a misspelling here. This device is quite different again from the *sāraṇāyantra* depicted in the Ahmedabad manuscript (folio 25v, top right), which in any case does not give much information. The Bombay manuscript does not illustrate a *sāraṇāyantra* (or at least does not label any illustration as a *sāraṇāyantra*). The *sāraṇāyantra* in the Bikaner manuscript also does not resemble the Jaipur manuscript's rendering.<sup>55</sup>

The next illustration depicts a *jālikāyantra*, number 25 in the Bombay manuscript's list. Again, the Jaipur manuscript's representation of this device does not correspond to the Bombay manuscript on folio 21v or the Ahmedabad manuscript on folio 25v, which are quite similar to each other. Next to it is a *haṇḍikāyantra*, which does not look much like the one shown on folio 21v of the Bombay manuscript, or the one on folio 25v of the Ahmedabad manuscript, but features the same labeling: *paṃcamṛtti(kā) rasa*.

The final illustration is labelled *iṣṭikāyantra*, a "brick device" that is not mentioned in any of the lists of apparatuses in the commentaries of the manuscripts examined here. The Bombay and the Ahmedabad manuscripts do not feature any *iṣṭikāyantra* in their illustrations and none of their images resembles the Jaipur manuscript;<sup>56</sup> the Bikaner manuscript, however, does. It is the last of its illustrations. Its drawing might suggest that the *iṣṭikāyantra* and *cāraṇāyantra* (which is found on the list of devices given in the commentary) may be the same device, or otherwise may be combined. This drawing does not correspond to that of the Jaipur manuscript.

## Discussion

As we have seen from the above descriptions, there is a great deal of overlap, but also significant difference in how the various apparatuses are illustrated in the manuscripts, and indeed which

54 The label reads *sarāsapuṭāyantra*. I have surmised *sarāva* for *sarāsa*, because the text in the illustration below gives *sarāvasaṃpuṭa* - two dishes placed together, forming a sphere.

55 See also Hellwig 2009: 349–351 on the different descriptions of *sāraṇāyantras* in the *Rasaḥṛdayāyantra*.

56 The drawing in the Jaipur manuscript is also rather different from the brick devices of the *Rasaratanasamuccaya* and *Rasapṛakāśasudhākara* described in Hellwig 2009: 169–170.

devices are represented as diagrams. We have seen that the manuscripts' illustrations do not necessarily follow the devices featured in their own commentaries' lists of devices, but instead seem to be oriented on the list found in the Bombay manuscript, or perhaps on another source with a parallel reading or parallel illustration to the Bombay manuscript. The latter hypothesis could explain the occasional differences in sequence.

Regarding the lists of apparatuses given in the commentary, it should be noted that, of the enumerated apparatuses, only four of the devices are mentioned in the *Rasendramaṅgala*'s text outside of the commentary. These are 1. *dolāyantra* (RM 1.32), 2. *adhahpātāyantra*, 3. *urdbvapātāyantra* (as *adhordhvāpātāyantra*, RM 1.36 and *pātāyantra* in RM 3.80), and 4. *cakrayantra* (RM 3.64). Furthermore, even within the commentary, most of the listed apparatuses are referred to only once in the list, or are mentioned just once more elsewhere in the commentary. Four of the apparatuses are mentioned more often in the commentary: the *handikāyantra* is featured six times, the *vālukāyantra* four times, the *mūṣāyantra* only once, while its synonym, *mūkbāyantra*, is found six times. The *gaḍuścakrayantra* is mentioned only once, but a *gaḍūkāyantra* five times, and a *gaḍākāyantra* once. Conversely, apparatuses that are mentioned in the main text of the *Rasendramaṅgala*, such as the *śarkkara-*, *garbha-*, *ūṣma-* or *dhūmakulāyantra* (see footnote 16), are not represented by illustrations.

Therefore, oddly, the illustrations show devices that do not seem directly relevant to the contents of the *Rasendramaṅgala*, or to the procedures elaborated in the commentary. That is, the devices may be what the authors of the *Rasendramaṅgala* and its commentary would have used for alchemical operations, but given the sparse information on their use, we can only speculate about this. The Bikaner manuscript is alone in offering some explanation of how the apparatuses were used within the scheme of the alchemical program, but its explanation also leaves out most of its listed apparatuses.

In those cases in which illustrations represent apparatuses mentioned in the commentary's list, we can argue that they function as a kind of commentary on the commentary, providing additional information on how the listed apparatuses were used and thus expanding the commentary. Yet, in those cases in which the illustrations do not follow the sequence of the manuscript's list of apparatuses, or show devices not mentioned in the text or commentary, the function of the illustrations is less clear. Perhaps they represent some local variations of apparatuses.

A comparison of how apparatuses are depicted creates further confusion in some cases. Apparatuses that look similar receive different labels or, conversely, those that look dissimilar are identified as the same device. (See the images of the *tulā-* (or *nalikā-*)*yantra* juxtaposed in Figure 5.11). In some cases, an explanatory text added to an image is found accompanying a different image on another manuscript.

Some of the inconsistencies may be attributable to the copyists of the manuscripts, who might not have known the apparatuses the illustrations depict. There are gaps in the labelling of the Bikaner manuscript's illustrations (for example, the device on the top left of folio 45r) that suggest someone unfamiliar with the device was copying illustrations from an older

manuscript and could not supplement information that was not legible on the manuscript they were copying.

Generally speaking, if one does not know the apparatuses and how they function beforehand, it is difficult – and in some cases impossible – to understand what the diagrams depict. Some of the illustrations, and those in the Bikaner and Jaipur manuscripts in particular, are almost extravagantly abstract, to the point that one may wonder whether the draughtsman knew the apparatus the image was based on. It is not certain whether the person who drew the line drawings was the same person who copied the text, though the lettering in the labels for the illustrations does not markedly differ from that of the main text in any of the manuscripts. I think it is fair to say that the illustrations lack artistic merit and are unlikely to have been executed by specially commissioned artists: These are fairly rough sketches that are clearly not meant to elicit aesthetic pleasure, but rather to convey technical information. However, the illustrations are only partially successful in conveying this information. In part, this is due to the nature of diagrams. Diagrams are shortcuts to information. They can show the principle of something, not just an object, but a process, and the relation of objects in space and time. However, they work best when accompanied by an explanation. Otherwise, you have to have some prior knowledge to understand what is going on in a diagram. As Baigrie puts it:

Line drawing – which is the simplest form of caricature in scientific illustration – lets the illustrator control exactly what the user sees. However, these devices are only useful for the initiated who can still see the caricature as a picture of a particular figure. The uninitiated may recognize that the picture is meant to caricature but not know what it is meant to portray. . . . Every diagram is a kind of encoding that demands a set of conventions that are shared by the illustration and the user. If the user is unfamiliar with the conventions at work, this compromises their utility.<sup>57</sup>

The integration of symbols or text into the picture to label objects transforms the line drawing into a kind of map or plan, though again, the viewer needs to be initiated into the meaning of the symbols and the relevance of the words or technical terms to make the necessary inferences. In my opinion, the labelling of the illustrations on the examined manuscripts generally does not provide sufficient information.

It is not just the reader or viewer who may be one of the uninitiated here: As noted above, the copyists of the manuscripts may also not have been familiar with alchemical practice, and they also may not have been trained in drawing diagrams. This could lead to a kind of visual game of “Chinese whispers,” with later copies becoming less and less comprehensible. However, assuming that, at some point, the original drawings were based on someone’s expertise with alchemical practice and the depicted apparatuses, the question still remains what the

57 Baigrie 1996: XX–XXI.

illustrations' intended uses were. Were they meant to function as aide-mémoires or representations of procedural variations for those already versed in alchemical practice, or perhaps as didactic devices for students, probably accompanied by the oral explanations of a teacher? This could point to a didactic program in which a student would be given a theoretical introduction to the procedures before (or instead of?) witnessing or performing them. The same could be argued for the text as a whole, i.e., that it functions as theoretical preparation for actual practice. A practical demonstration by the teacher would seem rather more effective for teaching the subject, though perhaps prohibitive in terms of cost.

To my mind, it seems more likely that the illustrations address a knowledgeable viewer – a practicing alchemist with experience, who can parse the shorthand of the images. The *raison d'être* of the illustrations would then perhaps lie in their showing regional variations, or the original authors' preferences and usages that they wanted to share with other alchemists.

However, there is a further possibility: One might ask whether the text and its illustrations were in fact meant to inform practice at all, or whether they fulfilled a different function altogether. This is part of a larger question about the function of alchemical literature. The emergence of alchemical literature may have been part of an effort of alchemists to establish their discipline as a proper, authoritative field of knowledge, a *śāstra*, worthy of respect and study by scholars. And their early works may thus not have been formulated as manuals or textbooks, but as descriptions of an established science.<sup>58</sup> Indeed, the very act of producing a text on the subject – in the scholarly language of Sanskrit, no less – would have served to not only codify alchemical knowledge, but also to endow the practice with a heightened status, legitimacy, and authority.<sup>59</sup> In the case of the *Rasendramāṅgala* and its commentary, both text and image would aid in establishing the shastric credentials of the science, as it were.

However, the question remains at what point the inclusion of diagrams became a necessary, or at least, accepted element of conveying or representing authoritative knowledge; and whether the concept of visually representing information was widely adopted in *Śāstra* texts, or was specific to certain fields, with alchemical texts perhaps using diagrams most prominently. To answer these questions, a broader study of diagrams accompanying alchemical and other literature in South Asian manuscripts needs to be undertaken.<sup>60</sup> For now, we can only state

58 I base this speculation on experimentation with recreating some of the procedures described in the *Rasabhrdayatantra*, the earliest of the surviving alchemical works. Trying to follow the described procedures, it quickly became clear that the text did not supply sufficient information to follow the formulae. See <http://ayuryog.org/content/alchemy-reconstruction> for video documentaries of these recreations, and <http://ayuryog.org/blog> for accompanying commentaries on the experiments. My conclusion was therefore that this early text (and others like it) had a descriptive rather than prescriptive function.

59 See Pollock 1989: 18 on the idea of *śāstra* textuality, i.e., that the rules of a *śāstra* must be organized into a text.

60 See Bray *et al.* (2007) for a study of technical images and their relationship with written text in the production of technical knowledge in premodern Chinese treatises. A parallel study for Indic texts is a desideratum.

that illustrations were an established part of the transmission of the *Rasendramāṅgala* by the seventeenth century at the latest, and that diagrams may have been a feature of alchemical texts more broadly.

**Appendix: Lists of apparatuses in the commentaries of the Bombay, Ahmedabad, Jaipur, and Bikaner manuscripts and the print edition of Āḍhamalla's commentary on *Śārṅgadharasamhitā* 2.12.4cd–13ab**

Bombay	Ahmedabad	Jaipur	Bikaner <sup>61</sup>	Āḍhamalla
śilā	śilā	śilā	śilā	śilā
piṭha	gajadamtabhājana	gajadamtabhājana	piṭhā	pāśāṇa
pāśāṇa	dolā	dolā	pahaka	bhūdhara
illegible	adhahpātana	adhah pātana	pāśāṇa	vaṃśanalikā
nalikā	pāna	pānatrayan (sic)	bhūdhara	gajadamtabhājana
gajadamtā (...)	urddhvpātana	urdhvpātana	vaṃśanalikā	dolā
dolā	niyāmaka	niryāmaka	tulā	adhahpātana
adhahpātana	ḍamarū	ḍamaru	gajadamtabhājana	urdhvpātana
urdhvpātana	cakratrayaṃ cāki	agniṣomāya	dolā	niyāmaka
pātāla	vālukā	cakra	adhahpātana	ḍamaruka
niyāmaka	tulā	cokī	urdhvpātana	kaṭāha
ḍamaruka	kaḷapa	vālukā	urdhvpātana	kāṃsyabhājana
tulā ?	agniṣomā	tulā	niyāmaka	pātāla
kacchapa	kāṃsabhājanam	kacchapa	ḍamaruka	tulā
cakratrayaṃ cāki	ghāṇa	kāṃsabhājana	tulā	kacchapa
vālukā	gaḍaka	ghāṇa	kascapa	cakra
agniṣomā	jalūkā	gaḍaka	cakra	cāki
gandhakako	vāraṇa	jalīkakā	cāki	vālukā
mūṣā		c(or v)āraṇa	vālukā	agnisoma
hamdikā			agniṣoma	gandhakaṭāhikā
kāṃsabhājana			gandhakaḍāhikā	mūṣā
ghāṇā			mūṣā	bāṇa
gaḍuścakra			haṇḍikā	garuḍa
sāraṇa			kāṃsyabhājana	sāraṇa
jalīkā			pāśāṇa	jalīkā
vāraṇa			gaḍuka	cāraṇa
			sāraṇā	
			jalīkā	
			cāraṇa	

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## Cannabis in Traditional Indian Alchemy

*Patricia Sauthoff*

### Introduction

It is a great honor to dedicate this paper to Dominik (Dom) Wujastyk, a scholar whose generosity and knowledge of a wide range of topics make him one of the most unique figures in South Asian studies working today. Over the course of several years, Dom and I have shared coffee and cake while discussing politics, religion, cryptocurrencies, and of course, medicine.

I have long been interested in the legality and usages of medicinal cannabis. Since first investigating the subject for an undergraduate research paper, the usage of both medicinal and recreational cannabis has become more mainstream, with legalization and decriminalization across large swaths of the Americas, parts of Europe, South Africa, Australasia, and Southeast Asia. Around the same time I began my early research, in 2002 Dom wrote an article suggesting that “to discuss cannabis is to step into an arena of fierce and lively contest.”<sup>1</sup> Much has changed over these last twenty years, with legalization efforts moving well past just medicinal use and now widely allowing for recreational use. However, the fierce and lively contest Dom identified remains. Discussion of cannabis remains a taboo subject for many people, even as usage grows.<sup>2</sup>

In this paper, I would like to respond to and provide updates to Wujastyk’s 2002 paper, “Cannabis in Traditional Indian Herbal Medicine.” I begin with the 12th–13th-century medico-alchemical work, the *Ānandakanda* (ĀK), which offers one of the earliest and most complete descriptions of cannabis in either the medical or alchemical corpora. Among the many topics related to cannabis in the *Ānandakanda* are discussion of its mythology, cultivation, associated mantras, medical uses and preparations, and dangers. I end the chapter with an examination of the uses of various terms for cannabis in early Sanskrit works and compare the ambiguities of etymology and usage to some of the terms for cannabis that are familiar to English speakers today.

1 Wujastyk 2002.

2 A study by the U.S. Substance Abuse and Mental Health Services Administration found that among people aged twelve and older, 17.5% of people used marijuana in 2019, compared with 11% in 2002, with 35.4% of young adults aged eighteen to twenty-five using in 2019, and 15.2% of those twenty-six and older. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration 2020.

## Medicinal marijuana in pre-modern South Asia

Buried within the *Report of the Indian Hemp Drugs Commission, 1893–1894*, is a brief report in which G. A. Grierson explores references to hemp in Sanskrit and Hindi literature, specifically the terms *bhaṅga*, *indrāsana*, and *vijayā* or *jayā*.<sup>3</sup> Though he mistakenly identifies *bhaṅga* – in the masculine/neuter rather than the feminine *bhaṅgā* – as the hemp plant in both the *Atharvaveda* and the work of Pāṇini, he correctly notes that in early works *vijayā* likely refers to yellow myrobalan rather than cannabis. *Indrāsana* (“Indra’s food”) as a term for cannabis does not appear in the *Ānandakanda*’s list of plants, nor to my knowledge does it appear in the *Rasaśāstra* corpus. Grierson states, without reference, that this term first appears in the tenth century and it’s in the fourteenth century that its intoxicating properties became widely known.<sup>4</sup> In Jyotiśvara’s 14th-century play *Dhūrtasamāgamānāṭaka*, an ascetic carries cannabis (*indrāsana*), a fragrant and special substance that entices others and appears to have both medical and non-medical uses.<sup>5</sup> Grierson further alludes to a 16th-century play, unnamed, that associates cannabis with Śaiva mendicants.<sup>6</sup> He also comments that the earliest mention of *gañjā* appears around 1300 CE, contemporary to or slightly preceding the *Ānandakanda*.

The cannabis of *Rasaśāstra* does not appear to be highly intoxicating, or at the very least its intoxicating effects are not highlighted. The *Ānandakanda* refers to *gañjā* only once as *mā-dayati*,<sup>7</sup> a term that can indicate intoxication, exhilaration, delight, passion, or stupor. The same passage also describes *gañjā* as that which inebriates or which is nectar (*madirā*). Again, the ambiguities do not necessarily point to a highly intoxicating substance, nor one used for the purpose of inebriation. Modern medical science and the growing legal trade of cannabis products in the Americas and Europe demonstrate a wide variety of effects from different strains of cannabis. Across Europe non-intoxicating strains of cannabis, high in cannabidiol (CBD) but low in tetrahydrocannabinol (THC, the intoxicating chemical found in cannabis), are available in shops and even vending machines. In Canada and parts of the US, these products sit side-by-side with those high in THC in recreational shops.

This is to say, not all cannabis is the same, and it is likely that the plants grown in South Asia between the tenth and thirteenth centuries were quite different from those imagined by writers versed in the effects of cannabis available today, which has been bred to include high amounts of THC for recreational rather than medical use. For example, a 2019 study of ancient archeological sites in Central Asia found that wild cannabis plants had low levels of psychoactive THC compared to their cultivated counterparts.<sup>8</sup> Without material evidence, it

3 Grierson 1893–1894: 246–249.

4 *Ibid.*

5 McHugh 2021: 271.

6 Grierson 1893–1894: 246.

7 ĀK 15.341ab.

8 Ren *et al.* 2019.

is impossible to know whether pre-14th-century cannabis medicines contained high levels of THC or if they were, like wild strains, higher in CBD, a non-psychoactive phytocannabinoid that remains understudied due to various legal issues, but which is currently marketed in Europe and North America as a treatment for anxiety, sleep disruption, pain relief, epilepsy, and other medical conditions.<sup>9</sup>

### Cannabis in the *Ānandakanda*

Containing approximately 6,900 verses, the *Ānandakanda* is one of the longer works of Rāsaśāstra literature. In its thirty-six total chapters, the work covers a wide range of material: from initiation to gemology to the purification of metals. Its fifteenth chapter focuses on thirty-eight divine herbs (*divyauṣadhi*). Important plants include *jyotirdruma* and *aśvagandhā*, a common ayurvedic plant used for a wide variety of ailments, which receives only brief mentions in three verses. By far the longest entry in the fifteenth chapter is the one dedicated to *vijayā* (cannabis), which consists of 186 verses. Apart from the introductory verses (1–3), this is the only section in the chapter that presents a dialogue between Bhairavī and Bhairava. While other sections mention specific mantras by name, only the section on *vijayā* and false daisy (*bhṛṅgarāja*) contain specific mantras.

### Mythology

The cannabis section of the *Ānandakanda* begins with the goddess Bhairavī asking about the plant whose rejuvenative use produces ease, knowledge, enjoyment, and absorption into the divine (313–316ab). Bhairava then replies with the mythological origin of cannabis as a substance that is part of the primordial ocean and a natural medicine (318–330). He explains that users include holy persons (*siddha*), sages (*muni*), women, people of all castes, yogis, children, the elderly, the infirm, those suffering from sexual afflictions, and those with many wives.

The *Ānandakanda* teaches that cannabis has changed during the different *yugas*, beginning as white, then becoming red, then yellow, and now green. In its white form it is associated with the *brāhmaṇa varṇa*, red with the *kṣatriyas*, green with the *vaiśyas*, and black with the *śūdras* (331–333). The plants come with one, three, five, seven, nine, ten, eleven, or thirteen leaves. As Dominik Wujastyk noted, the *Ānandakanda* acknowledges that the female plant has intoxicating properties that can cause fainting or delusion (*mūrchā*) as well as pleasure.<sup>10</sup> The male plant is described simply as tree-like (*drumākṛti*).

9 VanDolah *et al.* 2019: 1840–1851.

10 Dominik Wujastyk 2002: 62.

## Mantras

The cultivation, processing, and production of cannabis-based medicines described in the *Ānandakanda* requires a series of seven mantras. These are:

1. The establishing mantra (*sthāpana*): *oṃ kṣāṃ kṣīṃ kṣūṃ* reverence to [Śiva], the protector of the world, make, make me strong and give, give me perfection, *svāhā*.<sup>11</sup>
2. The honoring mantra (*sevana*): *oṃ śrīṃ hrīṃ klīṃ ya ra la va śa śa sa ha*. O Amṛteśvarī, make, make immortality, *āṃ hrāṃ kroṃ svāhā*.<sup>12</sup>
3. The thread binding mantra (*tantubandhana*): *oṃ glaum saum hrīṃ*, O goddess of finely calcinated mercury, protect, protect O tormentor of all enemies, *svāhā*.<sup>13</sup>
4. The cutting mantra (*lāvana*): *oṃ klīṃ vaṃ saṃ krauṃ*, O origin of happiness, bliss, and immortality. Grant victory in the triumph of three worlds, *svāhā*.<sup>14</sup>
5. The cooking in fire mantra (*agnipāka*): *hrīṃ śrīṃ* one prays for true perfection to Mahākālāgnibhairava, whose body is embraced by the Mother of all *siddhis*, [the Mother] who is sacred speech (*brahman*) [itself], who resolves disease and dries up all misfortune, *huṃ phaṭ ṭhaṃ*.<sup>15</sup>
6. The sun baking mantra (*sūryapāka*): *hrīṃ śrīṃ*, to the Sun in the vast sky (*vyoman*), whose body is embraced by the mother goddess (of) Brightness, make much light, *ṭhaṃ*.<sup>16</sup>
7. The moon baking mantra (*candrapāka*): *hrīṃ śrīṃ* the great Bhairava, who has the spreading rays of the moon. [Homage] to him whose body is embraced by the mother goddess Queen of the Nectar of Immortality, make, make lightening quiver, *huṃ phaṭ ṭhaṃ*.<sup>17</sup>

Each mantra has its own set of instructions. For example,

Having bathed and adorned himself in clean clothes and fragrant flowers, the *sādhaka* should venerate Bhairava and Nandi successively on the fourteenth night of the dark half of Phālgunī (February or March) with offerings of wine and meat, enveloping them with red, yellow, white, and black threads while reciting mantra:

11 *oṃ kṣāṃ kṣīṃ kṣūṃ kṣetrapālāya namaḥ savīryaṃ kuru kuru siddhiṃ dehi dehi svāhā* (355).

12 *oṃ śrīṃ hrīṃ klīṃ yaralavaśaśasaba amṛteśvari amṛtaṃ kuru kuru āṃ hrāṃ kroṃ svāhā* (355).

13 *oṃ glaum saum hrīṃ kbecarabhūcaradivayogini imāṃ rakṣa rakṣa sarvaśatrupramathini svāhā* (357).

14 *oṃ klīṃ vaṃ saṃ krauṃ śivānandāmṛtodbhve tribhuvanavijaye vijayaṃ prayaccha svāhā* (361).

15 *hrīṃ śrīṃ mahākālāgnibhairavāya sarvasiddhimātrībrahmālīṅgitavīgrahāya sarvāpadām śośakāya huṃ phaṭ ṭhaṃ* (370).

16 *hrīṃ śrīṃ mahāvīyomabhāskarāya dīptimātrīkāliṅgitavīgrahāya tejasām nidhiṃ kuru kuru ṭhaṃ* (376).

17 *hrīṃ śrīṃ mahāśaśāṅkīraṇavīspārābhairavāya amṛteśvari mātrīkāliṅgitavīgrahāya viśphuraṇaṃ kuru kuru huṃ phaṭ ṭhaṃ* (380).

*oṃ glauṃ sauṃ hrīm̃.* O calcified mercury, protect, protect this, o tormentor of all enemies.<sup>18</sup>

Here we find seed mantras combined with honorifics and two of the five transgressive substances (*pañcatattva*) common in Tantric practice.<sup>19</sup>

The moon-baking mantra (*candrapāka*) offers a more specific recipe that calls for:

- 3 *palas*<sup>20</sup> of cannabis
- 2 *palas* of licorice powder
- 1 *pala* of cardamom powder
- 1 Ashok tree root
- 1/2 *pala* of sandalwood powder
- 1 *pala* of sugar
- 1/2 *karṣa*<sup>21</sup> of gold powder
- 1/2 *karṣa* of camphor

The ingredients are stirred into melted butter, and put in the moonlight on the fifth day of the bright half of a month for a fortnight so that the macerated powder can dry in the moonlight.

## Usage

Despite their outward simplicity, Rasaśāstra recipes present a lot of technical challenges, for both the reader and alchemist, largely due to ambiguities of language that make identifying ingredients difficult. The *Ānandakanda* in particular is uniquely complicated because its recipes are often written as lists of ingredients with little information about how long to cook, grind, etc. their many parts. The section's early recipes are written as catalogs with very few instructions, while the later ones are more comprehensive. Despite the ambiguities, however, the basic uses and administration of cannabis and other materials are apparent.

Beginning with verse 380, the *Ānandakanda* takes ten verses to describe the various ailments for which cannabis preparations are prescribed. It grants protections, destroys epilepsy, removes bile, carries away spleen pain, grows knowledge, removes leprosy, increases weight

18 *snātaḥ śuddhāmbāro gandhapuṣpabhūṣaṇasamyutaḥ || arcayed bhairavaṃ tatra nandiṣaṃ ca krameṇa ca | madyamāṃsopabhāreṇa raktapītasitāsitaḥ || tantubhir veṣṭayed devi tanmantraṃ ca nigadyate | oṃ glauṃ sauṃ hrīm̃ kbecarabhūcaradivayogini imāṃ rakṣa rakṣa sarvaśatrupramathini svāhā |* (ĀK 15.355ij–357ab).

19 White 2003: 83–85.

20 Each *pala* is approximately equal to forty-eight grams. Srinivasan 1979: 93–94. Śrīnityanāthasiddha 1982: 255–257.

21 Each *karṣa* is approximately equal to 151 grams. Srinivasan 1979: 106.



and virility, destroys phlegm diseases and great pain, and helps users avoid old age and death. At verse 391, the text shifts to the preparation of medicines, sometimes but not always connected to particular ailments.

Aphrodisiac recipes are quite common in Rasaśāstra works, with entire chapters dedicated to potions appearing in 15th-century and later works, such as the *Rasaratnākara* (Rasāyanakhaṇḍa)<sup>22</sup>, *Rasamañjarī*<sup>23</sup>, *Rasaparakāśasudhākara*<sup>24</sup>, *Rasaratnasamuccaya*<sup>25</sup>, and *Rasendrasārasaṅgraha*<sup>26</sup>. The *Ānandakanda* gives several recipes for aphrodisiacs that include cannabis, including the following:

*siddhayoga* aphrodisiac:<sup>27</sup>

1 part cow's milk  
 1/2 part water  
 equal parts:  
     fire flame bush flower  
     jasmine fruit  
     dry ginger  
     cannabis

One then mixes the ingredients in milk, sieves the concoction through a cloth and dissolves honey, sugar, and ghee into the mix. The text gives no further instructions for production or consumption.

*kāma* pill:<sup>28</sup>

equal parts:  
     *tryūṣana*: long pepper, black pepper, ginger  
     butter tree  
     piper chilli  
     *cāturjāta*: cardamom, cinnamon, Indian bay leaf, Indian rose chestnut  
     fruit of the three myrobalans  
     red grape  
     peepul root  
     Cuddapah almond

22 Chapters six and seven.

23 Chapter nine.

24 Chapter twelve.

25 Chapter twenty-seven.

26 Chapter five.

27 ĀK 15.420–421.

28 ĀK 15.438–440ab.

large-leaf pongam creeper  
cannabis

The ingredients are mixed, powdered, and made into a pill.

In addition to increasing virility when taken three times daily, the *kāma* pill also mitigates disease, removes the three bad *doṣas*,<sup>29</sup> and gives strength. When eaten for three days, a person can be endowed with perfection, thus avoiding old age and death.

The *Ānandakanda* also advocates for the use of cannabis to aid meditation and to produce a perfected body (*debasiddhi*). A *karṣa* pill made of the *trijāta* (cardamom, cinnamon, and Indian bay leaf), *trikaṭu* (long pepper, black pepper, and ginger), cumin, and cannabis, eaten every evening and early morning, perfects meditation.<sup>30</sup> A powdered combination of asparagus, *trijāta*, *kaṭutrāya* (ginger, long pepper, and black pepper), and cannabis mixed with honey and licked during the first waxing of the moon perfects the body.<sup>31</sup>

Recipes and techniques for reducing the signs of aging and eliminating death appear across tantric, yogic, and ayurvedic works.<sup>32</sup> Vanity and an aversion to death may be some of our most human traits, with no civilization in history immune to either. In many ways, the products of *Rasāśāstra* resemble those of what in 2023 we might call the “wellness industry.” This includes exercise (including yoga), dietary supplements and health-focused diets, cosmetics, skincare, and meditation. Cosmetics and skincare are often marketed with the word alchemy or tout the inclusion of gold within products.<sup>33</sup> The U.S. Food and Drug Administration (FDA) even warns that some cosmetic products marketed as anti-aging or skin lightening contain dangerous levels of mercury,<sup>34</sup> though small amounts of mercury continue to be used as a preservative in mascaras.<sup>35</sup> Cannabis too has found its way into the cosmetics industry with cannabis-infused hair, skin, makeup, and even perfume products. The luxury brand Malin & Goetz romanticizes cannabis to market one of its cannabis-infused perfume oils, saying,

Once defiantly naughty, now inescapably chic and always a rite of passage, cannabis has never been more in vogue. Bringing to mind lazy afternoons spent dwelling on a favorite record and the lingering smokiness that clings somewhat inconveniently to clothes, cannabis balances rich, spicy and herbaceous aromas with soft, floral notes of muguet and magnolia. Free of THC but heavy on black pepper and bright bergamot, this apothecary staple grounds higher flights of

29 Likely referring to craving, aversion, and delusion.

30 ĀK 15.446–447ab.

31 ĀK 15.450cd–451.

32 *Kaulajñānariṇaya* chapter five, *Khecarīvidyā* chapter four, the *Rasaratnākara*’s *Rasāyanakhaṇḍa*, *Ānandakanda* chapter six, to name but a few.

33 Shatzman 2022.

34 U.S. FDA 2022.

35 Bienkowski 2013.

fancy with a base of earthy cedarwood, patchouli and sandalwood. Inhale deeply for an experience rife with nostalgia – minus the side effects.<sup>36</sup>

Like many *Rasaśāstra* recipes, this perfume contains flowers, black pepper, cedar, and sandalwood. The *Ānandakanda* gives several recipes for the elimination of such aging signs as wrinkles and grey hair. Ingesting a *karṣa* pill of equal parts black pepper, long pepper, dry ginger, cardamom peel, cinnamon, cannabis, wheat, and sesame seeds prevents wrinkles and grey hair.<sup>37</sup> Another recipe, called “the five arrows” (*pañcabāṇa*), calls for the use of a powdered mixture of bay rum tree, sandalwood, camphor, Ceylon ironwood blossom, cardamom, cloves, butter tree, long pepper, black pepper, and cannabis in equal parts. Not only does the powder remove all pain, but the continued use of it for twelve years destroys wrinkles and grey hair.<sup>38</sup>

Despite its position as an encyclopedic text of the *Rasaśāstra* corpus, the *Ānandakanda*’s entry on cannabis contains very few recipes that include mercury, gold, or any of the other metal, gem, or mineral ingredients associated with alchemy.

## Dangers and effects

Chaturvedi, Tiwari, and Rai note that cannabis does not appear in the ayurvedic classics, pointing to the approximately 14th-century *Śārṅgadharasamhitā* as the text in which cannabis as medicine is most often found.<sup>39</sup> These rare textual occurrences indicate that cannabis was not widely used as medicine prior to around the tenth century. In addition to its descriptions of medical uses, the *Ānandakanda* offers a handful of verses dedicated to the dangers and side effects of cannabis use. Signs that a person has consumed too much include reddish eyes, dryness of the tongue, lips, eyelids, and nose, heavy or closed eyes, warm hands and feet, hunger, thirst, and disturbed sleep; stammering and forgetfulness, a confused mind, an extended appetite, waves of happiness, eye-rolling, tranquility, furrowed brows, excessive crying, a hum in the ears, fainting, forgetting, and confusion, and finally vomiting, moaning, rolling on the ground, and a generally miserable state.<sup>40</sup> The description of these effects indicates at least some level of intoxication was acknowledged but not sought after.

36 Malin & Goetz n.d.

37 ĀK 15.442cd–444.

38 ĀK 15.448–450ab.

39 Chaturvedi, Tiwari & Rai 1981: 33–34. On the dating of the *Śārṅgadharasamhitā* see Meulenbeld 1999, IIA: 207.

40 ĀK 15.486–491: *āraktalocanaḥ śuṣkajibvauṣṭhapaṭatālukaḥ | prathame śuṣkanāsāgra uṣṇakṛc chvā-sapārśvayoḥ || dvitiye kṣinimīlatvaṃ paṭalīkṛtavīgrahaḥ | tṛtiye pādabastākṣidābhakṛd gadgadadhvaniḥ || caturthe kṣutpīpāsārto nidrāghūrṇitalocanaḥ | pañcame gadgadā vāṇi svaproktaṃ vismarekṣaṇāt || ṣaṣṭhe vikāre saṃjāte cittāpasmṛtikāraṇam | saptame karasādaśca debe ca rucirāyate || mahormaya ivollāsā jāyante ca punaḥ punaḥ | aṣṭame digbbramaḥ śāntirbbrūbhaṅgāś cātirodanam || navame śro-trabhuṅkāro mūrccāpasmṛtikātarah ||*. Many of these symptoms were confirmed in a widely mocked

## Cannabis in Rasasāstra texts

Cannabis as an alchemical ingredient is rare within Rasasāstra literature. Late premodern and modern texts such as the *Āyurvedaprakāśa* (seventeenth century),<sup>41</sup> *Rasajalanidhi* (nineteenth century),<sup>42</sup> and *Rasatarāṅgiṇī* (1923 or 1924)<sup>43</sup> are more likely to contain references to cannabis than those from the pre-Mughal period. We do find a handful of recipes from the *Rasasamketalikā* (fifteenth century)<sup>44</sup> and *Rasārṇavakalpa* (possibly eleventh or twelfth century)<sup>45</sup> that mention *vijayā*, which may refer to myrobalan or cannabis. The *Rasaratnākara* (fifteenth century)<sup>46</sup> and *Rasasamketalikā*<sup>47</sup> both include *siddhamūli* in recipes.

## Cannabis and Yoga Today:

### Postscript, or Bhanging on about jazz cigarettes

According to various sources and traditions, cannabis usage on the Indian subcontinent began either before written history, in the earliest medical works,<sup>48</sup> or approximately 1,000 years ago.<sup>49</sup> A plant named *bhaṅgā* appears in the *Amarakoṣa* (2.9.20), an approximately sixth century Sanskrit lexicon.<sup>50</sup> We cannot be sure the word means “cannabis,” however, as the text itself gives us no taxonomical information on the plant, and its synonyms often refer to other plants.<sup>51</sup> The Zoroastrian *Avesta* alludes to the medical use of a plant called *banga*, which today is commonly considered an early reference to cannabis.<sup>52</sup> Gnoli notes that *bang* (Middle Persian and etymologically related to Avestan *bangha* or *banga*) commonly refers to one of three plants: cannabis, henbane, and datura.<sup>53</sup>

Following on the work of Meulenbeld, Dominik Wujastyk argues that *bhaṅga* in the masculine or neuter cannot unambiguously refer to cannabis because the masculine form commonly appears to mean “break” or “rupture,” while the feminine form refers to cannabis

opinion piece by *New York Times* columnist Maureen Dowd who ingested far too much recreational cannabis on a trip to Colorado (2014).

41 Meulenbeld 1999, IIA: 599.

42 *Ibid*: 625.

43 *Ibid*: 695.

44 RSK 4.24, 4.26, 5.4, 5.13.

45 RAK 1.209, 1.430.

46 RRĀ Vkh 12.56–58, 12.75, 143, 14.7.

47 RSK 3.15.

48 Dash 1978: 142–143.

49 Dominik Wujastyk 2002: 56.

50 Chakrabarti 1979: 26.

51 Meulenbeld 1989: 62.

52 Russo 2005: 2.

53 Gnoli 1988: 689–691.

proper. Wujastyk points to the 11th-century *Cikitsāsārasaṃgraha* by Vaṅgasena as the first irrefutable reference to cannabis as an ingestible medical and intoxicating substance.<sup>54</sup>

The *Ānandakanda* provides an early description of *bhaṅgā* that includes mythological origins, synonyms, taxonomy, and usage. As an encyclopedic work of early Rasaśāstra, the *Ānandakanda* is the natural starting point for a discussion of the alchemical usages of cannabis. The names of cannabis given in the *Ānandakanda* describe its various properties. Many occur only within the *Ānandakanda* itself. But we can see from the names the connection of cannabis to both medicine and yogic philosophy. The names of cannabis in the *Ānandakanda* are:

- śivamūla*: the root of Śiva
- vijayā*: conquerer
- bhaṅginī*: breaker of the three types of humoral diseases
- gañjā*: intoxicator
- vimarśinī*: considerer or examiner
- dīvyakā*: giver of pleasure<sup>55</sup>
- siddhā*: perfected
- siddhidā*: granter of perfection
- siddhamūlikā*: root of perfection
- manonmanā*: achiever of mental objects<sup>56</sup>
- cidāblādā*: giver of happiness
- madhudravā*: distillate of the nectar of the gods
- paśupāśavināśinī*: destroyer of the bondage of living beings
- kālagbñi*: destroyer of death
- (sarva)rogagbñi*: destroyer of (all) disease.<sup>57</sup>

Note that each term is feminine, lending further credence to the idea that the masculine or neuter word *bhaṅga* likely does not refer to cannabis. Further, the *Ānandakanda* recognizes that the plant has male and female forms, the female being that which produces the flower buds that contain psychoactive properties. It is the female plant that the text prescribes for curative uses. In addition to being medicinal, the female plant produces intoxication, delusion, pleasure, purity, and union. It is pungent in both taste and scent. The male plant is tree-like and otherwise unnoteworthy.<sup>58</sup>

54 Wujastyk 2002: 56–57.

55 341.cd: *kṛīḍāmodadyutimadakāntidatvāc ca dīvyakā*. It is [called] *dīvyakā* because it gives sex, pleasure, dignity, rapture, and desire.

56 343ab: *manāscintitakāryāṅām sādhanāc ca manonmanā*. It is [called] *manonmanā* because it achieves the tasks that the mind has imagined.

57 ĀK 15.337–338.

58 ĀK 15.335cd–336ab.

The etymology of terms used in English to describe cannabis suffers from similar ambiguities as that of Sanskrit *bhaṅgā*. The term marijuana, commonly used in English to describe the plant in its intoxicating rather than industrial uses, where hemp is more common, shows similar obscurities. The word “marijuana” is the subject of intense debate in the Americas. Various stories exist, including that Chinese immigrants to western Mexico called cannabis “*ma ran bua*, or *mejoranda (chino)*,” which was Spanishized to marijuana and that it refers to the saint Maria Juana.<sup>59</sup> In the 1930s, former US commissioner for the Federal Bureau of Narcotics, Harry J. Anslinger, popularized the claim that the word marijuana had etymological roots in the Nahuatl word *millibuan* (prisoner).<sup>60</sup> Haugen points to the exoticization and racialization of the word marijuana:

That the English word is derived from the Spanish, and that its use was promoted to “exoticize” it (and its users), is not in doubt. What I would like to question here, however, is any connection to the Nahuatl term *mallibua* “prisoner.” While the phonetic forms of these two words are indeed similar, I see no semantic basis for connecting the two terms. The connection of this plant with illegality and hence “prisoners” is something that only occurred later. Therefore, I regard this as a case of accidental homophony and, until additional positive evidence is brought forth, I reject marijuana as being a possible Nahuatl loan word.<sup>61</sup>

A Nahuatl root is also historically unlikely, since cannabis did not appear in the Americas until after the beginning of Spanish colonization.

Post-1900s newspapers such as the *Los Angeles Times* associated cannabis with mental illness through headlines like “Delirium or death: terrible effects produced by certain plants and weeds grown in Mexico.”<sup>62</sup> The story claims that, “people who smoke marihuana finally lose their mind and never recover it.”<sup>63</sup> Frequently cannabis in the Americas was called *loco weed*, the crazy weed, which was demonized as “an intoxicant among a large class of Mexican laborers ... [and] ... if placed under the ban on equal terms with opiates it is believed the traffic in the drug can be much diminished.”<sup>64</sup> The efforts to ban cannabis often confused the marijuana of Mexico with locoweed (*astragalus bornii*), a plant native to North America that causes neurologic symptoms and death in livestock.<sup>65</sup> The California Board of Pharmacy, in a

59 “marijuana, n.” *OED Online* (accessed 13 October 2022), [www.oed.com/view/Entry/114102](http://www.oed.com/view/Entry/114102).

60 Booth 2005: 179–180.

61 Haugen 2009: 94.

62 “Delirium or Death: Terrible Effects Produced by Certain Plants and Weeds Grown in Mexico.” March 12, 1905.

63 *Ibid.*

64 Gieringer 2006–2012: 22.

65 Locoweed (*Astragalus* and *Oxytropis* spp.) 2022.

campaign article published in the *Washington Post*, *American Practitioner*, and *Pacific Medical Journal* between 1911–1913 claimed that “the hasheesh of India (*Cannabis Indica*) is almost like the Mexican drug plant” and claimed “the loco narcotic destroys body, soul and mind. Its immediate effects are said to include highly exhausted mental states that last much longer than morphine, and are followed by sudden collapse.”<sup>66</sup> The confusion between the two plants did little to stop California’s anti-cannabis legislation that connected the possession of opium pipes with extracts, tinctures, and other narcotic preparations of cannabis. The law went into effect in August of 1913. While not targeting medicinal cannabis, the law effectively outlawed all possession.<sup>67</sup>

The linguistic ambiguities that exist within Sanskrit and English proliferate in pop culture and colloquial language use, and they continue to cause confusion among non-linguists who seek to extract the history of its usage. The continued criminalization of cannabis also confuses the issue, with new terms coming into vogue all the time. The etymology of these terms, too, can cause confusion. The 1920s and 1930s in the United States saw the rise of cannabis use among jazz musicians. Popular culture has retroactively assigned the term “jazz cigarettes” to this era, often claiming the term was used within the community itself. However, it appears the term developed in Scotland only in the 1990s,<sup>68</sup> remaining in use with ironic meaning up to the present day. In fact, among the many terms, jazz musicians have used to describe cannabis, “muggle”<sup>69</sup> may be the most familiar today, though it’s likely to be associated with the non-wizards of the Harry Potter world rather than Louis Armstrong.

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66 Gieringer 2006–2012: 23.

67 *Ibid.*

68 Wright 1992.

69 “Crime: Muggles” 1931; Louis Armstrong & his Hot Five (1928) *Muggles* (Side two).

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## CHAPTER 7

# On the Meanings of *smṛtyantara*

*Patrick Olivelle*

The term *smṛtyantara* is ubiquitous in Dharmasāstric commentaries and Nibandhas, so ubiquitous and commonplace, in fact, that scholars have paid little attention to it.<sup>1</sup> I include myself in this group. We have proceeded all along with the implicit conviction that we understand its meaning. Over the past few of years I have spent considerable time preparing searchable transcriptions of medieval Dharmasāstric works.<sup>2</sup> This forced me for the first time to pay attention to each word and expression in these texts, and some unforeseen insights have emerged. One of these is the varied usages and meanings of this common term *smṛtyantara*. In this brief study, I present my findings based principally on four texts: Bhārucci's (7th century) and Medhātithi's (9th century) commentaries on the *Manusmṛti*, and Viśvarūpa's (9th century) and Vijñāneśvara's (12th century) commentaries on the *Yājñavalkyasmṛti*. These are some of the oldest commentaries that have come down to us.

First, what do scholars today take *smṛtyantara* to mean? To find out, I asked a few scholars of Dharmasāstra what they thought it means, off the top of their heads – and that is what I wanted, not researched answers. One answered: “I think of another unspecified, but well-accepted text, the precise author of which is either uncertain or unknown.” I had entertained a very similar view: some *smṛti* or other. Another gave a more nuanced reply: it refers to a *smṛti* different from what the author is currently discussing. But he also hedged this by resorting to the common view: “perhaps often just a floating verse regarded as *smṛti*.” My own teacher, Ludo Rocher, a very deep and punctilious scholar, refers to Vijñāneśvara citing “two *ślokas* from an anonymous *smṛtyantara*, ‘another Dharmasāstra.’”<sup>3</sup> Here Rocher’s “another” probably has the meaning of “some other.” Thus, when using the term *smṛtyantara* in citing a text, we seem to assume that the author either did not know or did not care much about the name or the author of the *smṛti* he was citing. The category of *smṛtyantara*, so we thought,

- 1 There is no discussion of this category of texts either in Kane's (1962–75) encyclopedic *History of Dharmasāstra*, or in other such histories written by Lingat (1973), Derrett (1973), or even in the recent book edited by me and Donald Davis (2018).
- 2 These can be accessed at the University of Texas Resource Library for Dharmasāstra Studies: <https://sites.utexas.edu/sanskrit/resources/dharmasastra>.
- 3 Rocher 2012: 400.

showed the way in which the textual corpus of *smṛti* grew over time and space into enormous proportions.<sup>4</sup>

A closer investigation of the actual uses of the term by four major early commentators presents a different picture. The first thing to note is that the term does not, or at least does not usually, refer to texts whose names or authors were unknown. Second, the term is used with a spectrum of related but distinct meanings depending on the context and the preferred style of the author. If I had to choose a single way to translate the term, which is used most frequently in the locative case, it may be “in a particular *smṛti*” if it is in the singular, and “in a spectrum of *smṛtis*” or “in certain *smṛtis*” if it is in the plural. There is no necessary implication that these *smṛtis* are unknown or anonymous.

Some light is thrown on the use of *smṛtyantara* by the parallel use of *śrutyantara* in these same commentaries.<sup>5</sup> In fact, the two are used together by Viśvarūpa (YDh 1.2, p. 9): *śrutismṛtyantarānusārāt* (“because it follows *śrutyantara* and *smṛtyantara*”), which is followed in the very next sentence by *śrutismṛtyanusārāt* (“because it follows the Veda and *smṛti*”). The two seem to have a very similar, if not identical, meaning. It is probable that *śrutismṛtyantara* is an abbreviated compound standing for *śrutyantara* and *smṛtyantara*. We do have the independent use of *śrutyantara* by Medhātithi (on MDh 2.6; Jha, p. 65):

*pratyakṣayā śrutyā prayogasampattau śrutyantaram praty ākāṅkṣaiva nāsti.*

Given that what is needed for the ritual performance is met by an express Vedic text, there is no expectation at all to seek some other Vedic text.

Here *śrutyantara* clearly means a *śruti* different from the *pratyakṣāśruti* mentioned at the beginning of the sentence, but not a *śruti* of unknown provenance. Elsewhere we have:

*satyām apekṣāyāṃ śrutyantarād yuktā viśeṣāvagatiḥ.* (On MDh 2.220; Jha, p. 188)

When there is an expectation, it is proper to obtain specific details from some other Vedic text.

Here *śrutyantara* refers to various *śrutis* from which one should gather the missing ritual details in the injunction to perform *japa*. Jha translates the term as “from other scriptural sources.” Medhātithi (on MDh 1.3; Jha, p. 5) uses the dual *śrutyantarābhyām* to refer specifically to two Vedic texts containing statements on the *darśapūrṇamāsa* sacrifice and on ritual formulas:

4 In a recent paper (Olivelle 2020: 223) I wrote to my chagrin: “Increasingly, however, we see an explosive *smṛti* production in the second half of the first millennium possibly extending into the second millennium. These passages are either ascribed to various famous individuals of the past, such as Vyāsa, Aṅgiras, and Paiṭhīnasi or they are cited anonymously, often with the expression *smṛtyantara*.”

5 See also the closer parallel *śāstrāntara*: Medhātithi on MDh 4.27 (Jha, p. 341): *yata idam śāstrāntarasāpekṣam, na svato vidhāyakam ity uktam | śāstrāntareṣu ca vribiśyāmākayavair āgrayaneṣṭir vibhitā |*

*vedatvaṃ ca tasya darśapūrṇamāsavākyamantravākyābhyāṃ śrutyantarābhyāṃ  
svasāmarthyenotthāpitavād iti kumārilaṃpakṣaḥ.*

And [an inferred text] is considered as Veda because it originates on the strength of two other Vedic texts containing two injunctions relating to the New- and Full-moon Sacrifices and to the mantras employed in them. This is the position of Kumārila.

Here it is clear that the term is not nebulous but refers to specific yet here unidentified Vedic texts. Vijnāneśvara (YDh 3.325; p. 486) uses the expression *śrutyantaramūlat-vakalpanāprasaṅgāt* (“because that would result in having to postulate another Vedic text as its basis”). In this usage, the term means an unspecified *śruti* which would provide the Vedic basis (*mūla*) for a statement or claim.

For the authors in the mainstream of Dharmaśāstra, there were no “floating” or anonymous Vedic texts. The reason why most Vedic citations are not identified by our authors, I think, is that they expected their audience to know them. This is similar to citing “To be or not to be” for an educated English audience; there is no need to identify the author or the provenance of this quote.

When we come to the companion, and more ubiquitous, term *smṛtyantara*, the semantic range becomes more complex, but remains broadly within the semantic parameters of *śrutyantara*. Here again the author citing a text as *smṛtyantara* usually expected his reader to know its identity. The following examples show that in the author’s mind the category of *smṛtyantara* includes texts and authors that he definitely knows and sometimes even identifies. So, in this example, Viśvarūpa (on YDh 3.263; p. 139), speaking about the penances that a person associating with a fallen person (*patita*) should perform, says:

*tathā smṛtyantareṣu api caṇḍālasaṃkare, yathā vasiṣṭhe: “gurvīsakhyādigamane kṛc-  
chrābdapādam caret” ity uktvoktam: “etad eva caṇḍālapatitānabhojaneṣu”* (VaDh 20.16–17) *iti.*

It is so stated also in *smṛtyantarās* in connection with association with a Caṇḍāla, as stated in Vasiṣṭha’s text. After stating, “If someone has sex with a female elder, a female friend, and the like, he should perform a Kṛcchra penance for three months,” he goes on to say: “The same applies for eating the food of a Caṇḍāla or an outcaste.”

Here Viśvarūpa refers to penances given in *smṛtyantarās* for association with Caṇḍālas and gives as an example (*yathā*) a passage of Vasiṣṭha. Clearly, here the category of *smṛtyantara* includes a well-known author, whom he identifies. A similar usage is found at YDh 1.195 (p. 134), where Viśvarūpa says:

*asyaiva smṛtyantareṣu prapañcanamātram | yathāba manuḥ: “saucaṃ yathārhaṃ  
kāryam” ity (MDh 5.114).*

This same provision is given in *smṛtyantaras* simply by way of elaboration, as Manu states: “The cleansing is done as appropriate.”

The same usage, this time in the singular, is found in Medhātithi (on MDh 5.18; Jha, p. 427). In dealing with the famous five five-nailed animals that can be eaten, he says: *smṛtyantare tu kbadge vikalpaḥ* (“But in a *smṛtyantara* an option is given with regard to the rhinoceros”). And then he gives an example of such a *smṛtyantara*, citing Vasiṣṭha (14.47): *tathā ca vasiṣṭhaḥ: “kbadge tu vivadante” iti* (“Accordingly, Vasiṣṭha states: “There is disagreement with regard to the rhinoceros’”). At another time Viśvarūpa (on YDh 3.250; p. 109) speaks about the prescription of the twelve-year penance for those who are incapable of performing the more severe penance that ends in the penitent’s death given in various *smṛtis* (in the plural), and cites a single example of such a *smṛti* anonymously, even though he knew well that the citation is from Gautama, whom he cites by name frequently:

*smṛtyantareṣu tu “agnau saktir brahmaḡbnaṣ trir avacchātasya, lakṣaṃ vā syāj janye śastrabhṛtām, khaṭvaṅgakaṭapālapānir vā” (GDh 22.2–4) iti ca prakramālocanayā maraṅśaktāv eva dvādaśavārṣikaṃ lakṣyate.*

In *smṛtyantaras*, however, we read: “A man who has killed a Brahmin shall emaciate his body and throw himself into a fire three times; or make himself a target during an armed battle; or carry a post from a bed-frame and a skull.” By tracking the sequence of these statements, we surmise that the twelve-month penance is available only when one is unable to face death.

Medhātithi on MDh 3.115 (Jha, p. 262) refers to two well-known texts, Gautama and Yājñavalkya, as *smṛtyantara*:

*smṛtyantarāt tarhi saṃkhyāvagamah: “ayujo vā yathotsāham” (GDh 15.7–8) iti, “yugmān daive” (YDh 1.226) iti.*

The number is ascertained from a *smṛtyantara*: “An uneven number, or as many as feasible”; “an even number for an offering to gods.”

Examples of similar usage are also found in Vijñāneśvara writing three centuries later. Commenting on the term *tathā* in YDh 1.118 (p. 36), he gives a passage from Gautama as an example of *smṛtyantara*:

*“tathā” iti smṛtyantaroktavṛtṭyupasaṃgrahaḥ | yathāha gautamaḥ: “kṛṣivāṅijye vāsvayaṃkṛte kusīdaṃ ca” (GDh 10.5–6) iti.*

The term “*tathā*” (thus) encompasses livelihoods given in *smṛtyantaras*. As Gautama states: “Agriculture and trade, if the work is not done by himself; as also money lending.”

And commenting on the term *viduḥ* in YDh 1.151 (p. 46), he cites Manu as a *smṛtyantara*:

*vidur ity anena smṛtyantaroktān anyān api saṃgr̥hṇāti. yathāba manuḥ: “sayāṇaḥ prauḍhaḥpādaś ca kṛtvā caivāvasakṭhikām | nādbhīyitāmiṣaṃ jagdhvā sūtakānnādyam eva ca” || (MDh 4.112).*

The expression “they know/state” encompasses other occasions given in *smṛtyantaras*. As Manu states: “He must not recite the Veda while lying down, putting his feet up, or squatting with a band tied around his waist and knees; after eating meat; after eating any food given by someone in a period of birth-impurity.”

An even more telling example is found in Bhāruci. At MDh 6.88 (p. 46) he says: *tathā ca smṛtyantaram “tasyāśramavikalpam eke” iti* — “Likewise, there is a *smṛtyantara*: ‘He has a choice, some assert, among the orders of life.’” Then, commenting on the very next verse (MDh 6.89; p. 46), he cites a text: *pratyakṣavidhānād gārbasthyasya* — “Because the householder’s state alone is prescribed in express Vedic texts,” without identifying it. And finally in his comments on the very next verse (MDh 6.90; p. 47) he reveals the identity of the author: *yathā ca gautamaḥ: “aikāśramyaṃ tv ācāryāḥ”* — “And as Gautama states: ‘There is, however, only a single order of life, the Teachers maintain.’” It is obvious that Bhāruci clearly knew the identity of the two texts he cited anonymously, because the first is the opening statement (GDh 3.1) of Gautama’s third chapter on the *āśramas*, and the second is the second half of the statement he ascribes to Gautama (GDh 3.36), which concludes that chapter: *aikāśramyaṃ tv ācāryāḥ pratyakṣavidhānād gārbasthyasya* — “There is, however, only a single order of life, the Teachers maintain, because the householder’s state alone is prescribed in express Vedic texts.”

Medhātithi (on MDh 2.61; Jha, p. 107) has a similar passage. The issue relates to the direction a person should face while performing purifications, such as sipping water (*ācamana*). At the outset he cites Gautama (1.35) on the proper direction: *“prāṇmukha udamukho vā” evaṃ hi gautamena paṭhitam* — “For, it is so stated by Gautama: ‘facing either the east or the north.’” And then further down in his explanation he reverts to the usual *smṛtyantara*, saying: *ato vikalpaḥ | udābr̥taṃ ca smṛtyantare: “prāṇmukha udamukho vā śaucam ārabbeta” iti* — “Hence, there is an option. And it is stated in a *smṛtyantara*: ‘He should commence his purification facing either the east or the north.’” This *smṛtyantara*, however, is a fuller version of what he cited as Gautama a few sentences earlier.

We have a similar example in Viśvarūpa (on YDh 3.233f.; p. 92), where he cites a *smṛtyantara*, which is actually Gautama, and gives two extracts from the beginning of the passage and then one further *sūtra* from the same chapter:

*smṛtyantare ca “brahmahasurāpagurutalpaga” ity uktvā, “māṭṛpitryonisaṃbandhāga” (GDh 21.1) ity uktam, “nuṣāyāṃ gavi ca tatsamo ’vakara ity eke” iti ca (GDh 23.12–13).*



In a *smṛtyantara* also, after saying: “Someone who murders a Brahmin, drinks liquor, has sex with the wife of an elder . . .,” it is said: “has sex with a woman related through his mother or father,” and also “someone who has sex with his daughter-in-law or a cow is equal to the former; according to some, equal to a Vedic student breaking his vow of chastity.”

Clearly this shows that Viśvarūpa was familiar with this entire chapter of Gautama; the first two extracts are actually snippets from one long compound.

More commonly, however, we notice the habit of authors referring to a text they cite as *smṛtyantara*, even if all the evidence shows that they knew the identity of the author and the text. It appears, therefore, that the use of *smṛtyantara* in these cases is either stylistic or a matter of convenience; the author probably expected his readers to recognize the identity of the text cited, just as he did. How do we know with a great deal of probability, if not certainty, that our authors knew the identity of the text they were citing as *smṛtyantara*? Because they show a close familiarity with these texts throughout their commentaries: the text so cited are from well-known authors such as Manu, Yājñavalkya, Gautama, and Vasiṣṭha, who are the most commonly cited authors in these commentaries.<sup>6</sup>

I will present a few examples. Here is Viśvarūpa:

On YDh 1.28 (p. 45): “*vidyā manuṣyās ca vibhitāḥ parivartakena*” (VaDh 2.39) *iti smṛtyantarāt*.

Because of the *smṛtyantara*: “knowledge and human beings are sanctioned for barter.”

On YDh 1.39 (p. 53): “*tad dvitīyaṃ janma*” (GDh 1.8) *iti smṛtyantaram*.

There is a *smṛtyantara*: “That is the second birth.”

On YDh 1.50 (p. 57): “*caturthaṣaṣṭhāṣṭamakālabhoji bhaiḥṣam*” (VaDh 7.8–9) *ityādinā smṛtyantroktena vidhinā*.

According to the rules spelled out in *smṛtyantarās*, such as: “Eating almsfood every fourth, sixth, or eighth mealtime.”

6 We have good examples in Maskarin’s commentary on Gautama 1.1 (p. 2): *tathā ca smṛtyantaram: “śrutiḥ tu vedo vijñeyo dharmasāstraṃ tu vai smṛtiḥ”* (MDh 2.10) *iti*; on Gautama 2.5 (p. 36): *tatra “śūdreṇa hi samas tāvad yāvad vedena jāyate”* (MDh 2.172cd) *iti smṛtyantare śūdreṇa tulyadharmaśravaṇād ācamaṇaṃ śūdravad draṣṭavyam*; on Gautama 2.34 (p. 50): *tathā ca smṛtyantaram: “gacchantam anugacched āsinaṃ cottiṣṭhec chayānaṃ cāsina upāsita”* (VaDh 7.12) *iti*; on Gautama 2.42 (p. 52): *in cānāpady api brahmacāriṇaḥ śūdrābhyanujñānam anena kalpayitum yuktam, smṛtyantare atyantapraṭiśiddhatvāt, “śūdrānnarasapuṣṭāṅgo yo ’bhīyāno ’pi nityaśaḥ | jubvann api jaḥṇan vāpi gatim ūrdbvāṃ na vindati || iti |* (VaDh 6.28). Surely, Maskarin was aware that these and other similar citations are from Manu and other well-known texts.

On YDh 1.139 (p. 109): *gām parakīyām nācakṣīta*, “*gām dhayantīm parasmai nācakṣīta*” (GDh 9.23) *iti smṛtyantarāt*.

He should not inform about a cow belonging to someone else, because of the *smṛtyantara*: “He should not inform another person that his cow is suckling her calf.”

On YDh 3.256 (p. 117): *yat tu smṛtyantaram “pataty ardbaṃ śarīrasya bbāryā yasya surām pibet | patitārdbaśarīrasya niṣkṛtir na vidhīyate”* || (VaDh 21.15)

As to the *smṛtyantara*: “Half his body becomes outcaste when a man’s wife drinks liquor. No expiation is provided for someone half of whose body has become outcaste.”

On YDh 3.320 (p. 176): *smṛtyantare tu “payo gḥrtam udakaṃ vāyum pratryaham<sup>7</sup> taptāni, sa kṛcchaḥ”* (GDh 23.2) *ity uktam*.

It is stated, however, in a *smṛtyantara*: “(Subsisting on) hot milk, hot ghee, hot water, and hot air each day; this is the *kṛcchra* penance.”

Viśvarūpa also uses *smṛtyantara* regularly to refer to Manu, whose text he probably knew by heart:

On YDh 1.25 (p. 43): *abhividhāv ān draṣṭavyaḥ, “ṛṣayo dīrghasamḍhyatvād dīrgham āyur avāpnuyuh”* (MDh 4.94) *ity smṛtyantaradarśanāt*.

The particle *ā* is used inclusively, because it is stated in a *smṛtyantara*: “Because they performed their twilight worship for a long time, the seers obtained long life.”

On YDh 1.33 (p. 49): “*niṣekādīni karmāṇi*” *iti* (MDh 2.142) *smṛtyantarāt, pitety arthaḥ*.

[The term *guru*] means the father, because of the *smṛtyantara*: “The rites beginning with the impregnation ceremony.”

On YDh 1.79 (p. 82): *asavarṇāsu tu jātaḥputrasya yātbākāmyam, smṛtyantarāt: “kṛ-tadāro ’varān dārān bhikṣitvā yo ’dbigacchati | ratimātraṃ phalaṃ tasya dravyadātus tu saṃtatiḥ”* || *iti*. (MDh 11.5)

In the case of wives of different *varṇas*, however, a man who already has a son may (have sex) as he pleases, because of the *smṛtyantara*: “When a married man marries another wife after begging for the expenses, his reward is only sensual pleasure; the resultant offspring belongs to the man who defrayed the expenses.”

7 The edition of the *Gautamadbarmasūtra* reads *pratitryaham*, “each day for three days.”

On YDh 1.237 (p. 159): *hasābdo 'vadhāraṇārthaḥ, smṛtyantare "yathā brūyus tathā kuryāt"* (MDh 3.253) *iti śravaṇāt.*

The word *ha* is for emphasis, because we read in a *smṛtyantara*: ‘He should do exactly as they instruct.’

On YDh 2.121 (p. 243): *yat tu smṛtyantare "jyeṣṭhasya viṃśa uddhāraḥ sarvadravayāc ca yad varam"* (MDh 9.112) *ityādivibhāgavaiṣamyam avagamyate, tad bhrātṛṇām parasparānumatyā vijñeyam.*

We gather the inequality of the shares partitioned in statements such as this in a *smṛtyantara*: “The preemptive share of the eldest is one-twentieth, as well as the best item in the entire estate.” That should be understood as happening with the mutual agreement of the brothers.

On YDh 3.244 (p. 100): *smṛtyantare ca "prāsyed ātmānam agnau vā samiddhe trir avāksīrāḥ"* (MDh 11.74) *iti śarīratyāgadarśanāt.*

...and because the abandonment of the body is prescribed in a *smṛtyantara*: “Or, he may throw himself headlong three times into a blazing fire.”

On YDh 3.263 (p. 136): *tenāyaṃ ślokārthaḥ: ya ebhir brahmahaprabhṛtibhiḥ smṛtyantarānusāreṇa "saṃvatsareṇa patati"* (MDh 11.181) *ityādinā saṃparkam ābbhimukhyena yāti.*

Therefore, this is the meaning of the verse. A persons who intentionally comes into close contact with these people beginning with a murderer of a Brahmin, following the *smṛtyantara*: “In one year he becomes an outcaste” ...

Note, that in this last example, Viśvarūpa cites the entire Manu verse earlier in his commentary on p. 137.

In a similar manner, Medhātithi frequently refers to passages from Yājñavalkya as *smṛtyantara*:

On MDh 3.27 (Jha, p. 220): *anye 'pi smṛtyantaroktā varaguṇā draṣṭavyāḥ "juvā dbimāñ janapriyaḥ | yatnāt parikṣitaḥ puṃstve"* (YDh 1.55) *iti.*

One should ascertain also the other qualities of the groom given in a *smṛtyantara*: “young, intelligent, well liked by the people, and carefully tested with respect to his virility.”

On MDh 3.57 (Jha, p. 235): *yady api smṛtyantaram: "karma smārtaṃ vivāhāgnau kurvita pratyahaṃ gr̥hī | dāyakālabṛte vāpi śrautaṃ vaitānikāgniṣu"* (YDh 1.97) *iti.*

Even though there is the *smṛtyantara*: “A householder should perform the rites prescribed in the *smṛtis* every day in the fire kindled at his marriage or brought at the time of partition, and the Vedic rites in the three sacred fires.” ...

Likewise, he refers to a passage from Baudhāyana as *smṛtyantara*:

On MDh 4.43 (Jha, p. 348): *tatra śucitvavacanam “striyaś ca ratisamsarge”* (BDh 1.9.2) *iti smṛtyantradarsanena ratistrivīṣayaṃ vijñāyate.*

There, the statement on purity should be understood as referring to a woman taken for pleasure, by referring to the *smṛtyantara*: “women when one is making love.”

It is significant that Medhātithi, who is commenting on Manu, uses *smṛtyantara* to refer to a verse of Manu himself. Commenting on MDh 5.58 (Jha, p. 445), he says:

*tad yathā smṛtyantare “ā dantajanmanah”* (YDh 3.23), *tathā “bāle deśāntarasthe ca”* (MDh 5.78) *ityādinā sadyaḥśaucam śrutam.*

One hears of immediate purification, as in a *smṛtyantara*: “until teething,” and likewise: “in the case of a child or someone living in a different region.”

And in his commentary on MDh 9.118 (Jha, p. 276), he uses the term to refer to two unnamed texts, which are taken from the texts of Yājñavalkya and Nārada, both of which are well-known to Medhātithi:

*smṛtyantarāny evam eva pakṣam upodbalayanti: “asaṃskṛtās tu saṃskāryā bhrātr-  
bhiḥ pūrvasaṃskṛtaiḥ | bhaginiyaś ca nijād aṃśād datvāṃśam tu turīyakam” || iti* (YDh 2.128). *tathā: “ā saṃskārād dbared bhāgam parato bibhṛyāt patiḥ” iti* (NSm 13.26).

The *smṛtyantarās* support that same viewpoint: “Brothers who are already married, however, should perform the marriages of their unmarried brothers and sisters, each contributing a quarter from his share of the inheritance for that purpose;” likewise, “Until her marriage her share of the inheritance should support her; after that, her husband should maintain her.”

There are parallel expressions that are used by commentators with meanings similar to those associated with *smṛtyantara*. One of the more common is simply *smṛti*, which seems to have a meaning identical to *smṛtyantara*. Thus Medhātithi (on MDh 3.60; Jha, p. 238) has both terms right next to each other:

*agniparigrahasya ca smṛtyantare kālāntarasyāpi śrutatvān nāvāśyam vivāha eva  
parigrahaḥ. evaṃ hi smṛtiḥ: “bhāryādir agnir dāyādir vā”* (GDh 5.7) *iti.*

Because in a *smṛtyantara* other times are given for the setting up of the fire, it is not obligatory to set it up specifically at one’s marriage. For, there is the *smṛti* to this effect: “Setting up the fire is done either on the day of marriage or at the division of the inheritance.”

Medhātithi further uses both *smṛti* and *smṛtyantara* with identical meanings in his commentary on MDh 3.161 (Jha, p. 281) and with reference to two verses from Gautama:

*tathā ca smṛtiḥ: “aṣṭau varṣāny udikṣeta ṣaḍ ity eke”* (GDh 18.19) *iti*.

There is a *smṛti* to this effect: “She should wait for eight years; some say for six.”

and

*smṛtyantare ’pi tu paṭhyate “bhrātari ca jyāsasi”* (GDh 18.18) *iti*.

However, we read also in a *smṛtyantara*: “And when older brother (is missing).”

Here the *smṛti* he cites is Gautama, a text with which Medhātithi was very familiar, citing it more than any other Dharmasāstra. And Viśvarūpa, interestingly, at YDh 1.69 (p. 72) cites the previous verse of Yājñavalkya (YDh 1.68), calling it a *smṛti*:

*nanu iyam api smṛtir eva “aputrām gurvanujñānāt”* (YDh 1.68) *ityādi*.

Surely, this too is indeed a *smṛti*: “(He should approach) a sonless woman when authorized by the elders.”

Two other pairs of expressions that approximate *smṛtyantara* are (1) *smaraṇa* and *śravaṇa* and (2) *vacana* and *ukta* (as also simply *āha*). So, Medhātithi (on MDh 3.100; Jha, p. 253) once again cites Gautama with the expression *uktam* in connection with receiving the teacher in one’s house:

*guruḥ prabhuvaḍ upacaryaḥ, “nivedya ṣacanakriyā”* (GDh 5.26) *ity uktam*.

The elder (or teacher) should be served just as the king. It is stated: “After announcing, he should do the cooking.”

Commenting on MDh 3.108 (Jha, p. 256), furthermore, he uses *vacanāt* to refer to Gautama:

*āturasya tu śarīradbhāraṇaṃ yenopāyena bhavati vidhyantarātikrameṇāpi tasyāśrayaṇaṃ yuktam: “sarvata evātmānaṃ gopāyet”* (GDh 9.34) *iti vacanāt*.

When someone is sick, however, it is proper to employ the therapy that would cure him even if it entails violating an injunction, because of the statement: “Let him take care of himself in every possible way.”

Elsewhere, on MDh 3.144 (Jha, p. 273), he simply says *āha* with reference to Gautama:

*āha ca “vāgrūṣavayaḥśīlasampannaḥ”* (GDh 15.9).

And he says: “One who is endowed with eloquence, beauty, age, and virtue.”

Viśvarūpa (on YDh 1.237; p. 159) uses both *smṛtyantara* and *śravaṇāt* in the same sentence:

*haśabdo 'vadhāraṇārthaḥ, smṛtyantare "yathā brūyus tathā kuryāt" (MDh 3.253) iti śravaṇāt.*

The term *ha* is meant as an emphasis, because it is given in a *smṛtyantara*: “He should do as they tell him.”

Viśvarūpa also (on YDh 1.145; p. 111) uses *vacana* to refer to Manu:

*“pāṇyāsyo hi dvijaḥ smṛtaḥ” (MDh 4.117) iti vacanāt.*

Because of the statement: “For it is said that the hand of a twice-born is his mouth.”

The term *smṛtyantara* with the meaning of “various *smṛtis*” is used by Medhātithi along with *samācāra* to point out the two major sources (*mūla*) of dharma. The compound of these two terms means the same as the older compound *smṛtyācāra*. Commenting on MDh 4.43 (Jha, p. 348), he says that *smṛtyantara* and *samācāra* support the prohibition of eating in the company of one’s wife:

*sa punar ayam idṛśaḥ sabārbhaviśeṣaḥ pramāṇāntarataḥ smṛtyantarasarāmācārādeḥ.*

Now, this specific meaning of the term *saba* (“with”) is derived from various means of knowledge (*pramāṇāntara*) such as *smṛtyantara* and proper conduct.

Commenting on MDh 4.113 (Jha, p. 371), he explains the term *aṣṭakāsu* in the plural found in the root text: *aṣṭakās ca sarvā aṣṭamyah, smṛtyantarasarāmācārābhyām* – “And ‘eighth days’ refer to all eighth days based on *smṛtyantara* and proper conduct.” Thus, various *smṛtis* and normative practice support taking *aṣṭakāḥ* to mean all *aṣṭakā* days.

One could cite dozens of other examples of *smṛtyantara* – and other parallel terms that serve as substitutes – to show that this expression need not, and most often does not, refer to floating texts whose identity is unknown to the author. The expression was probably coined at least by the time of Bhārucci, that is, around the seventh century CE.<sup>8</sup> I think its use, like many other idiomatic expressions, was most often determined by the style of each author. When used in the plural, often in the locative, the expression may be translated as “in various *smṛtis*.” It is similar to a theologian saying that a particular point is made “in various Biblical texts.” We know that frequently these “various *smṛtis*” were known to the author because he cites specific texts immediately after he uses this expression. I also see *smṛtyantara* used like “certain” in English, when it is used with reference to something specific but not explicitly named or stated. So, we can say this is found in “certain *smṛtis*,” and I believe this captures the

8 I have not been able to find *smṛtyantara* in either Śābara or Kumārila. I think, however, it is worth a more thorough search.

meaning of both “various” and “specific.” Why Medhātithi, for example, can say “Gautama says” in one place, and refer to Gautama as *smṛtyantara* at other places is difficult to determine. It appears that the use of the expression is very much dependent on the literary style of the author. We should not try to read too much into it; overinterpreting it will only lead us astray. It was, I think, a convenient expression, a shorthand, that many of Dharmasāstric authors found convenient as they composed their texts containing innumerable citations.

## Abbreviations

BDh	<i>Baudhāyanadharmasūtra</i>
GDh	<i>Gautamadharmasūtra</i>
MDh	<i>Mānavadharmasāstra</i>
NSm	<i>Nāradasmṛti</i>
VaDh	<i>Vasiṣṭhadharmasūtra</i>
YDh	<i>Yājñavalkyadharmasāstra</i>

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## Mīmāṃsā and Dharmasāstra Sources on Permissions\*

Elisa Freschi

## 1. Premise

In common parlance, people implicitly refer to three types of permissions: (1) “better-not permissions” (e.g., “You may smoke in the designated area” – implying that it would be better if you would not smoke), (2) “free-choice permissions” (e.g., “You may leave the room during the break” – where neither leaving the room nor not leaving it are the preferred option), (3) “rather-so permissions” (e.g., “You may participate in the discussion” – implying that participation is hoped for). Euro-American deontic logicians add implicit permissions, which are derived from obligations (e.g., “You may pay taxes” given that one ought to pay taxes). Thus, just talking about “permissions” does not specify the status of the action permitted (is it the preferred option? Is it even obligatory?).

A further ambiguity is linked to the status of the action permitted prior to the permission. Better-not permissions, such as “you may smoke in the designated area,” presuppose a general prohibition to smoke, whereas free-choice permissions and rather-so permissions presuppose that the permitted actions are previously extra-normative (not normed). Last, implicit permissions may regard actions that are even explicitly obligatory.

Mīmāṃsā authors discuss two distinct types of permissions: “better-not-permissions” (where  $P(x)$ <sup>1</sup> means that usually  $(\neg x)$  is obligatory (or that  $(x)$  is forbidden) and that it

\* I am grateful to Boram Lee and Munema Moiz for reading and commenting on an earlier draft of this paper. I discussed a draft of the first sections of this paper with my undergraduate students of PHL 418 at the University of Toronto and I am grateful to them all (and to Konstantina Anagnostopoulou in particular) for pointing out unclear passages (and for a fun discussion). I am also grateful to Timothy Lubin and Sudipta Munsu for help locating some Dharmasāstra passages. Last, I am more than grateful to Agata Ciabattoni and Josephine Dik for months of discussions on the deontic logic side of permissions (see Ciabattoni, Dik and Freschi 2023, focusing on the deontic aspect of the debate on permissions). For more on our joint efforts on formalizing Mīmāṃsā deontic teachings, see [mimamsa.logic.at](http://mimamsa.logic.at).

1 I will use an extremely limited formalization in this article.  $O(x)$  means “It is obligatory to do  $x$ ,”  $F(x)$  “It is prohibited to do  $(x)$ ” and  $P(x)$  “It is permitted to do  $(x)$ .” A slash indicates the addressee (*adbikṛta*) of a command, so that  $O(x/b)$  means “It is obligatory to do  $(x)$  if one is a  $b$ ,” and so on.  $\neg$  indicates a negation, e.g.  $\neg O(x)$  means “It is not obligatory to do  $x$ .”  $O(\neg x)$  means “It is obligatory not to do  $x$ .”  $\wedge$  means “and”. For instance,  $O(x) \wedge F(b)$  means “It is obligatory to do  $(x)$  and it is forbidden to do  $(b)$ .”

would be better if one were to keep ( $\neg x$ ) (or not to do  $x$ ), but that one can do it with a little sanction if there is no other way out) and “grantable permissions” (a superior person states to an inferior that they will not utter the prohibition to perform the action ( $x$ ) the inferior is already inclined to perform – in this case the action is deontically indifferent, neither encouraged nor sanctionable).<sup>2</sup> The latter type of permission depends on a specific pragmatic setting and cannot occur within the context of a law code or a sacred text that is believed to have deontic authority independent of any author. I therefore focus primarily on the first type in the following (for more on the latter, see the discussion in section 3.2.1<sup>3</sup>).

## 2. Permissions, prescriptions, and prohibitions

One of the most striking features of *Mīmāṃsā* deontics is the non-interdefinability of deontic concepts. Negative obligations ( $O(\neg x)$ ) are not the same as prohibitions ( $F(x)$ ) and there are three distinctive operators that are *not* mutually defined. When it comes to permissions, this means that  $P(x)$  does not just mean  $\neg F(x)$ .

By contrast, in *Mīmāṃsā* terms, saying “it is permitted to do ( $x$ )” entails:

- that ( $x$ ) was previously negatively obligatory or forbidden
- that doing ( $x$ ) is not on the same level as not doing it, or as doing ( $x$ ) while ( $x$ ) is an extra-normative action (see below for the concept of “extra-normative”).

In fact, doing a permitted ( $x$ ) exposes one to the risk of restrictions. For instance, the general permission to sell if one is a *Brāhmaṇa* in distress is restricted in case of selling sesame.<sup>4</sup> For a more familiar parallel, consider cases such “It is permitted to smoke in this part of the building” (where one knows that further restrictions may apply, e.g., that one will not be allowed to smoke if a child or a pregnant woman is present), as opposed to smoking until some decades ago (when it was, in many parts of the world, just not normed and everyone smoked in restaurants, clubs, trains, airplanes and cinemas). How bad is it to do ( $x$ ) if ( $x$ ) is permitted? The consequences differ, as I will discuss below (section 3.3.3), according to the type of permission, and range from a small sanction (anyway less serious than the sanction occurring to one who would have performed ( $x$ ) if ( $x$ ) had been prohibited) to no sanction at all, and rather a reward if one avoids to perform ( $x$ ). In this sense, all permissions are *better-not-permissions* (permissions to do something which one would be better off not performing) and some of them carve the space for a *supererogatory resolution* (i.e., the resolution not to do ( $x$ )), which, if observed, leads one to a reward. In fact, supererogation is also based on

2 The label “grantable permissions” has been introduced in Hansson 2013.

3 There is hardly any literature on permissions in *Mīmāṃsā*. This article improves on what I wrote on permissions in Freschi & Pascucci 2021 (section 3.5) and on deontic clashes involving permissions (section 6.2.2).

4 See Vijñāneśvara’s *Mitākṣarā* on *Yājñavalkyasmṛti* 3.35. See also Ciabattoni, Dik & Freschi 2023.

permissions in Mīmāṃsā. For instance, given a negative obligation (not to eat meat) and a permission to disregard it (in case of hardship), keeping the original negative obligation is considered supererogative.<sup>5</sup>

The idea of interpreting permissions as exceptions reflects a quite common practice in normative texts, such as most legal codes used in European jurisprudence, where permissions are normally stated only if there is an expectation of the contrary, due to some general prohibition. Norms stating permissions usually derogate from what is stated in other norms.<sup>6</sup> Similarly, the idea that permissions grant one a different degree of freedom if compared to the non-normed space of indifferent actions is neatly reflected by the comparison of cases like “You are permitted to run two kilometers per day” (said by a physician to her patient, who is recovering from a heart attack), as opposed to the same person’s freedom to run prior to the heart attack. The permission rules the realm of running by introducing a space of possibility that is, however, not as absolute as the space of extra-normative actions. Accordingly, permitted actions are, by rule, actions one would be naturally inclined to do, prior to the intervention of a normative text prohibiting them (or obliging one to refrain from them). In the Mīmāṃsā deontics, it would not make sense to have  $P(x)$  with regard to impossible actions like flying or undesirable actions like harming oneself.<sup>7</sup>

To define the realm of “whatever is not prohibited is permitted,” Mīmāṃsā authors introduce the concept of “normatively indifferent actions,” i.e., actions that are possible, but (until the present moment), neither prohibited *nor* enjoined (nor permitted in the Mīmāṃsā sense) and that constitute most of our everyday life.<sup>8</sup> These are the ones on which normative texts make an intervention. Offering to Soma is accordingly not permitted in a Mīmāṃsā sense, because it is enjoined. In the following, I will call whatever is neither prohibited nor permitted

5 See also Hurka & Shubert 2012.

6 See, e.g., the entry on “permission” in Bouvier 1856. As a matter of fact, Bouvier distinguishes between express permissions, that “derogate from something which before was forbidden, and may operate in favor of one or more persons, or for the performance of one or more acts, or for a longer or shorter time” and implied permissions. The former correspond to the derogation case mentioned here. It is worth mentioning that the latter are different from what Hansson 2013 (quoting previous scholars) calls “implied permissions” and rather correspond to his “tacit permissions.” They are in fact defined as “those which arise from the fact that the law has not forbidden the act to be done” (Hansson 2013: 201–204).

7 For the sake of the argument, I am assuming that harming oneself is not desirable for anyone.

8 Cf. McNamara’s introduction of “indifference” in McNamara 1996, section 1.2. McNamara connects the operator for indifference with the one for “moral significance” insofar as the moral significance of an action ( $x$ ) involves its not being indifferent. This feature also distinguishes indifference from supererogation (both indifferent and supererogatory actions are neither obligatory nor impermissible, but supererogatory actions are morally significant). In general, McNamara’s contribution opens up for a more complex landscape of deontic concepts, one that could be useful to compare with the Mīmāṃsā approach.

nor enjoined “extra-normative.” So, there are either normed actions (enjoined, prohibited or permitted) or extra-normative ones.

### 3. Mīmāṃsā sources on permissions

Sanskrit can express both obligations and permissions with the same verbal forms (optative etc.<sup>9</sup>), so that at times it might not be easy to distinguish them, because the Sanskrit form cannot be one’s final evidence (an example will be discussed below, section 3.2.2). For a comparison, one might think of the English sentence: “you may pay either by bank transfer or by credit card” displayed at the end of an online transaction procedure. Although the superficial structure of this sentence resembles a permission, the thought actually expressed is an obligation to choose among two options. Therefore, the linguistic form of a command is not sufficient to identify it, and exegesis is needed. In the following sections, I will focus on cases that Mīmāṃsā authors identified as permissions, either insofar as they explicitly labelled them as such or because they described the command as involving the exception to a previous prohibition.

#### 3.1. Permissions and deontic clashes

Permissions play an important role in Mīmāṃsā deontics as a solution to some deontic clashes.<sup>10</sup> Such is the case of a prescription seemingly clashing with a previous seeming prohibition having a different level of specificity, for example, the prescription to eat after a certain moment of the sacrifice given the seeming prohibition to eat during the same sacrifice. The former is construed as a permission, and the previous command is construed as embedding an exception (the term used is *paryudastānujñā*). Thus, starting with what looks like:

- (i) O(eating/time 1) (“It is obligatory to eat at time 1”)

one interprets it as:

- (i’) O( $\neg$  eating/during sacrifice)  $\wedge$  P (eating/time 1 of sacrifice) (“It is obligatory not to eat during the sacrifice and it is permitted to eat at a certain point within the sacrifice”).

Why would one construe the seeming prescription (i) as a permission instead of reading it as a prescription?

9 The optative suffix (*liñ*) is used in Sanskrit (like the subjunctive in Latin and the optative in ancient Greek) to denote both permissions and prescriptions.

10 For a schematic summary of all possible clashes (prescription against prescription, prescription against prohibition etc.), see Freschi & Pascucci 2021, figure 9.

- Because each prescription needs to enjoin something new<sup>11</sup> and eating is something naturally desired, that is, something one is spontaneously inclined to do (see also n. 20). Hence, a prescription prescribing eating would be meaningless, which is impossible according to Mīmāṃsā, for which meaninglessness in the Veda is the single thing to be avoided at all costs. A command to eat at a certain point, by contrast, would make sense as the interruption of the command not to eat.
- Moreover, if (i) were a prescription, it would include a reward, whereas there is no mention of any reward (by contrast, as discussed below, there is a reward for keeping the opposite behavior).<sup>12</sup>

Interestingly, Kumāṛila Bhaṭṭa construes the *paryudastānujñā* not as an exception to a previous prohibition but as an exception to a previous negative obligation (the obligation not to eat in the case discussed above). Why so? Because failing to observe the above-mentioned prohibition to eat would need to entail a sanction, although minor. By contrast, if this is interpreted as a negative obligation, by not observing it one at most does not get a positive result, but one does not risk any sanction. Moreover, this harmonizes with what Kumāṛila will say in *Tantravārttika* (henceforth TV) ad *Śābarabhāṣya* (henceforth ŚBh) 1.3.4, namely that by keeping the negative obligation – although there is permission to neglect it – one gets a reward.

A *paryudastānujñā* is preferred over a *bādba* “suspension” as a solution for deontic clashes, because in the *paryudastānujñā* case the former command is neither invalidated nor suspended.<sup>13</sup> A new command is added, which diminishes the consequences of the lack of compliance with a previous fixed negative obligation,<sup>14</sup> but the negative obligation remains in place insofar as keeping it will lead to a positive reward.

## 3.2. Śabara

### 3.2.1. Śabara and Maṇḍana on grantable permissions

Śabara (5th cent. CE?) also deals with a different kind of permission, called *anujñā* (or *anujñā-pana*), which is conceived of as a subcategory of prescription, usually as a prescription of an inferior person directed to a superior.<sup>15</sup> These permissions are only possible within a certain pragmatic setting in which there exists a clear hierarchy between speakers. However, such a setting is not found in the Veda nor in any other text independent of its author (as a law code).

11 See Freschi & Pascucci 2021, section 4.1.

12 I am grateful to Boram Lee for having suggested this point to me.

13 Freschi & Pascucci 2021.

14 It cannot be an elective negative obligation, because elective obligations only regard sacrifices as a whole, once a sacrifice has been undertaken every obligation is fixed.

15 See Maṇḍana (8th cent. CE), beginning of chapter 11 of the *Vidbiviveka*.

In such cases, the person asking for permission (*anujñā*) is by rule an inferior who is inclined to perform a given action (x), but is afraid that their superior might utter a prohibition to perform (x). The superior grants (*anuman-*) that the inferior completes the action they were already inclined to perform.

In short, if something is “worldly permitted,” this entails the following six aspects:

1. that there are a superior and an inferior person
2. that the inferior person is independently about to perform (x)
3. that (x) is for the benefit of the inferior person
4. that the superior person could prohibit the inferior to do (x)
5. that the inferior person is aware of the possible prohibition
6. that the superior person does not prohibit the inferior to do (x), so that the inferior person can go on undertaking it.

What does aspect 3 mean? Can't the inferior person ask the superior one for permission to do something that is ultimately for the sake of the superior person, e.g., a servant asking their master for the permission to clean their room? According to the discussion seen in Śābara (see immediately below) and Maṇḍana, this case can only be called “grantable permission” if the inferior person was independently about to undertake to act and saw some personal benefit in it. For instance, because they wanted to clean the room earlier than agreed upon in order to be free thereafter, or because they wanted to please their master in order to receive an increased salary.

Thus, as in “better-not permissions,” here too the permission contrasts with a prohibition (in this case, a prohibition one is afraid of, although it has not yet been uttered). Unlike in the “better-not permissions,” the act of granting allows one to perform or not to perform the action. It only confirms the listener in believing that no prohibition applies to the act or to its modality of performance. Therefore, the granted act goes back to being extra-normative. In this sense, these permissions are very different from Vedic ones, insofar as they only remove a prohibition.

Can the act go back to being obligatory? Śābara mentions the case of the duty to eat from a certain vessel during a sacrifice and a person asking the permission to eat first. Once the permission is granted, they can eat (which is obligatory). However, the permission is not about the fact of eating (that is obligatory), but about the fact of eating *first*, that – once one has ascertained that there is no prohibition about it – is extra-normative.

Accordingly, ŚBh ad PMS 3.5.41 discusses the permission to eat, which needs to be expressed with a specific mantra during a certain sacrifice. A following *sūtra* (3.5.43) discusses further the conditions for such permission (*anujñāpana*). The general background is a setting in which one needs to eat and the topic to be settled is whether one needs to ask for permission to eat in every case or only when eating with someone from the same vessel. The concluding opinion favors the latter opinion. One needs a permission only when one wishes to do what can be done also by another:

And this is the essence of the permission, when someone wants to do something which could be done by someone else, they say “Please permit [me to do it]!”

*anujñāpanasya caitad rūṣam, yatrānyena kartavyam anyas cikīrṣet, so “anumanyasva” iti brūte* (ŚBh ad PMS 3.5.43, vol. 2, p. 1012f. of Ā edition).

In fact, another term related to “permission” is *anuman-* (e.g., ŚBh ad PMS 3.5.43, p. 1012f, vol. 2 of Ā edition), 3.8.20 (vol. 2, p. 1123 of Ā edition), 6.1.15 (vol. 2, p. 1361 of Ā edition), 7.4.12 (vol. 2, p. 1577 of Ā edition), which takes into account the listener’s side of the concept of permission. The speaker asks for *anujñā* “permission” and the listener answers by “consenting” *anuman-*. In this case, the permission allows one to do something which could have been done otherwise, namely with a different sequence of eaters. Thus, the permission blocks a possible future prohibition by one’s senior, but it also sets a specific restriction on the openness of possible procedures. It therefore prevents one of the main perils for the Mīmāṃsā exegetical agenda, namely an open-ended situation, or *aniyama*. Open-ended situations are to be avoided within the Mīmāṃsā agenda, because Mīmāṃsā authors aim at producing an interpretation of the Veda which is independent of the whims of a particular interpreter. Open-ended situations, by contrast, are by definition open to multiple solutions.<sup>16</sup>

Unfortunately, Kumāṛila’s *Tuṣṭikā* commentary on the above passages of the *Śābarabhāṣya* is short and does not elaborate on the topic of grantable permissions.

Later within Mīmāṃsā, Maṇḍana (at the beginning of the *siddhānta* part in the *Vidhiviveka*, chapter 11) goes back to this pragmatic approach to permissions and systematizes this case as due to hierarchy and who benefits from the action to be undertaken. He distinguishes therefore permissions from orders (uttered by a superior to an inferior concerning an action that is for the benefit of the superior person) and requests (uttered by an inferior to a superior person concerning an action that is for the benefit of the inferior one). In fact, as in orders, the structure is from the superior to the inferior, and in permissions the person who is benefitting from the action is the one who receives the command. Maṇḍana does not say explicitly that the superior could prohibit one from performing the action, but this is intrinsic in the fact that they are superior.<sup>17</sup>

16 A solution is open-ended only if, at a given point, it can lead to two or more different outputs. The avoidance of open-endedness does not entail that if the speaker consents, then they cannot change their mind and say, for instance: “No, wait, you may not eat first.” In such a scenario, at each given moment the inferior person would have known what to do. (I am grateful to Munema Moiz for having raised this point.)

17 For more details, see the introduction in Freschi forthcoming (a).



### 3.2.2. Śabara on better-not permissions

ŚBh ad PMS 6.8.17–8 discusses the question of whether it is legitimate to take a second wife. Śabara refers to the deontic command<sup>18</sup> not to take a second wife if your wife is virtuous and fertile and concludes that if she is neither, then one could take a second one. Similarly, the deontic command not to take a second wife if one is drinking Soma should mean that in any other circumstance one could take one:

[Obj:] Prior to the setting of the ritual fires, one can marry a wife just for the sake of the rituals, and thereafter just for the sake of progeny. Therefore, if it is so, there is no clash [with commands about having a single wife].

[R:] It is not so. The wife is for all purposes, not only for the sake of progeny. It has been said “Because there is no distinction in the desire (*utsaha*) for the result” (PMS 6.1.13) (which discusses the wife’s role in sacrifices). Also because of that reason, one should not marry twice. Moreover, it is recollected that “In matters of law (*dharmā*), success (*artha*) and pleasure (*kāma*), one should not cross boundaries.” And in that case (that of remarrying), one would be crossing boundaries. Also for this reason, one should not marry twice. A single wife is needed for the sake of rituals and for the sake of progeny.

[..]

This is understood: Prior to the initiation, one does not have a wife. What has been said, namely “only one wife,” that is correct. Just like the recollected text says: “In matters of law (*dharmā*), success (*artha*) and pleasure (*kāma*), one should not cross boundaries.” And: “And one should not take another [wife] if one has one who is virtuous and fertile.” Similarly, that too is transmitted: “If one of the two [qualities] is missing, one could take another [wife].” Therefore, a person whose wife is not virtuous or not fertile “could take another one.” And the linguistic expression [in the PMS] “because of drinking Soma” points out also a commendatory statement, namely: “The one who drinks Soma should not take a second wife.” This shows also a second wife [as a possibility for the one who has not drunk Soma].

*athocyate, prāg ādbhānāc ca, karmārthaiva, ūrdhvaṃ cāpatyārthaivāsya bhaviṣyati. tenaivaṃ saty asya na kiṃcid virotsyata iti. ucyate, naitad evam. sarvārthā hi sā, na kevalam apatyārthatām eṣyati. tad uktam, pbalotsābhāviṣeṣād iti. tasmād api na dvir dārasaṃgrahaḥ. api caivaṃ smaryate, dharme cārthe ca kāme ca nāticaritavyeti. evaṃ saty aticaritā syāt. ato na dvir dārasaṃgrahaḥ. ekaiva bhāryā karmārthā-patyārthā ca.*

18 Śabara does not call it neither prohibition nor negative obligation and the Sanskrit form does not indicate conclusively one or the other.

[...] (PMS 6.8.18)

*grhyata etad, prāg upanayanān nāsti patnīti. yad uktam ekaiva patnīti. tan na mṛśyate. yathaiva smṛtiḥ, dharme cārthe ca kāme ca nāticaritavyeti. dharmaprajāsampanne dāre nānyāṃ kurvīte ca. evam idam api smaryata eva, anyatarāpāye 'nyāṃ kurvīte. tasmād yasya na dharmasampannā, na prajāsampannā vā patnī, so 'nyāṃ kurvīte. somaṇād iti cārthavādāṃ vyapadiṣati sma. somaṇo na dvititāṃ jāyāṃ abhyasūyata iti dvitīyāṃ api jāyāṃ darśayati* (ŚBh ad PMS 6.8.17–18, vol. 4: 1512 of the Ā edition).

From the last line, I derive the following metarule:

If (x) is prohibited under condition (y), then (x) in general is not prohibited.

Please note that the passage starts with Śabara's agreement with the fact that one only needs one wife. Thus, taking a second one is permitted only under specific circumstances and is not as free as an indifferent action.

As mentioned above (section 3), the linguistic form of the exhortative statement "One *could* take a second wife if the first one is not virtuous or fertile" is indistinguishable from the prescription to take a second wife ("One *should* take ...").<sup>19</sup> However, the latter interpretation is blocked by the fact that prescriptions need to convey new information (because of the Mīmāṃsā metarule about novelty), whereas the desire to marry a new wife, given the above conditions, would be spontaneously present.

Better-not permissions can only occur as exceptions to a previously stated prohibition or negative obligation and enable one to perform actions one would naturally be inclined to do. In the example discussed above, one would be naturally inclined to marry<sup>20</sup> and it is generally prohibited to remarry, but one can remarry if his first wife is not virtuous or if she is infertile. How can one decide whether these permissions are an exception to a previous prohibition or negative obligation? No author answers this question explicitly, but one can derive some hints from Kumāṛila when he speaks of better-not supererogatory permissions (see above, section 3.1), since these can only be exceptions to previous negative obligations. This also harmonizes with Kumāṛila's discussion of the *pariyudastānujñā* case, where he explicitly speaks of the previous command as a negative obligation.<sup>21</sup>

19 And in fact G. Jhā's translation of this passage oscillates between the two possibilities and speaks once of "he should certainly take another" and once of "a second wife may be taken" (Jhā 1933: 1211–1212). Similarly, G. Jhā speaks of "permissible" both in the case of Mīmāṃsā permissions (i.e., better-not-permissions, e.g., in ŚBh ad PMS 7.2.13 (vol. 4: 1545), where the Sanskrit text speaks of doing something only "if there is no other way" (*agati*), as well as in the case of what happens "according to the rules" (*nyāyā*) (e.g., in ŚBh ad PMS 5.3.2, vol. 4: 1320). Readers might want to check the original Sanskrit in such cases.

20 After all, sexual pleasure (*kāma*) is among the four natural aims of human beings (*puruṣārtha*).

21 By contrast, in the second wife case, Śabara does not give us enough information to decide.

Several passages of the *Śābarabhāṣya* (ad PMS 5.1.14, vol. 4: 1302; and ad PMS 5.4.2, vol. 4: 1336) hint, without discussing the topic in full, at the fact that some interruptions (*vyavadhāna*) within the sequence of acts in the sacrifice are permissible (*anujñāta*). The text does not get into many details, but it is clear from context that interruptions within a ritual sequence are usually prohibited, but might be permitted (although this is not a preferable option) in specific cases. ŚBh ad PMS 5.4.2 explains that there should be no more interruptions than the ones explicitly permitted (*anujñātebhyo vyavadhāyakebhyo nābhyādikaḥ*). ŚBh ad PMS 5.1.14 explains that more interruptions should be avoided than the ones which are permitted (*anujñāta*) because of “possibility” (*sāmarthyā*), i.e., because it would not be possible to avoid them altogether.

### 3.3. Kumāṛila: Better-not-Permissions and supererogatory resolutions

Considering Kumāṛila’s exceptional contribution to the philosophy of Mīmāṃsā, it is possible that Kumāṛila is the first Mīmāṃsā author to explicitly discuss permissions as being always better-not-permissions. However, as is typical for Mīmāṃsā authors and for the Sanskrit genre of philosophical commentaries, he does not systematically engage with the definition of better-not-permissions. Hence, in the following, I will have to zoom in on the details of Kumāṛila’s discussion to be able to extract his background theory of better-not-permissions.

In the following sections, I will focus on TV ad ŚBh 1.3.4, where Kumāṛila discusses the case of eating meat. This is absolutely prohibited for certain classes of people and on certain days of the month. On all other days, it is permissible. However, if one still refrains from eating meat, this is a meritorious act which leads one to the accumulation of good *karman*. This means that the permission is a better-not permission and that the deontic command of which it is an exception is not a prohibition, but rather a negative obligation, by keeping which one gets a reward. In fact, Kumāṛila speaks of a *manahkarman* “mental act, resolution” of keeping the negative obligation.

#### 3.3.1. Permissions and hardship

Kumāṛila in TV ad ŚBh 1.3.4 discusses the difference between violating a prohibition because of times of hardship or because of a prescription prescribing to do so.<sup>22</sup> He focuses on explicit permissions (*anujñā*)<sup>23</sup> and the difference between doing something not permitted, because there is no other way out (e.g., one risks starvation and therefore eats meat) and doing something explicitly permitted. Eating meat while risking starvation depends on the general (*sāmānya*) permission (*abhyanujñāna*) to follow different courses of action in times of hardship, even though there is no specific permission about eating meat in the case of

22 Subbāśāstri 1929–34, vol. 1b: 186–196.

23 Subbāśāstri 1929–34, vol. 1b: 190.

starvation.<sup>24</sup> Kumārila explains that when there is a specific permission, then there is no flaw at all in eating meat (or the like) (*atyantanirdoṣa*), whereas there is a “risk of flaw” (*stokadoṣa*) in the case of following only the general permission. Perhaps because in the case of the general permission one could still imagine that one might have had other chances? In fact, first Kumārila does not spell the point out, and rather quotes Manu explaining that at the end of the time of hardship one will need to undergo a purification, typically in the form of an expiation (*prāyaścitta*) ritual. This means that, if one violates a prohibition (such as eating meat) in times of hardship, one is sanctionable (perhaps in the sense of being liable to accumulate bad *karman*), but the sanction is minor and can easily be canceled through the performance of a minor expiation. However, immediately thereafter, Kumārila explains that if there is really no other way (*gatyantārāsambhave*), then one is free of flaws (*nirdoṣa*).<sup>25</sup> This suggests that the “risk of flaw” and the consequent need for expiation was meant to cover cases in which there would have been a way to avoid violating the prohibition without risking death, but this would have been cumbersome. In such cases, there is a sanction, but it is minor. When there is an explicit permission or really no way out, then no sanction accrues to one. Kumārila adds here a parallel from ritual obligations: If there is an obligation to do (x) and an alternative to do (y) is laid out in case (x) is impossible, but one performs (y) even though (x) would have been possible, then one will not get the result of the ritual (*prabhuḥ prathamakalpasya yo ’nukalpena vartate | sa nāpnoti phalam*).<sup>26</sup> The underlying similarity between the two cases lies in the fact that better-not-permissions work like substitutions in the case of ritual commands, namely they are only justified if the primary command cannot be fulfilled.

### 3.3.2. Permissions and supererogatory resolutions

Kumārila connects the above remark with the case of the explicit permission to eat at the house of someone who has just purchased Soma (and is therefore in the process of performing a ritual). During all sacrifices one should usually not eat, but an explicit permission to do so is provided in the Veda. How to make sense of it? Kumārila attempts two explanations. First, he says that the explicit permission to eat at the home of someone who has just purchased Soma in case of risk of starvation is only valid as a permission if it is truly the case that no other option is available. Secondly, he also offers a different reading of the same explicit permission, namely: It is permitted to eat at their place, which means that by doing so, no sanctions accrue to one. However, if one nonetheless refrains from eating until the end of the sacrifice, then this counts as a (supererogatory) mental action (*manabkarman*) and will get one a reward. Which reward? Kumārila says it is *śreyas* “one’s best,” which might point

24 The theme of eating meat when one risks starvation probably originates from the *Mahābhārata*, where Viśvamitra is described as eating dogmeat (12.139). See Chapter 4 in Sathaye 2015.

25 Subbāśāstri 1929–34, vol. 1b: 191.

26 *Ibid.*

to good *karman*, as an always desirable and good-conducive reward. Why does Kumārila call it a mental action? Probably in order to equate it with a *vrata* “vow” or the decision to keep a negative obligation, and to explain how it can count as an *action*, even though nothing seems to happen in the external world (the action is one’s decision to refrain from eating).<sup>27</sup> Kumārila does not call it a *kāmyakarman* “elective ritual,” but this mental action seems to work in a comparable way, since its omission is not sanctioned, but its performance leads to a reward. However, usually *kāmyakarmans* are prescribed in view of specific rewards, whereas here the performance leads to a generic good result. This could be the reason for Kumārila’s hesitancy to call it a *kāmyakarman*.

Kumārila also approvingly quotes the *Mānavadharmasāstra* (henceforth MāDhaŚā) in this connection:

There is no flaw attached to eat meat, drink wine or make love [apart from the specific cases in which these behaviors are prohibited] |

Undertaking an action with regard to them is [natural] for living beings. Abstaining from action, however, leads to great results ||

*na māṃsabhakṣaṇe doṣo na madye na ca maithune |*

*pravṛttir eṣā bhūtānāṃ nivṛttis tu mahāphalā ||* (MāDhaŚā 5.56, Jhā vol. 1: 444).

Kumārila then answers an objection and explains that the permission to eat at the house of someone who has purchased Soma does two things: It leads one to postulate a previous prohibition (*pratiṣedha*) to eat at the place of someone who has not yet bought Soma and it allows one to do so thereafter.<sup>28</sup>

Notice that the second case is closer to that of violence within sacrifice, the subject of van Berkel *et al.* 2021 and 2023 with regard to the *śyena*, a malefic sacrifice that should indeed not be performed, even though it is mentioned in the Veda, because it implies a violation of the prohibition to perform any violence. In the case of violating a prohibition because of hardship, one is actually violating a prohibition and will get the negative consequences ensuing from the violation (i.e., negative *karman*), although less than the usual negative consequences, due to the hardship. The example mentioned by Kumārila is that of eating the thigh of a dead dog because of being on the point of death by starvation. Eating a dog remains a prohibited act, but one can be purified of it if one violates the prohibition due to hardship through an

27 Mimāṃsā authors agree in defining actions as efforts and not as movements. For more details, see Freschi 2010.

28 Subbāsāstri 1929–1934, vol. 1b: 192. Why does Kumārila speak of a prohibition given that he will elsewhere (see below) explain that this could be read as a negative obligation? I imagine that here Kumārila might just use the term *pratiṣedha* (lit. “prohibition”) informally to mean “one should not eat,” even though he will then explain this passage in two alternative ways, and according to one of them this is in fact not a prohibition but a negative obligation.

expiatory rite (*prāyaścitta*) once the hardship is over. After the *prāyaścitta* a person is again entitled to perform sacrifices to obtain what she desires.

By contrast, the performance of an explicit prescription to do something prohibited does not lead to any negative consequence at all. Kumārila does not discuss this case further, but due to the *śyena* discussion, one can add that this scenario only applies if the prescription to perform the prohibited act applies to all indefinitely and not only to the ones who are already in a sub-ideal condition (e.g., because they desire something prohibited). The example discussed is that of the prescription to eat at the place of the one who has purchased Soma (i.e., the sacrificer) if and only if one is on the point of death by starvation. In this case, no negative consequences follow from the performance of eating. However, should one eat at the place of the one who has purchased Soma because of a natural desire for food (i.e., not in order to save oneself from starvation), then negative consequences will occur.

### 3.3.3. General and specific permissions

Let me now go back to the discussion of general and specific permissions. Kumārila (TV ad ŚBh 1.3.4)<sup>29</sup> starts with general permissions, ((x) is permitted, but ( $\neg$ x) would be better and by doing (x) if there is no other way, one obtains a small sanction). This applies in the case of (x) being permitted only insofar as it is part of a general provision for looser rules in times of hardship (*āpaddharma*). Thus, these permissions just substitute a mild sanction for the harsh sanction of transgressing the prohibition. In Kumārila's words:

[Text a)]

[In the case of hardship,] one does something even without permission, because there is no other way |

[In the other case, that of supererogatory permissions,] one does something else on the strength of a permission: the difference is major ||

And there is a difference between the specific permission and the permission in general (to adopt looser rules in times of hardship) |

In fact, the specific permitted action is completely free of flaws; the other action has a little flaw ||

And in the same way, also Manu said the following with regard to actions during *āpaddharma*: |

The residual evil deeds committed during such times will be purified at the end [of hardships] ||

At that point, a person who, through any *karman* that is slight or harsh, |

29 Subbāśāstri 1929–34, vol. 1b: 190ff.

has brought out themselves as afflicted, is able to undergo purification and shall perform dharma ||<sup>30</sup>

And the dharma, to begin with, should first consist of an expiation |  
Thereafter, the person, now purified through it, will obtain other results of rituals ||

*ekaṃ vināpy anujñānāt kriyate gatyasambhavāt |  
kriyate 'nujñayā tv anyad viśeṣās ca tayor mahān ||  
sāmānyenābhyanujñānād viśeṣās ca viśiṣyate |  
viśeṣo 'tyantanirdoṣaḥ stokadoṣetarakriyā ||  
tathā ca manunāpy uktam ā gataṃ prati |  
tatratyapāpāśeṣāṅām ante śaucaṃ bhaviṣyati ||  
karmaṇā yena keneha mṛdunā dāruṇena vā |  
uddhared dīnam ātmānaṃ samartho dharmam ācaret || iti ||  
dharmās ca prathamam tāvat prīyaścittātmako bhavet |  
tatas tena viśuddhasya phalārtho 'nyo bhaviṣyati || (TV 1.3.4).<sup>31</sup>*

Kumārila immediately thereafter moves to the case of specific permissions. Again, these are also conceived as better-not permissions of (x) (i.e., it would be better not to do (x), but this time there is no sanction whatsoever for doing (x) if there is no other way. Kumārila stresses the “no other way” by insisting on the parallel with rituals, where it is also relevant that a less cumbersome alternative is only efficacious if one actually cannot perform the first one.

[Text b)]

As for the statement “Out of eating at the place of someone who has bought Soma . . .” one understands that it is just for the sake of communicating that there is no flaw at all if there is no other way. In that case, too the following applies:

The one who is able to perform the first (preferred) alternative, and undertakes the secondary one (*anukalpa*) |

He does not obtain the result of the ritual later – this has been pondered about before ||

Due to this reproach [against people going for easier alternatives], one should not eat [at the place of one who has bought Soma] because of staying alive even though an alternative food is possible.

30 This verse (but not the half verse preceding it) is found in *Mahābhārata* 12.138.38. I am thankful to Zhipeng Wei for locating the source.

31 Subhāśāstri 1929–34, vol. 1b: 190f.

*yat tu kṛitarājakabhojyānnatvavacanam tad gatyantarāsambhave nirdoṣatvajñā-  
panārtham eva tatrāpi tu ||*

*prabhuḥ prathamakalpasya yo 'nukalpena vartate |  
sa nāpnoti phalam tasya paratrete vicāritam ||*

*iti ninditatvān na sambhavadbhojyāntareṇāpi lokayātrādivaśena bhoktavyam, (TV  
ad ŚBh 1.3.4).<sup>32</sup>*

Kumārila then adds an alternative explanation of better-not permissions:

Alternatively, the two alternatives are not equal, due to the different moments  
in time [they refer to] |

One ascertains that there is no clash among them due to their having different  
purposes assigned ||

It is certain that when they have not bought Soma, one should eat the food of  
an initiated person |

By contrast, once they have bought it, the non-eating is prescribed as a mental  
act (i.e., the mental decision not to eat) ||

Just like not eating at the *śrāddha* ceremony or just like not eating meat.

*yadi vā kālavaīṣamyād asatsamavikalpayoh |  
arthabhedavyavasthānād avirodho 'vadhāryate ||*

*dikṣitānnabhojyam syād akṛite rājani dbruvam |  
kṛite tv abhojanam nāma manaḥkarma niyamate ||*

*yathaiṅvāśrāddhabhojitvam yathā vāmāṃsabbakṣaṇam | (TV ad 1.3.4).<sup>33</sup>*

This might be evidence of the fact that there were divergent opinions about how exactly to  
conceive of them. This time, he says that when P(x), doing (x) leads to no sanction, but  
forming the resolution not to do (x) (and fulfilling it) leads to a reward. Please note that in  
the last example eating meat is not prohibited, but if one does not eat meat, one will get a  
reward.

### 3.3.4. Results of commands interacting with permissions

Thus, when encountering a prohibition or negative obligation, four possible outcomes can be  
conceived:

32 Subbāśāstrī 1929–34, vol. 1b: 191.

33 Subbāśāstrī 1929–34, vol. 1b: 191.



1. sanction (for transgressing a prohibition, e.g., the one to eat meat on certain days)
2. expiable sanction (for transgressing a prohibition at times of hardship, which grant one a generic relaxation of norms and hence work as a generic permission, see Kumāṛila's text a))
3. no sanction at all, but lack of reward (for following a specific permission to ignore a negative obligation or a prohibition, see Kumāṛila's texts a) and b) respectively)
4. reward (for following an obligation or a negative obligation, see Kumāṛila's text b))

This means that permissions by themselves lead neither to rewards nor penalties, but they can lead to a diminished penalty in case they are exceptions to prohibitions. By contrast, not following the “easier” path of a better-not-permission by forming a contrary resolution may lead to a reward.

Does this mean that one should never follow a permission and always aim at not transgressing prohibitions? Not necessarily, because 2 and 3 are temporary drawbacks and one can rationally choose them (e.g., because one is too weak to continue fasting *and* fulfill one's other obligations). The rational decision will be the result of the consideration of the above scenarios together with that of the further contextual elements (e.g., one's other obligations). In this sense, permissions are part of a complex network. For instance, refraining from eating meat is advisable because it leads to outcome number 4, but an adult who is under the obligation to carry a young child over a long stretch and in a situation of hardship might prefer to eat meat or even prohibited meat and choose outcomes number 2 or 3 over 4.

## 4. Dharmaśāstra sources on permissions

### 4.1. Dharmaśāstra authors on permissions in times of hardship

In the following, I analyze the positions of two eminent scholars of Sanskrit jurisprudence discussing permissions for times of hardship. Since their specific answers do not harmonize with each other (e.g., when it comes to the acceptance of gift in times of hardship), I focus more on the structure of the argument than on its details.

#### 4.1.1 Medhātithi on permissions in times of hardship

The main Mīmāṃsā-inclined commentator within Sanskrit jurisprudence (Dharmaśāstra), namely Medhātithi,<sup>34</sup> commenting on MāDhaŚā 5.157 mentions the permission (*anuḥjñā-tatva*) to eat meat in times of hardship (*āpad*). Within the same passage he similarly discusses the case of a widow starving herself to death. This is something that should not be done (*akārya*), but it is still better than seeking union with another man, which is even more

34 On Medhātithi's use of Mīmāṃsā, see Freschi (2023).

not to be done (*akāryatara*). Thus, surviving through working is the preferred option, starving oneself to death is bad, but a new union is worse. This seems to suggest that Medhātithi is using the same three-layered scheme as Kumārila (prohibited, permitted in a general way due to the need to survive, and permitted in a specific way).

Medhātithi's commentary on MāDhaŚā 10.81–114 deals with permitted occupations for *brāhmaṇas* and *kṣatriyas*, *vaiśyas* and *śūdras* in distress. Like Vijñāneśvara's text analyzed in the next section, Medhātithi focuses especially on the case of *brāhmaṇas* in distress and I consequently mostly deal with their case in the following.<sup>35</sup>

The *Mānavadharmaśāstra* commented upon predates Kumārila's discussion of times of hardship (which quotes from Manu) and presupposes a system in which there are:

1. Absolutely forbidden acts (e.g., taking up the occupation of a *śūdra* if one is a *brāhmaṇa*, even if in distress). These will lead to bad consequences (e.g., loss of one's caste, MāDhaŚā 10.92).<sup>36</sup>
2. Permitted acts leading to the bad *karman* (*enas*) that can be expiated (e.g., accepting gifts, that will lead to the need of returning the gift and performing an expiation ritual, MāDhaŚā 10.111).<sup>37</sup>
3. Permitted acts leading to no need of expiation at all (e.g., teaching according to MāDhaŚā 10.103).<sup>38</sup>

However, the *Mānavadharmaśāstra* seems contradictory, e.g., insofar as it first says that a *brāhmaṇa* incurs no flaw in teaching and sacrificing (*na...doṣo bhavati*, MāDhaŚā 10.103<sup>39</sup>), but then adds that the bad *karman* accumulated through teaching etc. can be eliminated through low voice recitation (MāDhaŚā 10.111).<sup>40</sup>

Medhātithi discusses therefore the opinion of some, who think that MāDhaŚā 10.103 should be interpreted as just a commendatory statement (*arthavāda*), and as not entailing any command, since commands should always prescribe something new and this is not the case for MāDhaŚā 10.103.<sup>41</sup> These "some" do not explain the command in conjunction with

35 Some background information: Medhātithi and Vijñāneśvara recognise four *varṇas* "classes," *brāhmaṇa*, *kṣatriya*, *vaiśya* and *śūdra*. *Vaiśyas* are typically merchants. Each *varṇa* can, in time of hardship, take up the occupation of the lower *varṇa*, but not the opposite, and a *brāhmaṇa* can never take up the occupation of a *śūdra*.

36 Jhā 1999b, vol. 2: 357.

37 Jhā 1999b, vol. 2: 362.

38 Jhā 1999b, vol. 2: 360.

39 *Ibid.*

40 Jhā 1999b, vol. 2: 362

41 In Mīmāṃsā, commendatory statements are not autonomous sources and must be construed as supplements to a command. For more details, see Edgerton 1929 or Freschi 2012.

which MāDhaŚā 10.103 should be read, but a possibility would be to read it together with the command to perform an expiation in MāDhaŚā 10.111.<sup>42</sup>

Some say: [Obj:] Sacrificing to or teaching bad people should also be permitted (*anujñā-*), like accepting gifts from bad people.<sup>43</sup> [R:] If they were so, then they would be mentioned in the previous verse, like accepting gifts.<sup>44</sup> In the present verse, by contrast, [it is not so, because of the following reason]. Since one does not grasp any exhortative ending in “there is [no] flaw for” *brāhmaṇas*, through the usage of the present indicative (in “is,” *bhavati*) one understands that the passage is a commendatory statement since it states something already established. Moreover, every command can have a commendatory statement attached, since the latter can be combined in a single sentence with the former, since it describes something already established. It can be so also for sacrificing and teaching, [given that the sentence about the absence of flaw conveys something already established and can therefore form a single sentence with another command].

*kecid ābuh̄ asatpratigrahavad asadyājanādhyāpane apy anujñāyete. yady abha-  
viṣyatām tadā pūrvaśloka eva pratigrahavad apaṭḥṣyatām. iha tu vidhīpra-  
tyayābhāvād doṣo bhavati viprāṇām iti vartamānapratyayena siddhavyapadeśād  
arthavādatāpratīteḥ. kiṃ ca prativacanam tāvad arthavādaḥ pūrveṇa siddhatvāt  
tadekavākyatvāpatter yājanādhyāpane apy evaṃ bhavitum arhati* (Medhātithi ad  
MāDhaŚā 10.103).<sup>45</sup>

The people identified as “some” notice the inconsistency in Manu’s treatment, they highlight how permission is also a command (*vidhī*) and point to a possible solution, namely a non-deontic reading of the passage. Medhātithi disagrees with the conclusion of these “some,” but not with their way of reasoning.

42 Jhā also does not spell out which command this alleged commendatory statement should be connected to. He only speaks of a “foregoing injunction” (Jhā 1920–1926, vol. 5: 324, translation of Medhātithi ad 10.103).

43 Medhātithi adds “to bad people” or “from bad people” in the case of teaching or sacrificing and accepting gifts respectively, possibly in order to bring their prohibition in harmony with the description of the lawful activities for *brāhmaṇas*. The text of the *Mānavadharmasāstra* is more naturally read as talking of sacrificing and teaching on the one hand and accepting gifts from bad (*garhita*) people on the other. This interpretation is shared, e.g., in the translation of MāDhaŚā 10.103 in Olivelle 2005: 213.

44 The previous verse states that accepting gifts never sullies a *brāhmaṇa*.

45 Jhā 1999b, vol. 2: 360. I eliminated the full stop before *vartamānapratyayena*, present in Jhā 1999b, vol. 2: 360.

#### 4.1.2. Viññāneśvara on permissions in times of hardship

Viññāneśvara's *Mitākṣarā* commentary on *Yājñvalkyasmṛti* 3 (on expiations), verse 35,<sup>46</sup> explains that even in cases of hardship a non-*brāhmaṇa* cannot take up the occupation of a *brāhmaṇa* and a *brāhmaṇa* cannot take up that of a *śūdra*. The commentary on verse 35 also explains that a *brāhmaṇa* will need to undergo an expiation ritual (*prāyaścitta*) because of having undertaken the occupation of another *varṇa*, once the difficult times are over (see Kumārila's similar point in text a) about expiable permissions). This suggests the following formalization:

P(taking up the occupation of a *kṣatriya* or *vaiśya*)/being a *brāhmaṇa* in distress  
(and so on for the further *varṇas*)

This permission is to be understood as an exception to a previous prohibition and not of a negative obligation:

F(take up the occupation of a *kṣatriya*, *vaiśya* and *śūdra/brāhmaṇa*)

It also seems to mean, as Timothy Lubin suggested, that there is no prohibition to commit self-harm, since it may happen that taking up the occupation of a *brāhmaṇa* would be the only way to avoid dying by starvation, but this still does not lead to a duty to undertake such an occupation.<sup>47</sup>

Moreover, the picture gets more complicated. In fact, verses 37–39<sup>48</sup> explain that

P(taking up the occupation of a *vaiśya*)/(being a *brāhmaṇa* in distress)

has some counter-exceptions, namely prohibitions applying to it, e.g.

F(selling sesame)/being a *brāhmaṇa* in distress who has taken up the occupation of a *vaiśya*

Thus, it is possible to have prohibitions within permissions (that are, in turn, exceptions to other prohibitions). In the case at stake, though selling (the occupation of a *vaiśya*) is permissible for a *brāhmaṇa* in distress, selling sesame is prohibited.

Then, there is a counter-counter exception, namely:

F(selling/*brāhmaṇa*)  $\wedge$  P(selling/*brāhmaṇa* in distress)  $\wedge$  F(selling sesame/*brāhmaṇa* in distress)  $\wedge$  P (selling sesame in exchange for grain/*brāhmaṇa* who can't perform rites for want of grain).

46 Acharya 1949: 356.

47 Personal communication with Timothy Lubin on November 25, 2022.

48 Acharya 1949: 357f.

The commentary quotes MāDhaŚā 10.91 explaining that if one were to sell sesame in exchange for something else, one would be harshly sanctioned (one will be born again as dog).

Verse 41 and the commentary<sup>49</sup> explain that the previous permissions are clearly better-not permissions and that they come with some cost, whereas accepting gifts in case of hardship is alright. Summing up, like in Kumāriḷa (see text a above), there are two levels of permissions:

F(selling/*brāhmaṇa*)

P1(selling/*brāhmaṇa* in distress) → O(expiation/end of distress) ∨ bad *karman*

P2(accepting gifts/*brāhmaṇa* in distress) → no bad *karman*

At that point, verse 43 (on stealing<sup>50</sup>) follows. It reads as follows:

If one has been hungry for three days, one might take some grains from someone who is not a *brāhmaṇa* |

If one takes it and is accused, one must say it, according to duty (*dharmā*) ||

*bubbukṣitas tryayaṃ sthitvā dhānyam abrahmaṇād dharet |*

*pratigrhya tad ākhyeyam abhiyuktena dharmataḥ ||*

There are several noteworthy points. The general prohibition to steal is overrun by P(stealing/not having eaten for three days), provided one is stealing only from a non-*brāhmaṇa* (thus presupposing that the prohibition to stealing from a *brāhmaṇa* holds unconditionally). The *Mitākṣarā* commentary further explains that one can only take enough for one meal and cannot take additional supplies, thus presupposing P(stealing a minimal amount to avoid starvation)/(not having eaten for three days). Now, if one goes on like that for a long time, one might eventually die of starvation (because one is stealing only enough for one meal and only once every three days). Verse 44<sup>51</sup> suggests the solution (the king should take care of his subjects), but this is not a solution one can count on in every case. Hence, verse 43 does not rule out a situation in which, in order to avoid violating the prohibitions at stake (F(stealing/in general), weakened by P(stealing from a non-*brāhmaṇa*/not having eaten for 3 days) and F(stealing from a *brāhmaṇa*/in general)) one ends up actually dying. This further strengthens the point that there is no O(avoid starvation) as the result of the general prohibition to perform any violence.

The commentary introducing verse 43<sup>52</sup> states that P(stealing from a non-*brāhmaṇa*/distress) only applies to people who have tried all of the above. I am not sure about how to formalize the temporality factor, perhaps something like:

49 Acharya 1949: 358f.

50 Acharya 1949: 359.

51 Acharya 1949: 359f.

52 Acharya 149: 359.

F(selling/*brāhmaṇa*)

P1(selling/*brāhmaṇa* in distress)  $\wedge$  distress  $\rightarrow$  P1(stealing/*brāhmaṇa* in distress)

Noteworthy here is that Kumārila had distinguished between P1 and P2, but by saying that P1 are “general permissions” and P2 specific ones, that is, ones explicitly mentioned in a Vedic text. By contrast, here P1 can be specifically mentioned and still involve some bad *karman*.

Is the *Mitākṣarā* just not following Kumārila when it says that even a specific permission can imply bad *karman* and the need for an expiation? Is Kumārila trying to systematize a complicated series of cases? Further investigation is needed to offer a final answer.

## 4.2. Dharmasāstra authors on permissions of telling lies

Another case where Dharmasāstra authors discuss permissions is that of telling lies to save the lives of other people. All authors discussing this case refer to the general prohibition of telling lies (*nānṛtaṃ vadet*), but add the permission to tell a lie if this is meant to save the lives of others (because one is asked about the whereabouts of someone in order to kill them).

Medhātithi ad Mādhaśā 8.104<sup>53</sup> discusses at length the definition of what is an agent in connection with the killing (can the person who delivers information be considered an agent of the killing?). The text also concludes that a person who decides to tell a lie does so “with a reason” (*yuktimattvena*). One might imagine that therefore no sanction or liability to sanction should be attached to one who lies under these circumstances. However, Mādhaśā 8.105<sup>54</sup> prescribes an expiation ritual for such cases. In the commentary, Medhātithi voices an objection<sup>55</sup>:

Why should there be any bad *karman* in this case – when it has been declared that there is nothing wrong in lying under the circumstances mentioned?

*nanu ca kuto 'tra pāpam – yāvatāsmiṃ nimitte nānṛtavacane doṣa ity uktam.*

Medhātithi attributes the reply to this objection to “some” (*kecid*). These construe the previous prohibition to tell lies as a negative obligation (*saṃkalpa*). Hence, “don’t tell lies” would not be a case of F(lie), but of O( $\neg$  lie). Consequently, they say that keeping the negative obligation notwithstanding the permission would be a case of supererogation and lead to results (as in Kumārila, text b) above).

53 Jhā 1999b, vol. 2: 117–121.

54 Jhā 1999b, vol. 2: 121.

55 *Ibid.*

## 5. Conclusions

Permissions in Mīmāṃsā are less ambiguous than in our common parlance (not to speak of contemporary deontic philosophy). In mainstream deontic philosophy, P(x) only means that it is not the case that (x) is forbidden. It does not tell us whether (x) was previously forbidden or whether (x) is encouraged, discouraged or indifferent.

By contrast, for Mīmāṃsā authors when talking about Vedic commands (granting permissions are only found in worldly interactions among agents), P(x) necessarily means that ( $\neg$ x) was previously obligatory or that (x) was previously prohibited and that performing (x) is the less desirable option.

This is also linked to the Mīmāṃsā overall approach: Mīmāṃsakas do not want to end up with an open-ended outcome (as with permissions leading to “indifferent actions”), which is also the reason why they accept random picking (*vikalpa*) only as the last resort to solve a deontic paralysis.<sup>56</sup> Their interpretation of Vedic commands should, by contrast, lead to fixed conclusions and not to whimsical and subjective ones. Accordingly, *anujñā* “permission” is repeatedly mentioned in the *Śābarabhāṣya* as an antidote to *aniyama*, “lack of rules.”<sup>57</sup>

Kumārila is, as is often the case, the author offering the most systematic overview of permissions, and he distinguishes three types of permissions (leading to a minor sanction, to no sanction at all, involving a supererogatory resolution if one does not follow them). Dharmasāstra jurists like Medhātithi and Vijñāneśvara largely follow the view of Kumārila on permissions. However, their treatment of permissions in two key cases (*āpaddharma* and telling lies to save lives) appears to presuppose a slightly different scheme when it comes to specific and general permissions, since even the former appear to possibly entail some residual bad *karman*. It remains to be investigated whether the difference is due to their actively upholding a different theory or just being less rigorous than Kumārila.

## Abbreviations

MāDhaŚā	Manu’s <i>Mānavadharmaśāstra</i>
PMS	Jaimini’s (Pūrva) <i>Mīmāṃsāsūtra</i>
ŚBh	Śabara’s <i>Śābarabhāṣya</i>
TV	Kumārila’s <i>Tantravārttika</i>
VV	Maṇḍana’s <i>Vidbhiviveka</i>

56 On picking when both options are at exactly the same deontic level, see Freschi & Pascucci 2021.

57 See ŚBh ad PMS 3.5.40 (p. 1011 of Ā edition), 5.1.14 (vol. 4, p. 1302) and 5.4.2 (vol. 4, p. 1336).

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- Kumārila Bhaṭṭa, *Tantravārttika*, see Jaimini.
- Kumārila Bhaṭṭa, *Tuṣṭikā*, see Jaimini.
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## The *Yogasāra* Cited in Vimalabodha's Commentary on the *Mahābhārata*

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### Introduction

The second oldest commentary on the *Mahābhārata* that is known to us is the work of Vimalabodha, who in his introduction entitles the text *Durghaṭārthaparakāśini* in one verse, and *Durbodhaṭpadabodhini* in the next.<sup>1</sup> Because Vimalabodha refers to the earlier *Mahābhārata* commentator, Devabodha (eleventh century), and to the author Bhoja, king of Dhār (eleventh Century), and is in turn referred to by the *Mahābhārata* commentator Sarvajña Nārāyaṇa (fourteenth century), V. S. Sukthankar assigned Vimalabodha to some time in the twelfth or thirteenth centuries (Sukthankar 1935–36). Vimalabodha's engagement with the *Mahābhārata* is a departure from that of his predecessor, Devabodha, in a number of ways; some of his innovations were continued in later commentaries. Just as Vimalabodha sometimes repeated glosses and lines of interpretation from Devabodha's commentary, ideas and even entire discussions originally presented in Vimalabodha's commentary are repeated by later commentators, including Arjunamiśra (sixteenth century) and Nilakaṇṭha Caturdhara (seventeenth century).

Vimalabodha refers to a large number of sources, including verses from elsewhere in the *Mahābhārata*, from the Vedas and Upaniṣads, from well-known Dharma- and Nitiśāstra texts, and from various philosophers.<sup>2</sup> Vimalabodha directly cites many other sources without attributing them. Some of these passages are readily identified, while others remain unknown. The purpose of this article is to discuss one such source that is named and directly cited, a text Vimalabodha calls the *Yogasāra*. Vimalabodha (henceforth Vimala) refers to the *Yogasāra*

- 1 The text of these two verses is cited from two BORI manuscripts (Belvalkar 1966: cxxxix–cxl). The colophons at the end of *parvans* refer to the commentary more simply as the *Viśamaśloki* or the *Viśamaślokyākhyā* or *-tikā*. Research on this paper was made possible by a grant from the Leverhulme Trust, RPG-2021-177.
- 2 P. K. Gode provided a list of sixty-three sources named in Vimalabodha's commentary, working from the manuscript BORI 84 of 1869–1870 (Gode 1935). One can see Gode's penciled underlining of these sources as they appear in the leaves of the manuscript itself. Some of these named sources are repetitions, the total number of distinct sources mentioned being slightly above fifty.

in his commentary on two verses, in two *parvans*, CE 5.45.13 and CE 12.188.1.<sup>3</sup> The *Yogasāra* known to him was a versified text: he cites one *upajāti* verse in his discussion of 5.45.13, and five *anustubh* verses, which appear to constitute a continuous sequence, in his discussion of 12.188.1.

Here I aim to identify the most likely candidates for this source. The chapter moves through the following five sections:

1. a brief summary of the nature and format of Vimalabodha's commentary;<sup>4</sup>
2. the text of the verses cited from the *Yogasāra*, as reconstructed from manuscripts currently available to me;
3. a discussion of the verses and commentaries in which these citations appear, along with later echoings or repetitions of these passages in later commentaries;
4. a sifting of the more than thirty texts known to the *New Catalogus Catalogorum* by the title of *Yogasāra* in order to identify the most likely text, while ruling out others;
5. a discussion of why Vimala has cited these verses, and what is distinctive about them with reference to the history of yoga.<sup>5</sup>

## 1. Vimalabodha's commentary

In keeping with his practice of using scholarly resources available in his scholarly environment, Vimala begins by acknowledging a number of genres and authorities aside from his predecessor, Devabodha. Among these are lexicons, Vedic passages, and commentaries. He appears to know other existing lore or scholarship on the *Mahābhārata*.<sup>6</sup> While Devabodha's commen-

- 3 I refer to verses in the *Mahābhārata* using the numbering of the Critical Edition (Sukthankar 1933–1959), for ease of location of the text in other editions. This was of course not the numbering known to Vimalabodha. The equivalent verses in the Vulgate edition are 5.46.13 and 12.195.1 (Kiñjavadekar 1929–1936). The equivalent verse in Bakre's edition of the Udyogaparvan is also 5.46.13 (Bakre 1920).
- 4 This is an as yet unpublished text. Here I work from eight manuscripts from three Indian collections, as described below. As part of the Leverhulme project I am developing an initial working edition of Vimalabodha's commentary.
- 5 I have received indispensable help from Valters Negribs, from James Mallinson, who read a draft of the paper and provided corrections and improvements, and especially from Jason Birch, who went out of his way to provide me with access to materials and information he has developed in his research activities. Given the quasi-scientific nature of the *mahābhūta-yoga* described in one of these passages, it may perhaps be relevant to the interests of Dominik Wujastyk, to whom I commend this essay. I offer the chapter as a tribute to my colleague's boundless energy, buoyant cheer, and useful productivity, whose friendship by now seems *anādi*, and which, I trust, will be *ananta*.
- 6 *nighaṅṭabbhāṣyanigamaniruktāni viśeṣataḥ. vaiṣampāyanaṭīkādivasvānimatāni ca (1) vikṣya* etc. (Belvalkar 1966: cxxxix–cxl). Gode and others have noted the reference to a *Vaiṣampāyanaṭīkā*. The compound might be segmented differently, referring to Vaiṣampāyana, i.e., the text of the *Mahā-*

tary mostly consists of glosses of difficult words, Vimalabodha's commentary takes the *śloka* as the unit of analysis. The working title of Vimala's commentary, which one encounters in the colophons to *parvans*, *Viśamaślokī*, reveals this orientation.<sup>7</sup> Vimalabodha covers a smaller number of verses than Devabodha does, but they are more thoroughly discussed. In keeping with this difference, Vimalabodha's commentary on the *Mahābhārata* is the first to present the text of an entire verse before commenting on it. The comment usually begins with *asyārthaḥ*, or more explicitly, *asya ślokasyārthaḥ*. It typically ends with *ity arthaḥ*. Since he sometimes comments only on a single verse in a chapter, Vimala in places begins with an explanation of the narrative context. The commentary usually presents an *anvaya* or *sambandha* for the verse, glossing as it goes. Occasionally it will include grammatical analysis. Often it closes by explaining the larger meaning of the verse – its *āśaya* or *bhāva* or *abhiprāya*. In support of both his rendering of particular words and these larger meanings, Vimala adduces verses, epigrams, and *sūtras* from his many sources. Vimala also refers to interpretations of particular verses by others, not just Devabodha's. For example, for *Mahābhārata* verses that also circulated in Dharma and Nīti texts, he may refer to the comments or renderings of *nibandhakāras* and the like.

While usually respectful of Devabodha's interpretation, and in places dependent on it, Vimalabodha does not shrink from criticizing him in places. For example, in his comment on CE 12.47.27, which describes a personified, idealized Vedic sacrifice (*tasmai yajñātmane namaḥ*) he mentions Devabodha's explanation of a compound (*dāśārdbabavirākṛtim*) and then rules it out, saying that that explanation is no good (*tad asādhū*), giving a reason for saying so.<sup>8</sup>

## 2. The text of the verses cited from the *Yogasāra*

The text of the citations I offer here is a simplified version of a working edition currently in preparation.<sup>9</sup> It is based primarily on two manuscripts: BORI 84 of 1869–70 and Mysore C2136, with supplementary readings from six other manuscripts: BORI 167 of 1887–91; BORI 171 of 1884–87; Baroda 6579; Baroda 11288; Baroda 11677; and Baroda 11930, when

*bbārata* itself. Either way, there appears to be at least one *ṭikā* other than Devabodha's known to him, and perhaps more, given the *-ādi-*.

7 Or the colophon will say *ete N-parvaṇi viśamaślokāḥ*.

8 BORI 84f. 59r. For *asādhū* the Mysore manuscript (f. 26v) reads *asaṃmataṃ* – “not the consensus view”; the Nārāyaṇa transcript (p. 64), *mandam* – “dumb.”

9 For these purposes I am regularizing variants in sandhi, both internal and external. I confine myself to recording variants that make a difference in the meaning. I do not record eccentric variants, wherein a single manuscript presents an obvious mistake e.g., *prādo* for *prāpte*.

the passages are available in those manuscripts.<sup>10</sup> These six manuscripts are often too faulty to justify full collation, but they provide supporting readings that are helpful in solving cruxes. Bakre's edition of the Udyogaparvan includes the commentary of Vimala, among others (Bakre 1920). Bakre used more than one manuscript and in places made editorial changes. I have collated his readings for CE 5.45.13. Because of its close relationship to Vimala's commentary, I have also made use of a transcription of a manuscript of the commentary attributed to Sarvajña Nārāyaṇa, the *Bhāratārthaprakāśa*, which is preserved in the government manuscripts collection in Chennai, GOML R2169.<sup>11</sup> The commentary of Arjunamiśra on CE 5.45.13 includes a parallel to Vimala's comment close enough to amount to a testimony, and is referred to here when helpful.

### A. Citation in the commentary on *Mahābhārata* CE 5.45.13:<sup>12</sup>

I include a brief part of the commentary that leads into this verse. More details about Vimala's framing are discussed in the next section. In brief, Vimalabodha reads the verse as being about *sadyomukti*, or instant liberation (and bodily death).

... *vidadbhātīty āgamād bodhavyaṃ. kṛtsnarūpaś*<sup>13</sup> *cāsāv iti somasiddhāntaḥ. uk-*  
*taṃ*<sup>14</sup> *ca yogasāre:*

- 10 My thanks to Amruta Natu and Shreenand Bapat at BORI, to the Mysore ORI, and to Vipul Patel at the Baroda OI. Also, thanks to Vishal Sharma, Shree Nahata, Poorva Palekar, and Harshal Patel for help in working with these institutes.
- 11 The history and identity of the *Bhāratārthaprakāśa*, attributed to Sarvajña Nārāyaṇa, requires further study. The GOML R2169, at least, presents a text that is often very close to, or identical with, the text of Vimalabodha's commentary as that has been preserved in the manuscripts I have been able to examine. In other places it is expanded or clarified, or simply reworded slightly. There are significant lacunae in the GOML manuscript, including all of the commentary on the Udyogaparvan. The modern copyist lists the title of this work as *Bhāratatātparyasaṃgraha*. Colophons in descriptive catalogues sometimes call it simply the *Bhāratavyākhyāna* or *-vyākhyā*. The colophon at the end of the GOML transcript calls it simply the *-ṭīkā*. The commentary on the Udyoga, only available to me in the text that Bakre has published in his edition, does not follow the pattern of the GOML manuscript elsewhere. One possibility is that Sarvajña Nārāyaṇa wrote an independent commentary only on the Udyogaparvan, which he or some later author supplemented with a somewhat improved version of Vimala's commentary on the rest of the epic. Another is that there are two works that have been confused.
- 12 The passage begins in BORI 84 on f. 47v; in Mysore 2136 on f. 13r; Baroda 11288 on f. 53v; in Baroda 11677 on f. 61v; in Baroda 11930 on f. 16r; in BORI 167 on f. 34r. in BORI 171 on f. 34v; the Udyogaparvan is missing in Baroda 6579 and GOML R2136.
- 13 Bakre, BORI 167: *kṛtsna-* (BORI 171 *kṛtsnu-*); BORI 84, Mysore, Baroda 11288, Baroda 11677, Baroda 11930: *kṛṣṇa-*.
- 14 Bakre, Mysore: *uktaṃ*; BORI 84: *uktaś*.

*kapālapadmasthitasomabimbam*<sup>15</sup> *ācintayan taṃ*<sup>16</sup> *janakānticauram*<sup>17</sup> |  
*prasyandi*<sup>18</sup> *pīyūṣalavāsthi*<sup>19</sup> *carmā prāpnoti caikādaśa lakṣaṇāni* ||

Notes:

The passage refers in this context to the Āgama and to the Somasiddhānta, which gives us some help in placing the genre of literature in which we might find this *Yogasāra*.

*kṛṣṇarūpaḥ* vs. *kṛtsnarūpaḥ*: The *asau* in this sentence refers to the mind, conceived to be the moon, present in the crown of the head. Is it full (*kṛtsna-*) or dark (*kṛṣṇa-*)? There are readings in the manuscripts that support both possibilities. Since earlier in the commentary the moon is said to be nourishing the tissues of the body with *amṛta* or Soma, I suppose it is full, and so read *kṛtsna-*. What might be in favor of it being dark is the difficult compound, *janakānticauram*. Arjunamiśra's commentary, which reproduces Vimala's with minor changes for this passage, reads *kṛtsna-* as well.<sup>20</sup>

*ācintayan taṃ* vs. *acintayan taṃ*: *ā + cint* is an unusual collocation. I assume that the meditation on the mind as moon results in the flow of Soma throughout the body. The use of *cint* in the third verse cited below supports that interpretation. It might instead be, however, that not thinking about the mind or moon is what achieves this effect.<sup>21</sup>

*janakānticauram*: The thief of the love or luster of the people or of the Janaloka? It would appear to be a descriptor of the disk of the moon. There are no useful variants. This remains a problem in the text for now. If the moon is indeed dark (*kṛṣṇa*), then this adjective could describe a moon whose luster is stolen. Could we read *-gauram*? Perhaps *-cauram* is to be understood in the sense of surpassing.

*prasyandipīyūṣalavāsthicarmā*: "whose skin and bones have drops of flowing ambrosia." In the discussion that precedes citation of this verse, Vimala refers to a nourishing flow of Soma to the constituent elements or *dhātus* of the body. See more discussion of the context below. Arjunamiśra's version, as it appears in Bakre, reads *-vasāptikarmā*. If *vasā-* is correct, but the

15 Mysore, Baroda 11288, Baroda 11930, BORI 171: *-bimbam*; BORI 84, Bakre, BORI 167: *-viśvam*; Baroda 11677: *-dr̥ṣyam*.

16 Mysore, Baroda 11288, Baroda 11677, BORI 167: *ācintayan taṃ*; (Baroda 11930 *āvintapan taṃ*; BORI 171 *āvintayan raṃ*); BORI 84; Bakre: *acintayan taṃ*.

17 All manuscripts and Bakre read *janakānticauram*, except BORI 167: *janakānticauram*; BORI 171 *janakānticauram*.

18 Bakre, Baroda 11288, Baroda 11677, Baroda 11930: *prasyandi-*; BORI 84, Mysore, BORI 171: *prasāndi-*.

19 BORI 84, Bakre, Baroda 11288, Baroda 11677, Baroda 11930: *-lavāsthi-*; Mysore: *-lavāsti-*; Arjunamiśra in Bakre: *-vasāpti-*.

20 I cite Arjunamiśra's commentary from Bakre's edition of the Udyogaparvan.

21 My thanks to James Mallinson for this suggestion.

following words are not, we would have *-vasāsthicarmā*: three of the bodily tissues that receive the flowing ambrosia.<sup>22</sup>

### B. Verses from the *Yogasāra* cited in Vimalabodha's commentary at *Mahābhārata* CE 12.188.1.<sup>23</sup>

The context will receive further discussion in the next section of this paper. Here it suffices to say that this passage forms part of a discussion of a fourfold meditation (*dhyānaṃ caturvidhaṃ*), and pertains to the first of these meditations, which is concerned with the five material elements (or *mahābhūtas*).

*tatra nābher adbaḥ pṛthivīsthānaṃ. tad brahmagranthir<sup>24</sup> ity<sup>25</sup> ucyate. tasmin line manasi sarvaśāstrārthasamvettā kavir bhavati.*

*uktaṃ ca:*

*ūrdhvādhoromamadhyastho brahmagranthir udābrtaḥ |  
sarvaśāstrārthasamvettā kavir bhavati tadgata iti ||<sup>26</sup>*

*tadūpari jalasthānaṃ nābhis<sup>27</sup> tajjanitasarojamadhye manasi line jalastambhādisiddhir<sup>28</sup> bhavati. uktaṃ ca*

*nābhisaraḥsamudbhūtasitapaṅkajamadhyagaḥ<sup>29</sup> |  
somalokam avāpnoti stambhayec ca jalaṃ sadā ||*

- 22 *tvak* or *carman* does appear as the first in the list of *dhātus* in some Ayurveda texts. See Maas 2007: 125–162, 134, and n. 19. I thank the editors for this reference.
- 23 The relevant passage begins in BORI 84 on f. 66v; in Mysore 2136 on f. 35r; in Nārāyaṇa on p. 81; in Baroda 6579 on f. 11v; in Baroda 11288 on f. 77r; in Baroda 11677 on f. 87; in BORI 167 on f. 50v; in Baroda 11930 on f. 31r (the manuscript has some missing leaves, so the text begins with *sitapaṅkajamadhyagaḥ*); Baroda 11288 has a large lacuna at the beginning.
- 24 BORI 84, Baroda 6579, Baroda 11677, BORI 167: *brahmagranthir*; Mysore: *brahmagradhir*; Nārāyaṇa: *br̥hadgranthir*. Other manuscripts are missing this section.
- 25 BORI 84 omits *iti*. Present in Mysore, Baroda 6579, Baroda 11677, BORI 167.
- 26 Mysore omits everything from *uktaṃ* to end of the verse. Instead of the second line of the verse, BORI 84 reads only *sarvaśāstravettā kavir bhavati*. Nārāyaṇa, Baroda 6579, Baroda 11677, BORI 167 read the second line as constituted. See below for a parallel for *ab* in the *Kubjikāmatatantra*.
- 27 BORI 167 omits *tadūpari jalasthānaṃ nābhiḥ*. Baroda 11677 inserts in margin.
- 28 Mysore, Nārāyaṇa, Baroda 6579, Baroda 11288, Baroda 11677, BORI 167: *-stambhādi-*; BORI 84: *-stambhanādi-*.
- 29 Mysore: *nābhi-*; BORI 84, Baroda 6579, Baroda 11288, Baroda 11677: *nābhi-*; missing in Baroda 11930, Nārāyaṇa. Baroda 6579, Baroda 11288, Baroda 11677, BORI 167: *-saraḥsam-*; Nārāyaṇa: *-sarassam-*; Mysore, BORI 84: *-sarasam-*.

*tadupari hṛdi prānasthānaṃ. tasmīn manasi line sarvajñatvādikam bhavati. uktaṃ ca*

*hṛtpadmapīṭhamadhyastham<sup>30</sup> cintayañ jīvasaṃjñakam<sup>31</sup> |  
pradīpakalikākāraṃ sarvajñatvaṃ prapadyate ||*

*tadupari bhrūmadhye tejasthānaṃ. tatra line manasi pratibhādisiddhayo<sup>32</sup> bhavanti. uktaṃ ca.*

*sarvedamayaṃ binduṃ<sup>33</sup> bhrūvor madhye vyavasthitaṃ |  
yas taṃ vedamayaṃ veda sa veda bhuvanatrayaṃ ||*

*tadupari kapālāntara ākāśasthānaṃ.<sup>34</sup> tatrādhomukhapadmamadhye<sup>35</sup> mano niveśya tribhuvanam eva vaśīkurate.<sup>36</sup> uktaṃ ca.*

*kapālākāśamadhyastham<sup>37</sup> yad adhomukhapānkajam |  
tanmadhye<sup>38</sup> manasi prāpte vāśyaṃ syād bhuvanatrayaṃ ||*

*etāni yogasāre<sup>39</sup> draṣṭavyāni.*

Notes:

The verses are in the *anuṣṭubh* meter and are better and more consistently preserved in the manuscripts than is the verse in the Udyogaparvan.

*hṛtpīṭhapadma-* vs. *hṛtpadmapīṭha-*. Three manuscripts (Baroda 6579, Baroda 11677, BORI 167) record *hṛtpīṭhapadma-*. Baroda 6579 does preserve good readings and is some-

30 Baroda 6579, Baroda 11677, BORI 167: *hṛtpīṭhapadma-*; BORI 84, Mysore, Baroda 11288, Baroda 11930, Nārāyaṇa: *hṛtpadmapīṭha-*.

31 Mysore: *-saṃjñakam*; BORI 84 and all other manuscripts that contain this passage: *saṃjñakam*

32 Mysore, Baroda 6579, Baroda 11677, Baroda 11930: *pratibhādisiddhayo*; BORI 84, Baroda 11288: *prātibhāvayādisiddhayo*; Nārāyaṇa: *pratibhātiśayo*; BORI 167: *sarvāḥ siddhayo*.

33 BORI 84, Mysore: *sarvedamayaṃ binduṃ*; Baroda 11933: *sarvedamayaṃ bimbanam*; Nārāyaṇa: *sarvedamayaṃ vidyud*; Baroda 6579, Baroda 11677, BORI 167: *sarvedavaymayam viṣṇuṃ* (Baroda 6579: *viṣṇu*).

34 Baroda 6579, Baroda 11677: *kapālāntara ākāśa*; Nārāyaṇa: *kapālāntare ākāśa-*; Mysore, Baroda 11288: *kapālāntarākāśa-*; BORI 84: *kapālāntarā ākāśa-*; Baroda 11930: *kapālāntarākārākāśa-*; Baroda 11288: *kapālākāśamadhyastha-*. The pattern of the preceding prose suggests strongly *kapālāntare*, becoming *-āntara* and hiatus after sandhi.

35 BORI 84: *tatra sukha-*; all other manuscripts that contain this passage: *tatrādhomukha-*.

36 Mysore: *vaśīkaroti*; all other manuscripts that contain this passage: *vaśīkurate*.

37 Nārāyaṇa: *kapālādhomukhamadhyastham*; all other manuscripts that contain this passage: *kapālākāśamadhyastham*.

38 BORI 84, Baroda 6579, Baroda 11288, Baroda 11677, BORI 167: *-madhye*; Mysore, Baroda 11930, Nārāyaṇa: *-madhyam*.

39 BORI 84, Mysore: *yogasāre*; Baroda 11288: *yogasyare*; Baroda 11677, Baroda 11930, BORI 167: *bhūtayogasāre*; Baroda 6579: *bhūtayogatyāder*; Nārāyaṇa: *bhūtasāre*.



times independent. Nevertheless, it appears to me that logic requires the other reading, which is supported by Mysore, BORI 84, and the Nārāyaṇa manuscripts.

*pratibhādisiddhaya* or *pratibhāvvyādi* or other. Most of the gains or powers predicted in the introductions to the other sections are reflected in the verses themselves. Intuitive knowledge is not obviously connected to knowledge of the *bbuwanatraya* uniquely.<sup>40</sup> The more expected term for the power would be *pratibha*, which occurs in the *Yogasūtra* twice (3.33, 36), the second time in connection with enhanced sensory powers. *pratibhāvya* is not used to refer to a yogic ability, as far as I know. We might expect *pratibhādisiddhaya*, not reflected in any manuscript.

*sarvavedamayam binduṃ* vs. *sarvadevamayam viṣṇuṃ*. A number of manuscripts reflect what seems to be a conscious change or alternative reading of the verse, in which the point (*bindu*) between the eyes is replaced by Viṣṇu. Viṣṇu is made *devamaya*- rather than *vedamaya*-

*yogasāre* vs. *bhūtayogasāre*. More manuscripts preserve the attribution as *bhūtayogasāra*, rather than *yogasāra*. This is in keeping with the topic of Vimalabodha's discussion, which is a material (*bhautika*) form of meditation. I have been unable to find a record of any text or section of text that is called the *Bhūtayogasāra*. More on this below, but it is worth noting here that the *Yogasāra* text cited here might be a different one than the text cited in the Udyogaparvan.

### 3. The commentaries in which the verses are cited

I turn now to the immediate literary context of the verses from the *Yogasāra* that are cited in Vimala's commentary. The citations form part of Vimala's discussion of particular *Mahābhārata* verses; these discussions need to be understood, at least in a synoptic way, in order to understand Vimala's point in citing the *Yogasāra* when and where he does.

#### A. Udyogaparvan 5.45.13

Vimala cites a verse from the *Yogasāra* in his commentary on CE 5.45.13, in which there is a series of consumings: *prāṇa* swallows *apāna*; the moon swallows *prāṇa*; the sun the moon; and the sun is swallowed by "that higher [thing]" (*tat param*).<sup>41</sup> Vimala takes the verse as describing *sadyomukti* or the yogic practice whereby those who are well beyond interest in worldly things, (*atinirvedavatām*)<sup>42</sup> can leave the body, thereby terminating their bodily lives.<sup>43</sup>

40 Cf. *Yogasūtra* 3.26: *bbuwanajñānaṃ sūrye saṃyamāt*.

41 Vimala's reading of the verse is: *apānaṃ girati prāṇaḥ prāṇaṃ girati candramāḥ; ādityo girate candram sūryaṃ girati tat param*. CE 5.45.13abcd agrees except in the d *pāda*: *ādityaṃ girate paraḥ*.

42 Most manuscripts (BORI 84, Bakre, Baroda 11288, 11677, 11930) read *anirvedavatām*, while three others (Mysore, BORI 167, BORI 171 (most likely)) read *anirvedatām*. I use Arjunamiśra's reading, as cited in Bakre's ed.: *atinirvedavatām*. I suspect that the *-ti-* was omitted in a parent to the surviving manuscripts of Vimala. It might be possible to make sense of *anirvedavatām*, as referring to people who are still full of interest in life but who want an immediate release from it, but it seems unlikely in the context.

43 *sampraty atinirvedavatām sadyovimuktim icchatām dhyānopāyaḥ kathyate*.

Vimalabodha provides glosses of the terms in the verse that explain this practice, in which, first, the *vāyu* or wind present in the *apāna* (this wind being the *bbūtātman* or individualized soul), is moved to the place of the *prāṇa* by means of *utkrāntiyoga*.<sup>44</sup> The *prāṇa*, here called the *jīvātman*, consumes the entity of *vāyu/apāna/bbūtātman*, which is to say, it brings it under its sway.<sup>45</sup> The *prāṇa*, in turn, is brought to the domain of the inner self (*antarātman*), the inner self being the same thing as the mind, for which the moon is a synonym.<sup>46</sup> The domain of the inner self/mind/moon is the top of the head. Located there it fills the body's tissues with ambrosia, thereby nourishing them.<sup>47</sup> This idea of filling the tissues with *amṛta* can be supported from the Āgama, Vimala says. Then he invokes the Somasiddhānta to say that the mind/moon is full.<sup>48</sup> To demonstrate that last point, Vimala brings in the verse from the *Yogasāra*, as cited above, which refers to the *bimba* or disk of the moon.

Continuing with this sequence, then, Vimala explains that, using the *utkrāntiyoga*, the mind / moon is brought out of the head via the *brabmarandhra* to the realm of the sun, which is to say, the *buddhi*. The *buddhi*/sun then “consumes” the mind/moon, and becomes all-illuminating.<sup>49</sup> The higher self (*paramātman*) then consumes the sun/*buddhi*. Thereupon follows liberation, which is characterized by the removal of the accumulation of all the attributes of the individual, such as the *buddhi*.<sup>50</sup>

## B. Śāntiparvan, *Mahābhārata* 12.188.1

The five verses that Vimala cites from the *Yogasāra* in the Śāntiparvan all occur in the discussion of CE 12.188.1. This *adhyāya* (12.188), called the *Dhyānayogavidhi* in some colophons, comes early in the Mokṣadharmaparvan and speaks of a fourfold meditation (*caturvidhaṃ*

44 *apānamadhyasthitam vāyum bbūtātmasamjñitam utkrāntiyogena prāṇasthānam upāgatam.*

45 *sa jīvātmā prāṇasamjñakaḥ girati gilati vaśīkarotīty arthaḥ.*

46 *prāṇam antarātmaviśayam āgataṃ. antarātmā manas candra iti paryāyaḥ.*

47 *tasya viśayo mūrdhā. tatrastha evāsāv amṛtena debadhātūn pūrayan puṣṭim vidadbāti.*

48 Or dark, if *kṛṣṇa-* is the reading.

49 *tam evambhūtam candram ādityo girati grasati. utkrāntidhyānayogena taṃ brabmarandhrenāditya- viśayam nītam tadādityo grasati. ādityo buddhir ucyate viśayaprakāśarūpatvāt. taṃ candram asau grasati. tataś ca viśvaprakāśo jāyate.* The manuscripts are more or less evenly split between *taṃ candram asau grasati* and *taṃ candramasam grasati*. The sense is not crucially changed by this difference.

50 *taṭpūrvoddiṣṭaḥ paramātmā sūryam girati. tato buddhyādisakalaguṇasamḍobanivṛtilakṣaṇo mokṣa iti bbāvah.* A significant number of the manuscripts read *-samḍeba-* rather than *-samḍoba-*, but while *samḍebanivṛtti* makes sense in other contexts, given the rest of the compound, it seems more likely that here we have an aggregate or collection *-samḍoba-*. It might be noted here that Vimalabodha does not give any explanation of the eleven *lakṣaṇas* mentioned in the *Yogasāra*'s verse. A set of eleven *lakṣaṇas* is relatively rare in this context, I am informed, which will require further historical elucidation.

*dhyānam*).<sup>51</sup> Vimalabodha explains the four types of meditation as being related to the material elements (*bbautika*), the sense of 'I' (*āhaṃkārika*), the intellect (*bauddha*), and the Self (*ādhyātmika*).<sup>52</sup> He begins with the material form of *dhyāna*, describing it as a dissolving of the mind into the five elements.<sup>53</sup> At this point, Vimala's discussion of the five steps of material meditation starts, beginning *tatra nābber adbo pṛthivīsthānam*.<sup>54</sup> The verses of the *Yogasāra* are here cited in relation to the *bbautika* form of meditation.

After Vimala's explanation of this series of five practices, the material stage is complete, and the meditation proceeds to the one related to the sense of 'I' (*āhaṃkārika*), one in which aspirants imagine themselves to be Vāsudeva or another deity.<sup>55</sup> Vimala cites two sources to support the principle involved, *Bhagavadgītā* 17.3 and *Narasimhapurāṇa* 62.17.<sup>56</sup>

This is followed by the meditation related to the intellect (*bauddha*), which, in the terminology of the Sāṃkhya, Vimala explains, is a particular evolute of the *prakṛti*, the *mahat* in the form of the inner organ (*antaḥkaraṇa*). The *buddhi* is at the same time a content of cognition, the knowledge of non-difference between *prakṛti* and *puruṣa*.<sup>57</sup> The seed syllable (*mantrabījam*) that forms the content of meditation is in essence an evolute of the *ahaṃkāra* that has, in turn, developed from this *buddhi*.<sup>58</sup> In keeping with this conceptualization, Vimala cites a verse about Viṣṇu the Lord as inner self, upon whom one should meditate.<sup>59</sup>

Upon completing this level of practice, for the fourth (*ādhyātmika*) and last meditation, the meditator is to put his mind, freed from content, into the *kṣetrajñā* self.<sup>60</sup> To exemplify this freedom from the content of awareness, Vimala cites a verse from the *Amṛtabindu Upaniṣad*.<sup>61</sup> Vimala closes his comment on 12.188.1 by saying that all of this has already been said here and

51 *banta vaksyāmi te pārtha dhyānayogaṃ caturvidham; yaṃ jñātvā śāsvatim siddhiṃ gacchanti paramarṣayaḥ*. The verse that Vimala has in front of him reads the same as its counterpart in CE 1.188.1.

52 *tac caturvidham catuḥprakāram. bbautikam āhaṃkārikam bauddham ādhyātmikam ca*.

53 *tatra bbautikam pṛthivyādiṣu pañcasu manaso layaḥ*.

54 See passage cited in section 2 of this paper.

55 *evam bhūtābhūmiṃ jtvā ahaṃkāre mano niyojayet. ahaṃkāraś ca bhāvitavāsudevādidevatābbhimānaḥ*.

56 *yo yacchraddhaḥ sa eva saḥ* (BG 17.3); *dhyeyaḥ sadā savitṛmaṇḍalamadhyavartī* etc. (NṛP 62.17). These are both, broadly speaking, Vaiṣṇava sources.

57 *evam ahaṃkārabhūmiṃ jtvā buddhau mano niveśayet. sa ca prakṛtipuruṣayor abhedajñānam. mahadākhyāntaḥkaraṇarūpaprakṛtipariṇāmaviśeṣaḥ*.

58 *yato 'haṃkārapariṇāmātmā mantrabījam iti yāvat*.

59 *yat sarvavarnāśrayabījam ekaṃ sa caiva viṣṇuḥ prabbur antarātmā. jvālāsahasrārciṣam aprameyaṃ dhyātva naro mucyati janmabandhāt*. Some manuscripts read *yaḥ* for *yat*. This verse remains unidentified. It is explicitly Vaiṣṇava.

60 *buddhibhūmiṃ api jtvā kṣetrajñātmani nirviśayaṃ mano niveśayet*. Some manuscripts read *nirviśaye*.

61 *mana eva manuṣyānāṃ kāraṇaṃ bandhamokṣayaḥ*. The manuscripts have various versions of the second line of this verse, (e.g., Nārāyaṇa: *bandhāya viśayāsaṃgaṃ mukter nirviśayaṃ manaḥ*). All of the versions vary from the received *Amṛtabindu Upaniṣad*; nevertheless, all maintain a contrast between an attachment to percipient content, which leads to bondage, and a removal of content, which leads to liberation.

there by the sage (*muni*), by which he probably means Vyāsa; Vimala is simply condensing it into one place for the sake of easy understanding.<sup>62</sup>

#### Part 4. Identification of the *Yogasāra*

In identifying the *Yogasāra* from which these verses are cited, we must first acknowledge that there may be two texts: a *Yogasāra* linked to the Somasiddhānta and Śaiva contexts, on the one hand, from which the commentary on CE 5.45.13 cites, and a *Yogasāra* linked to Vaiṣṇava contexts on the other, from which the commentary on CE 12.288.1 cites. Many of the manuscripts of Vimala that I had available refer to a *Bhūtayogasāra* in the ascriptions of the latter. There is no work of that title mentioned in the NCC, Aufrecht's original CC, or the Kaivalyadhāma catalog (SMYM), either as an independent title, a portion of another work, or even as a source referred to in other texts.<sup>63</sup>

There is no such problem with texts called simply the *Yogasāra*. The NCC has pages of references to manuscripts that carry this title. Many of these titles can be ruled out at the outset, as they are works that use the term *Yoga* in a medical sense or an astronomical or astrological sense.<sup>64</sup> Within the category of *yoga* understood as a practice that brings about powers or a higher transformation of the person or both, there are some that can be ruled out as well. There are, for example, works on *yoga* by Jaina authors, especially Hemacandra, the influential twelfth-century polymath, whose form of *yoga* hews closely to the Jain soteriological line, and does not go in for yogic nexus points within the body, much less visualizations of Viṣṇu.<sup>65</sup> There are also works that are simply too late to be considered as a source for Vimalabodha, most prominently the *Yogasārasaṃgraha* of Vijñānabhikṣu, an author of the sixteenth century.<sup>66</sup> Indeed most of the *Yogasāras* that have an attributed author and that

62 *sarvam etat tatra tatra muninaivoktam. sukhragabhañārtham tu saṃkṣīpya asmābhir iboktam ity avadhātavyam ity arthaḥ.*

63 *Bhūtajaya* is a result of a meditational practice, however. See below, part 5. The discussion of *bhautika* meditation might be the reason the copyists attribute these verses to a work of that title.

64 For a variety of medical works with this title, by various authors, see NCC (Raghavan *et al.* 1968–2015, vol. 22: 126a), as well as *Yogasārabandha* and *Yogasārasaṃjñā* (Raghavan *et al.* 1968–2015, vol. 22: 128a) and a *Yogasārasaṃgraha* by various authors (Raghavan *et al.* 1968–2015, vol. 22: 129a). For *Yogasāra* texts about the *vyotīśas'* *yoga*, most notably the *Yogasārabhavya* of Bhāskarācārya and the *Yogasārasaṃgraha*, see Raghavan *et al.* 1968–2015, vol. 22: 129a.

65 Hemacandra's work, usually called the *Yogasāstra*, has been published several times, with commentaries. See Raghavan *et al.* 1968–2015, vol. 22: 126b–127. This text does make some mention of points of focus for the *prāṇa*, e.g., 5.14. (My thanks to James Mallinson for this reference.) See also the *Yogasāraprābhṛta* of Amitagati Ācārya (Raghavan *et al.* 1968–2015, vol. 22: 128a), and the *Yogasāra* of Yogendradevamuni described in the Jodhpur RORI Catalogue as no. 817 (Jinavijaya 1963: 95f). This last is, in any case, not in Sanskrit and so cannot be our source.

66 Jha 1933. There is also a *Yogasāra* of an Appayya Dikṣita of the nineteenth century, which presents a form of Vedāntic philosophy called *anubhavadvāita* (Raghavan *et al.* 1968–2015, vol. 22: 126a).

the NCC classifies either as yoga or tantra come from a period too late to be viable as an influence on Vimalabodha. For example, there is the *Yogasāra* of Gaṅgānanda, described in the Asiatic Society catalog as manuscript no. 6621 (Sastri 1939: 737f.). Haraprasād Shāstri there remarks that the “work seeks to explain the main principles of Yoga by way of bringing out the significance of the different expressions used in” a verse of the author’s own creation in Mandākrānta meter. That is to say, it provides an ingenious multivalent commentary on a single verse composed by the author so as to elicit all the teachings of yoga. This can hardly be Vimala’s source.

As for the remaining possible candidates mentioned in the NCC, we may work through them in order of increasing likelihood. Some of these are ruled out entirely, based on a search of the text, when it has been available. Others are unlikely given their length, or the sort of discussion they engage in. Finally, there are some that remain candidates, manuscripts of which are yet to be consulted.

## A. Texts that are ruled out

### 1. *The Yogasārasaṃgraha*

This is a different work than Vijñānabhikṣu’s work, though it carries the same title. A manuscript of it is described in the GOML Descriptive Catalogue as no. 4373.<sup>67</sup> It begins, *pranamāmi gaṇeśānām pranaṭārtiprabhañjanam*, etc. It has fourteen chapters, on topics such as *pātāñjalayoga*, *layayoga*, *rājayoga*, and *haṭhayoga*, as well as the *kuṇḍalinī* and the *prānas*. An electronic file was made by the Muktabodha organization, based on a transcript on file at the IFP Pondicherry (IFP T 0859), that transcript being copied from a complete manuscript at the GOML.<sup>68</sup> The text frequently cites a text called the *Yogasāramañjarī*, as well as the *Sūtasambhitā* (mid-twelfth century) and the *Yogayājñavalkya* (thirteenth–fourteenth century).<sup>69</sup> The manuscript as transcribed does not include any of Vimalabodha’s cited verses. Citation of the *Yogayājñavalkya* should make the work too late for Vimalabodha to have known it.

### 2. *The Yogasārasamuccaya*

This work has an alternative title, the *Akulāgamatantra*. A manuscript of this text is described in the India Office catalogue as manuscripts no. 2565 and 2566.<sup>70</sup> It begins *ādau yas tu tvayā*

67 Rangacarya 1910: 3257–32759. Also see Adyar VIII. 98 and 99. There are probably a half dozen other manuscripts of this text, (Raghavan *et al.* 1968–2015, vol. 22: 128a).

68 The text represented in the Pondicherry copy is probably not based on GOML 4373, given the differences between them.

69 Birch has assigned this text to the eighteenth century (Birch 2020: 464, n. 43).

70 IO 1894: 876–879. RASB 6113; Hpr II.1 is apparently a different manuscript than the previous one; Mysore ND XVII. ii 50487; BORI Descriptive Catalogue XVI.ii.1; and two other manuscripts.

*nātha munisiddhair anekadhā*.<sup>71</sup> It consists of ten chapters or *paṭalas*, and is a dialogue between Śiva and Pārvatī. The Muktabodha organization has made a transcription of a NGMPP manuscript (no. 1–9 Reel No. B 115/6), which contains the first nine chapters. The verses cited by Vimalabodha do not occur in these nine chapters.<sup>72</sup>

### 3. The Yogasāra

This work takes the form of a dialogue between Pārvatī and Parameśvara. A manuscript of this text is described in the GOML Descriptive Catalogue IX as 4372. Jason Birch and Gupta Viśvanātha have produced a transcription of GOML 4372, which they kindly shared with me. Their transcription includes their notes about the text's relationship to other, mostly later Yoga texts. According to their analysis the work shares parallels with the *Haṭhāpradīpikā*, but is exclusively a Rājayoga text. It consists of only sixty-six verses. It begins: *katham muktīpradaṃ deva katham jñānapradāyakaṃ*. It contains none of the verses of the *Yogasāra* that Vimala cites.

## B. Texts that are unlikely

### 1. The Yogasāra of Hariśaṅkara, son of Lakṣmaṇajyotirvid

A manuscript of this text is described in the RASB catalog as no. 6599.<sup>73</sup> The author describes himself in an internal colophon as Hariśaṅkara, son of Lakṣmaṇajyotirvid. It begins: *vande taṃ paramātmānaṃ saccidānandam avyayam*. The extant manuscript has only three leaves and covers the first chapter, on the importance of the *guru*, and the next chapter, which begins with a description of the *kumbhaka* form of *prāṇāyāma*. It is difficult to say more, but it seems unlikely to be Vimala's source given the individual authorship and its initial focus.

### 2. The Yogasāra

Another *Yogasāra* is described in the Adyar Descriptive Catalogue VIII as no. 97.<sup>74</sup> Adyar's manuscript is incomplete, but reaches the end of the third *adhyāya* within five leaves. It appears to have only five chapters, and by its own description is very brief. It begins: *athedāniṃ yogadharmo 'tisamāsarūpeṇa kathyate*. Its organization appears to be into five types of yoga: *mantra*, *sparśa*, *bhāva*, *abhāva*, and *mahāyoga*.<sup>75</sup> It is, furthermore, a work in prose. It

71 The various Descriptive Catalogues read this opening line variously.

72 There is a chance that they occur in the last chapter, of course.

73 Shāstrī 1940.

74 Aithal 1976.

75 *niruddhavrtyantare 'sya cittasya parameśvare niścalā yā tu vṛtṭiḥ sa yoga ity ucyate. yogaḥ punaḥ pañcadhā bbinnab: mantrayoga-sparśayoga-bhāvayoga-abbāvayoga-mahāyogabhedena*. The fivefold division of yogas is taught in the *Vāyaviyasamhitā* of the *Śivapurāṇa* (2.29.5–13) and the *Liṅgapurāṇa* (2.55.7–28). My thanks to James Mallinson for these references.

thus seems unlikely to have a versified discussion substantial enough to include the passages that Vimalabodha cites in his commentary.

### 3. *The Yogarahasya*

Another text has a variable title, listed in the NCC primarily as the *Yogarahasya*, though the text in one place refers to itself as a, or the, *Yogasāra*. Its colophon identifies it as the eighteenth and final chapter within a larger work called the *Hastigirimāhātmya*, which in turn is said to form part of the *Brahmapurāṇa*.<sup>76</sup> The text is instantiated in a manuscript described in the GOML Descriptive Catalogue IX as 4366, where it consists of nine leaves;<sup>77</sup> thus it is not a long text. Indices of the published *Brahmapurāṇa* make no mention of this *Hastigirimāhātmya*, which is not found in Stietenron *et al.*'s *Epic and Purāṇic Bibliography* or Rocher's *Purāṇas*. The text, or rather, this chapter of the text, begins *kathito vistareṇaiva hayamedhas tvayā vidhe; āvirbhāvas tathā viṣṇor hastīśailasya mūrdhani*. This text was edited recently by G. R. Srinivasan, who attributes it to the *Brahmāṇḍapurāṇa*.<sup>78</sup> It forms part of a Vaiṣṇava-leaning text that has the city of Kāñcīpura (Hastigiri) as its focus. The manuscript and edition both feature Tamil annotations. It thus appears unlikely to be a source for Vimalabodha, who does not appear to have been a Tamil Vaiṣṇava.

## C. Texts that remain possible candidates to be Vimalabodha's source

### 1. *The Yogasāra*

One text called the *Yogasāra* is described in the GOML Triennial Catalogue of 1916–17 to 1918–19 as R2831r.<sup>79</sup> It comprises nine leaves and consists of a dialogue between Devī and Īśvara. It begins *mūlamantrasya māhātmyaṃ śrotum icchāmi śaṅkara*. It has four chapters or *paṭalas*, with the following titles: *Mūlamantramāhātmyam*, *Nādabindusvarūpavarṇanam*, *Nāḍīsthānapīṭhacakranirṇayaḥ*, and *Yogasādhakakramavarṇanam*. The third chapter seems especially likely to be a possible source for Vimala's comments on CE 12.188.1.

### 2. *The Yogasāra*

Finally, there is a *Yogasāra* text described in three catalogs from Calcutta, all produced by Haraprasād Shāstri.<sup>80</sup> The text takes the form of a conversation between Mahādeva and Pār-

76 *iti brāhmapurāṇe bṛḡgunāradasaṃvāde śrīhastigirimāhātmye aṣṭāṅgayogo nāma aṣṭādaśo 'dhyāyaḥ*. This is a different text from the *Hastigirimāhātmya* of Vedāntadeśika. Its closing section includes this line: *iti samyak samākhyāto yogasāro mayādbhunā*.

77 Rangacharya 1910: 3257f.

78 Srinivasan 2006. To date I have been unable to examine the publication.

79 Sastri, S. K. *et al.* 1922: 4079f.

80 Hpr I. 301; Hpr II.173; and RASB VIII A 6115. Most of the chapter colophons begin: *iti śrīmadyogasāramahāgranthe sarvāgamottame śrīpārvatī-śiva-saṃvāde śatasāhasrjāṃ sambhitāyāṃ...*

vati. It begins: *mātar me devadeveṣi yogeṣi prāṇavallabhe*. It has at least twelve chapters, some of the manuscripts described ending slightly earlier.<sup>81</sup> This text appears to have more parts not included in these manuscripts (*-mahāgranthē śatasāhasryāṃ samhitāyāṃ*), presents itself as the best of all Āgamas (*sarvāgamottame*), and emphasizes lore about the *cakras* or centers in the body, as well as a variety of preliminary yogic practices. The Toṣiṇī compendia of Rāmatoṣaṇa Bhaṭṭācārya, published in the nineteenth century, refer to this *Yogasāra* regularly.<sup>82</sup> I hope that one of the specialist researchers in Yoga will have had access to a manuscript of this text and be able to confirm or disconfirm it as the source for Vimala's comments.

To conclude this section, then, at this point we have not yet identified the definitive source for Vimalabodha, but there is a leading candidate, perusal of which might provide the answer to this question. There are, of course, other possibilities: for example, that the text does not survive in full, or survives under another title. The *Yogasārasaṃgraha* mentioned above as no. 1, for example, regularly refers to a *Yogasāramañjarī*, but this text survives under that name only in a single manuscript (IM 491). Both of these texts, in turn, by their title suggest the existence of some earlier, more capacious work, of the sort partially preserved in RASB VIII A 6115.

## 5. The significance of Vimala's citations of the *Yogasāra*

The purpose of this section is to provide some context, not just of the verses from the *Yogasāra* that Vimala has cited, but also of Vimala's use of them; that is, what his use shows us about his work as a commentator on the *Mahābhārata* by comparison with the work of other *Mahābhārata* commentators. The questions I wish to ask are, therefore: why has Vimalabodha introduced these *Yogasāra* verses where he has? Is there anything distinctive about the background of the *Mahābhārata* verses where he cites them? Is there anything distinctive

81 The contents of these chapters appear to be consistent between the manuscripts Haraprasād Shāstri describes, though Hpr I is more detailed for the beginning and less detailed for the later parts: *mantraṇaśaraṇavidhi; yoga(or -i)-mābātmya; śaṭcakradarśana; mūlādhārasthadevatādīkathanam; bāṇaliṅgopākhyāna; mañipūrakādbiṣṭhānacakrādivarṇanam; hr̥tpadmasya dhyānārcanādivarṇanam; ṣoḍaśadalasya varṇanam; śaṭcakrādicakre dvidalādivarṇanam; śrīguroḥ paraṃbrahmastotrakavacaṃ; gurusabasranāmādiḥ; vaśīkaraṇoddīpane rātrivyatyayakarmādinirūpaṇam.*

82 These works have been published as the *Prāṇatoṣiṇī* (Bhaṭṭa & Viśvāsa 1859). This includes an *Arthatoṣiṇī* and a *Bhaktitoṣiṇī*. The contents of particular *parichedas* that the Toṣiṇī texts mention as belonging to the *Yogasāra* correspond to the contents of chapters described by Haraprasād Shāstri in his *Notices* and *Descriptive Catalogue*. For example, Rāmatoṣaṇa cites almost all of the *Bāṇaliṅgastotra* and ends it with the chapter colophon found in Haraprasād's descriptions: *iti śrīyogasāre sarvāgamottame pārvatiśivasamvāde vāṇaliṅgastotram samāptam (Bhaktitoṣiṇī, lines 2554f)*. At line 2448 he attributes this *stotra* to the fifth *paricheda* of the *Yogasāra*, which is in conformity with Haraprasād's description. It appears, from comparing the citations from the *Yogasāra* that Sundaradeva makes in the *Haṭhatattvakaumudī* (eighteenth century), that these are drawn from this same *Yogasāra*. On Sundaradeva, see Birch 2018: 58f.



in Vimala's way of interpreting those verses? What, finally, is significant about the *Yogasāra* verses themselves?<sup>83</sup>

As to the first question, in general we might say that Vimala shows himself here, as in places elsewhere, to be turning to sources of information about the practice of yoga that are not available from his usual Brahminical, i.e., Vedic, śāstric, and Purāṇic sources. Vimala was working in a context in which even a mainstream Brahminical commentator on a *smārta* text was aware of the growth in prominence of new sorts of Yoga texts, which had increasing authority for those wishing to understand the practice of yoga. Implied in Vimala's use of these verses is, in turn, a re-reading of older passages in mainstream literature, what might have been called anachronism in a previous generation of modern historicist scholarship. Given what other commentators do with these *Mahābhārata* verses, as we shall see, Vimalabodha's context appears not to have been the same as that of other commentators on the epic.

#### A. 5.45.13 *apānaṃ girati prāṇaḥ* etc.

This verse appears in a chapter of the *Sanatsujātīya* in which each verse has the refrain *yoginas taṃ prapaśyanti bhagavantaṃ sanātanaṃ*. The chapter is not primarily a discourse on yoga, and instead instantiates the eternal Lord in a variety of cosmological and natural phenomena, having thereby an Upaniṣadic drift.

The set of four – *apāna*, *prāṇa*, moon, and sun – as a sequence is not unknown to other early literature. While Devabodha and other early commentators understand this set of four to form a sequence within the microcosm of the individual, and connect it with a meditation practice, Vimalabodha takes that further in interpreting this verse to relate to instant liberation and leaving the body (*sadyomukti* and *utkrāntiyoga*). Devabodha makes the identifications that then appear in Vimala: the moon means the *manas*, and the sun means the *buddhi*.<sup>84</sup> The sense that consuming means dissolving is also there.<sup>85</sup> But Devabodha makes no mention of *sadyomukti* or of *amṛta* flowing from the top of the head. Śāṅkara, or, really, \*Śāṅkara, author of the *Bhāṣya* commentary on the *Sanatsujātīya*, follows a similar line to Devabodha's in interpreting this verse.<sup>86</sup> He uses the action of contracting or withdrawing rather than dissolving

83 I hesitate to venture into the subject of the history of Yoga, in which there is currently such a dynamic and erudite cadre of specialist researchers active, who are unlocking the history of this movement in unprecedented ways, especially in its earlier periods. In writing this article I have benefitted from recent publications produced by this cadre, and conversations with several of them. I defer to their collective and individual expertise; what follows is offered in the hope that it might be of some use to them in establishing dating, and that they will be able to identify the likely channel of influence.

84 *candramā manaḥ. ādītyo buddhiḥ sattvādbhikyāt prabhāsvaratvāc ca.*

85 *girati grasate. apānaḥ* (Ed. *apānaṃ*) *prāṇe liyate ity arthaḥ*. Citations are from De 1944.

86 Scholars of Advaita and of Śāṅkara have written very little about this commentary since K. T. Telang discussed it in the introduction to his translation of the *Sanatsujātīya* (Telang 1882: 135–

to explain the verbs of consuming in the original verse.<sup>87</sup> He does not mention *sadyomukti* or the other related ideas.

Sarvajña Nārāyaṇa, or the author of the *Bhāratārthaprakāśa* on the Udyogaparvan, follows his own line, identifying *prāṇa* and *apāna* with the *pūraka* and *recaka* forms of *prāṇāyāma*, the moon with *ākāśa*, and the sun with nothing other than itself.<sup>88</sup> Arjunamiśra incorporates both Devabodha and Vimalabodha in his commentary, repeating the one and then the other. His reuse of Vimalabodha is nearly verbatim and includes the *sadyomukti* theory, citing the *Yogasāra* verse and giving Vimala's *sadyomukti* theory in full.

Nilakaṇṭha does not pick up any of Vimala's unique ideas. He follows the earlier identifications of moon with mind and sun with *buddhi*, which Vimala also accepts.<sup>89</sup> He appears to know the \*Śaṅkara commentary, as he glosses *girati* with *upasaṃharati*.<sup>90</sup> Nilakaṇṭha cites two verses about yoga that summarize a similar practice.<sup>91</sup>

Thus Vimalabodha innovates with his reading of this verse as recommending a technique for bringing about departure from the body at will. He is evidently drawing from outside the usual Brahminical stream of commentary on yoga passages in the *Mahābhārata*, and is aware that he is doing so, for he supports his idea with mention of the Āgama, the Somasiddhānta, and then with the direct citation of the *Yogasāra*. The particular purpose of the citation, again, is to show that the moon which is present in the crown of the head, in the lotus located there, and dispenses ambrosia to the tissues of the body, thereby keeping it healthy, is full.

A related idea is found in a source for the earliest Haṭhayoga texts, the *Amṛtasiddhi*, in which the moon is located at the top of the head, the sun at the bottom of the spine, and the *bindu*, or semen, normally flows downward from the one to the other (Mallinson 2015).

148). It is not in the list of works attributed to Śaṅkara by Ānandagiri, so far as I can see. As Telang points out, it does receive mention in the *Śaṅkaradīgvijaya* in the list of Śaṅkara's compositions and was thus reckoned a work by Mādhavācārya in the Vijayanagara period (Telang 1882; 135). But it might have reached this status after Vimalabodha's time.

87 *etad uktaṃ bhavati – samādhibivelāyām apānam prāṇe upasaṃhrtya prāṇaṃ manasi manaś ca buddhau buddhiṃ paramātmāny upasaṃhrtya svābhāvīkacitsadānandādāvītyabrahmātmanāvāvaṭiṣṭhata ity arthaḥ*. Cited from Bakre's edition of the Udyogaparvan.

88 *girati ātmany antarbhāvayati pūrakeṇa prāṇena miśrikṛtasyāpānasya recakāvasthāyām prāṇena saba nīrgamāt. prāṇaṃ niṣṛtam ākāśarūpeṇa candramā girati. ākāśamūrtir hi candraḥ . . . tam candram ādītyo girati darśasamaye prāpte*. Cited from Bakre's edition of the Udyogaparvan. See earlier notes about the relation of the author of the *Bhāratārthaprakāśa* on the Udyogaparvan with the evidence of the manuscript of Sarvajña's commentary on the rest of the *Mahābhārata*.

89 *candramā atra manaḥ; ādītyo buddhiḥ, paraḥ paramātmā*. Cited from Bakre's edition of the Udyogaparvan.

90 *apānam iti. girati upasaṃharati svātmani yogaśāstroktarītyā*.

91 *pārṣṇinā gudam āpīdya dantair dantān asaṃsprśan. dṛḍhāsano 'pānavāyum unnayec ca śanaiḥ śanaiḥ. tam prāṇenaikatām nitvā sbiraṃ kṛtvā hṛdambare. cetomātreṇa tiṣṭheta tac ca buddhau vilāpayet*. I have not found the source of these verses. Cf. *Bhāgavatapurāṇa* 2.2.19cd–20ab. The metrical unit, *dantair dantān asaṃsprśan*, appears in *Yājñavalkyaśmṛti* 3.199b; *Viṣṇuśmṛti* 97.1; and Vāgīśvarakīrti's *Mṛtyuvañcanopadeśa* 4.47b. It also appears in the *Mṛgendrantra's* Yogapāda, vs. 19. My thanks to James Mallinson and Jason Birch for these references.

The idea of a natural nourishing of the tissues is present in the *Amṛtasiddhi*, but the principle of the yogic practice of leaving the body at will is not.<sup>92</sup> Some ideas of the former sort are present in the yoga text, the *Vasiṣṭhasaṃhitā* (ca. twelfth century), where there are forms of meditation recommended that contemplate the heart lotus and the crown lotus streaming *amṛta* throughout the body.<sup>93</sup> Such ideas are present in the Śaiva forebears of these Yoga texts. For example, the seventh chapter of the *Netratantra* contrasts the *bindu*-retention practices underlying the *Amṛtasiddhi* with a different, Śākta type of meditative practice that results in the crown of the head diffusing *amṛta* throughout the body.<sup>94</sup> Vimalabodha signals that he is drawing on Śaiva forms of these traditions by the mention of the Somasiddhānta.<sup>95</sup> As for *sadyomukti*, some versions of this practice have crept into the Purāṇic literature from the Āgamic well before Vimala's day.<sup>96</sup>

### B. 12.188.1 *hanta vakṣyāmi te pārtha dhyānayogaṃ caturvidhaṃ* etc.

This verse opens an *adhyāya* of the Mokṣadharmaparvan, for which Johannes Bronkhorst has identified the probable Buddhist background, given the regular discussion in early Buddhist texts of a fourfold meditation and the similarities of the techniques discussed.<sup>97</sup> Vimalabodha introduces the verse in order to discuss it in a way that differs from the only other independent commentator on the Mokṣadharmā to whom I had access: Nilakaṇṭha Caturdhara. In his *Bhāratabhāvadīpa* on this chapter, Nilakaṇṭha interprets the fourfold meditation strictly in terms of Pātañjalayoga.<sup>98</sup> He refers to four *sūtras* (1.34, a part of 1.35, 1.38, and 1.39), and differentiates the four forms of meditation by their basis or focus (*ālambana*), offering the four possibilities as a gloss of these *sūtras*.<sup>99</sup>

92 Mallinson 2020: 412.

93 *Vasiṣṭhasaṃhitā* (Maheshananda et al. 2005) 4.42–46: *ṣoḍaśacchandasaṃyuktaṃ śiraḥpadmād adhomukhāt; nirgatāmṛtadbhārābbiḥ sabasrābbiḥ samantataḥ* (4.43) *plāvitam puruṣaṃ drṣṭvā cintayitvā samāhitāḥ; tenāmṛtena saṃpūrṇaḥ sāṅgopāṅgakalevaram* (44) *abam eva paraṃ brahma paramāt-māham avyayaḥ*. Note the use of *cintaya-* as a verb in this practice. Thanks to Jason Birch, I have a transcription of this text made by James Mallinson, Jason Birch, and Mark Singleton for the SOAS Haṭha Yoga project.

94 See Flood, Wernicke-Olesen & Khatiwoda forthcoming. See also the Buddhist *Mṛtyuwañ-canopadeśa* 4.43–45, which presents a similar form of meditation and with similar results: *mūrdhni candramaso bimbāt kṣaratpīyūṣāśikarān; bhādayataḥ samastāṅgaṃ romakūpaiḥ samantataḥ | śaḍ māśān bhāvayed yogi sarvasaṅgavivarjitaḥ; sarvarogān vinirjitya mṛtyuṃ jayati mṛtyuvat | śirasy adhomukhaṃ śuklaṃ sabasradalapaṅkajam; dhyātvā candrakramān mṛtyuṃ kalpādīṃś ca vināśayet |*.

95 Here I must leave it to the specialists to make a clearer determination of the nature of the influences.

96 See *Bhāgavatapurāṇa* 2.2.15–21; 11.15.24.

97 Bronkhorst 1986: 43–46. I thank Valters Negribs for this reference.

98 Nilakaṇṭha on 12.195.1 in the Vulgate text (Chitrashala edition).

99 Note that in his discussion of the fourth of these *sūtras*, 1.39: *yathābbimatadhyānād vā*, Nilakaṇṭha allows for a meditation on an embodied deity such as Śiva, or on the deities of the six cakras: *yathābbimatam nilagrīvapitāmbarādivigrahaṃ ṣaṭcakra devatādikaṃ vā ālambya cittam sthīrikuryāt*. This

Vimalabodha, as we have seen, understands the *caturvidhaṃ dhyānam* to refer to four meditations that are related to the elements, the sense-of-‘I’, the intellect, and the spirit. Sarvajña Nārāyaṇa, in this case serving as a near contemporary expander of Vimala’s commentary, adduces a verse here, not found in Vimala, which summarizes these four forms of what he calls *jñānayoga*.<sup>100</sup>

As for the significance of Vimala’s citation of the verses from the *Yogasāra*, he uses them as his way of expounding the first, or material (*bhautika*) level of meditation, in which the mind is absorbed into the five elements, from the most concrete to the most subtle, whereby the *yogin* achieves various powers and knowledges. The five elements are spread along the body’s vertical axis, with the place of the earth element, the lowest, being in the *brahmagranthi*, below the navel. Thus this practice imagines five locations of meditation, which are associated with the five elements, the others being the navel, the heart, between the brows, and the top of the head.

In the tantric traditions, there were systems of spiritual nodes in numbers other than the later established *ṣaṭcakra* system, which was articulated initially in the (eleventh century) *Kubjikāmatatantra*.<sup>101</sup> But I have not been able to locate a system of five centers matched up to the five elements in the way that we find in the *Yogasāra* citations.<sup>102</sup>

The mention of the *brahmagranthi* in one of the cited *Yogasāra* verses is revealing of its background. In Yoga texts that are influenced by the *Amṛtasiddhi*, this *granthi* is conceptualized with two others, the Viṣṇu and Rudra *granthis*, as blockage points along the vertical axis of the person.<sup>103</sup> Mallinson refers to earlier schemes of more *granthis* in tantric predecessor texts: the *Kubjikāmatatantra*’s seventeenth chapter and the *Netratantra*’s seventh.<sup>104</sup> It is worth noting that the first line of the first verse that Vimala cites from the *Yogasāra*, the one that mentions the *brahmagranthi*, is very similar to a line from *Kubjikāmatatantra* 17.<sup>105</sup>

There are systems of yogic practice described in early Yoga texts that distribute the five elements through the body, and recommend yogic practices in relation to them, as for example in the *Vasiṣṭhasaṃhitā*, mentioned above. This text, however, distributes the elements

is not obviously drawing directly from Vimalabodha, who does not present the six-cakra system in any case. Nor does Vimala mention deities presiding over the five locations he lists, except in the case of a probably later variant to the passage about the centre between the eyebrows.

100 GOML R 2169 transcription, p. 81. *uktaṃ ca: mahābhūtaṭajayaḥ pūrvam abamkārātmakas tataḥ; buddhir ādhyātmikāś ceti jñānayogaś caturvidhaḥ*. Again, this part of Sarvajña’s commentary, unlike that on the Udyogaparvan, largely follows Vimalabodha’s.

101 Flood 2006: 157–162.

102 It is probably worth noting that the five places are described eclectically, the first is a *granthi*, the next two and the topmost are lotuses; while the one between the eyes is a point. The downward facing lotus in the crown of the head is probably usefully determinative of a source.

103 Mallinson 2020: 414.

104 Mallinson 2020: 415–416, n. 22.

105 *Kubjikāmatatantra* 17.73ab: *adbordhvaromamadhye tu brahmagranthir udābrtā*. Compare the *Yogasāra* verse cited above: *ūrdhvādboromamadhyastho brahmagranthir udābrtaḥ*.

differently than the way the *Yogasāra* known to Vimala does. In the *Vasiṣṭhasambhitā* (4.6–8) the place of earth is from the knees to the feet; of water from the anus to the knees; of fire from the heart to the anus; of air from the brows to the heart; with ethereal space in the top part of the head.

The emphasis on the conquest of the elements as an early form of yogic practice is better known. *Yogasūtra* 3.44 prescribes the conquest of the *bhūtas* on many levels and in many modes as a result of a complex form of practice of *saṃyama*.<sup>106</sup> The tantric texts speak of a purification of the elements (*bhūtaśuddhi*) in the body as part of spiritual practice, but the purpose and technique of both of these appears different to what we see in the *Yogasāra*.<sup>107</sup>

Vimalabodha mentions a dissolving of the mind, while the *Yogasāra* verses do not, using instead verbs of motion, thinking, or positioning (*gam*, *cint*, *vyava* + *sthā*, *pra* + *āp*). Here Vimalabodha appears to be supplying a notion from the realm of yogic meditative practice, which can be called *layayoga*.<sup>108</sup> Versions of this practice become widespread in Brahminical appropriations of yogic meditation.

To conclude, then, one can see traces of the forerunners of Vimalabodha's source in Śaiva Tantric yoga, where practices of flooding the body with *amṛta* are described. Practices described in such texts as the *Mālinīvijayottaratantra* were popularized in yoga texts such as the *Vasiṣṭhasambhitā*, which had emerged into public accessibility not long before Vimala wrote his commentary.<sup>109</sup> Vimala's use of the *Yogasāra* can best be understood in relation to this history, which had begun about a century before he was active. Study of the relevant texts of this period should further clarify the networks of circulation of ideas and practice in which Vimala's commentary participated.

## Abbreviations

BG	<i>Bhagavadgītā</i>
CE	Critical Edition
NGMPP	Nepal-German Manuscript Preservation Project
NṛP	<i>Nṛsiṃhapurāṇa</i>

Others are listed below under their respective catalogues.

106 *sthūlasvarūpasūksmānvayārthavattvasaṃyamād bhūtajayaḥ*.

107 Flood 2006: 108–113.

108 The practice has earlier, Tantric predecessors. Mallinson 2015: 119.

109 Mallinson 2015: 109–10. My thanks to Jason Birch for useful suggestions for this conclusion.

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## Psychological Transformation in Buddhism and Yoga

*Johannes Bronkhorst*

Freedom is a central notion in many religious and philosophical movements of classical India. It usually concerns freedom from rebirth and karmic retribution, a freedom that advanced practitioners are believed to attain at death. Certain movements, however, accept that freedom can be attained while one is still alive, by undergoing a transformation. As a consequence of this transformation, which is thought to be permanent and irreversible, the person concerned, still alive, is now liberated. The transformation concerned is often of a mental, or psychological, nature.<sup>1</sup>

Psychological transformations are the business of psychology. The question to be addressed in this article is: Can modern knowledge about psychological transformations help us understand some of the early Indian texts better?

What does modern psychology know about permanent and irreversible transformations? While classical forms of psychotherapy – first among these Freudian psychoanalysis – assumed that certain permanent psychological changes can be induced in human beings, neuroscientists tended to remain skeptical. They held that essential psychological features – including those based on the memories that contributed to the formation of our personalities – were laid down in unchangeable synaptic connections between neurons. This conviction itself has now changed. During the last twenty years or so a discovery has found its way into neuroscience and psychology that is known by the name *memory reconsolidation*;<sup>2</sup> in 2012 a researcher called it “one of the hottest new theories of the past decade.”<sup>3</sup> Experiments on animals and subsequently on humans have revealed that during a short while after the reactivation

1 I am not sure if O’Brien-Kop’s (2022: 28) claim that “any doctrine of liberation is, by definition, metaphorical” is helpful.

2 For a recent discussion, see Nadel & Sederberg 2022.

3 Alison Winter 2012: 264. Cp. Nadel 2007: 180: “there is no such thing as a fully consolidated and hence ‘fixed’ engram.” In spite of the newness of the discovery of memory reconsolidation, Sigmund Freud wrote already in 1896 about “the material present in the form of memory traces being subjected from time to time to a *rearrangement* in accordance with fresh circumstances – to a *retranscription*” (Letter from Freud to Fliess, December 6, 1896; <https://pep-web.org/browse/document/ZBK.042.0207A?index=100>)

of memories their emotional contents can be permanently modified.<sup>4</sup> During this so-called *reconsolidation window*, which can last from minutes up to a few hours,<sup>5</sup> such a change can be brought about by pharmacological means (by so-called protein synthesis inhibitors, such as propranolol)<sup>6</sup> or through new competing learning. A condition for such a change, it appears, is that the reactivated memory be confronted with what is called a *mismatch* or *prediction error*; that is to say: the reactivated memory is not accompanied by its expected outcome.<sup>7</sup> Indeed,

therapeutic change in a variety of modalities, including behavioral therapy, cognitive-behavioral therapy, emotion-focused therapy, and psychodynamic psychotherapy, results from the updating of prior emotional memories through a process of reconsolidation that incorporates new emotional experiences.<sup>8</sup>

Here is a short description of how memory reconsolidation can be used in the case of humans:

Studies examining the behavioral interference of emotional memories in humans have explored both conditioned aversive memories and appetitive memories. A common nonpharmacological technique to change conditioned emotional reactions is extinction training. Extinction involves recurrent presentations of the CS [*conditioned stimulus*] without aversive or appetitive outcomes, which leads to a gradual decrease in the CR [*conditioned response*]. Similar to acquisition, extinction is a learning process, but now the CS is associated with no aversive or appetitive outcome. Importantly, *there is abundant evidence that standard extinction training results in an additional memory trace representing an alternative for the CS* (e.g., safe). Because the initial aversive or appetitive memory trace still exists, the CR can return after extinction training in a number of circumstances

4 Cogan *et al.* 2019. Memories can alternatively be more solidly consolidated. This happens in sleep, one of whose functions appears to be to “consolidate [new memory traces] into more permanent forms of long-term storage, integrating key features of recent experience with existing remote and semantic memory networks” (Wamsley & Stickgold 2011: 2). Significantly, this kind of memory consolidation takes place in NREM (non-rapid eye movement) sleep, i.e., not in dreams and therefore without consciousness intervening. In the case of motor skill memory, it leads to instinctual habits. Consciousness, it appears, is required to re-consolidate and potentially change memory, not to consolidate it to begin with. This happens, to at least some extent, in dreams about upsetting memory experiences, which reduce the emotional charge of those memories. See on all this Walker 2017: 112–132, 204–212; see also Solms 2021: 229.

5 Phelps & Hofmann 2019: 45.

6 Pharmacological means are rarely used in humans. Kindt *et al.* 2009 is among the exceptions. See also Ecker 2018: 22.

7 There is an extensive literature about all this. See, e.g., Lee *et al.* 2017; Exton-McGuinness *et al.* 2015; Fernández *et al.* 2016; Elsey *et al.* 2018; Sinclair & Barense 2019.

8 Lane *et al.* 2015: 1.1

... However, if extinction training occurs during reconsolidation while the memory is still labile, it is possible that this new information will get incorporated into the original memory trace, thus updating the original emotional memory and changing its emotional significance.<sup>9</sup>

In this last case one speaks not of *extinction* but of *erasure*.<sup>10</sup> It is important to remain aware of the difference between the two. Extinction normally creates an additional memory trace.<sup>11</sup> It *only* results in erasure – and therefore in a change in the original memory trace – *if* it is applied during the reconsolidation window.<sup>12</sup>

All of this is, of course, grist for the mill of psychotherapists. Consider the following:

Defining complete elimination of unwanted emotional responses as the goal of psychotherapy is a statement that no neuroscientist would have ventured to make prior to 2000, before the discovery of memory reconsolidation. It is a goal now recognized as a possibility grounded in empirical research. That goal is the operational definition of erasure ... : lasting, effortless, complete cessation, under all circumstances, of an unwanted behavior, state of mind, and/or somatic disturbance that had occurred either continuously or in response to certain contexts or cues.<sup>13</sup>

The first target of psychotherapies that use this procedure is, of course, to find and identify the memories (“implicit memories”)<sup>14</sup> that underlie symptoms. Symptoms, and habits in general, are automatic responses. Anyone who has ever learned to ride a bicycle can confirm that consciousness is required before the appropriate automatisms have been established but is no longer necessary after that.<sup>15</sup> Memories that underlie symptoms are emotional memo-

9 Phelps and Schiller 2013: 199; my emphasis.

10 See further Dunsmoor *et al.* 2015: 54–56.

11 The term “extinction” is strictly speaking “a misnomer that creates misconceptions, ... because it produces none of the effects that have been identified with the term ‘extinction’ for a century” (Ecker 2018: 26).

12 It is possible that the engram underlying the original memory trace survives in a “silenced” state, but they will no longer be accessible; Frankland *et al.* 2019.

13 Ecker 2018: 3. Alberini (2015) has some reservations about the extent to which memory reconsolidation can be used in therapy; see also Schacter 2021: 305–311.

14 Schacter 1987; Cubelli and Della Sala 2020.

15 Cf. Earl 2014: 1: “Consciousness is associated with a flexible response mechanism ... for decision-making, planning, and generally responding in nonautomatic ways.” Kanai *et al.* 2019: 1: “consciousness emerged in evolution when organisms gained the ability to perform internal simulations using internal models, which endowed them with flexible intelligent behavior.” Solms 2021: 190: “Affective valence – our feelings about what is biologically ‘good’ and ‘bad’ for us – guides us in *unpredicted* situations. ... [T]his way of feeling our way through life’s unpredictable problems, using

ries.<sup>16</sup> Many of these are hidden from consciousness and need to be found.<sup>17</sup> This is not always simple. And yet, “[a]ttempting to prevent or reduce a symptom with counteractive methods that leave the underlying memory material intact positions a therapy client to be prone to relapses.”<sup>18</sup>

A complicating factor is that symptoms are not always (if ever) the result of one single memory. There are networks of memories.<sup>19</sup> This is not the place to enter into these complexities.

## Reconsolidation in Buddhism and Yoga

This then is, in short, what is known about memory reconsolidation and the way it can bring about permanent and irreversible changes in the human (and animal) psyche. Can it help us understand early Indian texts that speak about such changes? Some preliminary observations are required.

The first thing that must be emphasized is that none of the Indian texts and movements to be considered offer anything that we might call psychotherapy. Their aim was not to deal with the kind of symptoms that modern psychotherapy tries to resolve, and it is often far more radical. Early Buddhist texts are particularly clear about this. Successful practice results in the end of suffering and the end of desire. This difference must be kept in mind in what follows.

The belief that a state of freedom can be attained *before death*, while one is still alive, explicitly found its way into certain Brahmanical currents of thought from a relatively late date

*voluntary* behaviour, is the biological function of consciousness.” Solms 2015: “conscious reflection upon an automatized motor programme undermines the intended behaviour because it destabilises the underlying programme. ... Biologically successful memories are reliable predictive algorithms ... There is no need for them to be conscious.” Solms 2019: 13: “[Consciousness] is a sort of alarm mechanism, which guides the behavior of self-organizing systems as they negotiate situations beyond the bounds of the preferred states, in so far as they are not equipped with automatized (or automatable) predictions for dealing with them.” For an example of unconscious memory, see the chapter “Uncovering secrets: the problem of traumatic memory” in Van der Kolk 2014: 205–220.

16 Staniloiu, Kordon and Markowitsch 2020: 4. Even though memories can be forgotten (Ryan and Frankland 2022), this appears to be less true of emotional memories.

17 Ecker 2018: 3.

18 Ecker 2018: 7.

19 “... fear memories consist of *multiple elements that become interweaved within a broad associative network*.” (Dunsmoor *et al.* 2015: 56; my emphasis). Note further that “what is erased through the reconsolidation process is a specific, learned schema or model or template of reality ... That schema [is] the target for erasure ... With dissolution of the schema, the negative emotions that it [is] generating ... [disappear], though those emotions [are] not themselves the target for mismatch or erasure ...” (Ecker 2015: 29).

onward.<sup>20</sup> It is commonly referred to by the name *jīvanmukti*, which means: freedom while alive. According to many texts, one reaches that state by means of a special kind of insight into the nature of reality. Memory reconsolidation plays no obvious role in these transformations.

Jainism and Buddhism deserve special attention apropos this topic. Both have a lot to say about irreversible changes that can be brought about and guarantee that the person concerned, though still alive, will not be reborn. Strictly speaking, Jainism does not speak of freedom in this connection; it reserves this term for the shedding of the last remains of karma (conceived of as a form of matter) at death.<sup>21</sup> This is a terminological nicety that does not concern us at present. However, features Jainism attributes to those who have undergone the crucial transformation are such that memory reconsolidation cannot easily be invoked to explain them. Such persons are claimed to be omniscient (literally) and in the possession of a highly resilient and ironlike physical structure. Some add that they do not engage in normal bodily activities, including eating.<sup>22</sup>

Buddhism is more promising in this respect. It can be argued that at least one path toward the goal presented in its early texts involves memory reconsolidation.<sup>23</sup> The method it proposes does not resemble modern therapeutic practice, to be sure, to say nothing about the use of propranolol or other pharmacological substances. Broadly speaking, the Buddhist path uses meditation, but it does more. Meditational practices – mindfulness and mental absorption – are the *tools* that lead practitioners to a state in which they can bring about the final transformation. Mindfulness and absorption are *preliminaries* and do not by themselves bring about this transformation. How this is done is described in the following frequently recurring passage, sometimes put in the mouth of the Buddha:

Then, when my mind was thus absorbed, pure, cleansed, free from blemish, without stain, supple, ready, firm, immovable, I directed my mind to the knowledge

20 “While not without ancient precursors, *jīvanmukti* was first celebrated and popularised by the 11th century *Mokṣopāya* (later known as *Yogavāsiṣṭha*) and by the seventeenth century had become a topic of discussion in every school of Hinduism ... *jīvanmukti* is a central goal of Hāṭha texts” (Singleton 2021: 125; cf. Mallinson and Singleton 2016: 251–253). See further Bronkhorst forthcoming. The *Yogaśāstra* (= *Yogasūtra* + *Yogabhāṣya*) is an exception, for which see below. Interestingly (and confusingly), the *Mahābhārata* presents King Janaka of Mithilā as someone who claimed (though falsely) to have gained *mokṣa*; see Fitzgerald 2003. See also Bronkhorst 2010; 2016: Appendix V. Philipp Maas draws my attention to *Sāṃkhyakārikā* 65–67, where the reference to a liberated, yet living, person seems beyond doubt.

21 Dundas 2020.

22 Dundas 2002: 104ff.; Bronkhorst 2020: 179.

23 The early Buddhist texts present a number of paths; see Gethin 2020; further Shi 2021. The path here highlighted is the one that Gethin calls the “Tathāgata appears” scheme; for details see Bronkhorst 2009: 12–19. Other Buddhist paths are discussed in Pecchia & Eltschinger 2020; Buswell & Gimello 1992. Buswell and Gimello (1992: 7–8) present some of the best-known Buddhist *mārga* schemes.

of the destruction of the influxes (*āsava*; Skt. *āsrava*). Then I recognized in accordance with reality “this is suffering,” I recognized in accordance with reality “this is the origin of suffering,” I recognized in accordance with reality “this is the cessation of suffering,” I recognized in accordance with reality “this is the path leading to the cessation of suffering.” I recognized in accordance with reality “these are the influxes,” I recognized in accordance with reality “this is the origin of the influxes,” I recognized in accordance with reality “this is the cessation of the influxes,” I recognized in accordance with reality “this is the path leading to the cessation of the influxes.”<sup>24</sup>

Can psychology, including the new knowledge about memory reconsolidation, help us make sense of this?

It can, if we make two assumptions. The first is that the practice of meditation here set forth can facilitate access to mental contents, especially memories and their networks that are not normally easily accessible to consciousness. The second is that, once there is access, these memories can be emptied of their emotional charges.

To begin with the first assumption, conscious access to memories (along with their emotional charge) is the precondition for memory reconsolidation. Only thus can these memories be reactivated, and only reactivated memories can be reconsolidated. Do mindfulness and absorption provide access to such memories?

We can be brief about mindfulness. Modern therapists who work with memory reconsolidation, too, use it as a tool.<sup>25</sup> However, modern therapy provides access to one emotionally charged memory at the time (or to a limited number of them), often after several preparatory therapeutic sessions. It may not have the means to gain access to a whole lot of them (not to speak of all of them) in short succession.<sup>26</sup> Mindfulness by itself, though essential, may not be sufficient.

24 *Majjhimanikāya* vol. I, p. 23: *so evaṃ samābhi citta parisuddhe pariyodāte anaṅgaṇe vigatūpakkilese mudubbhūte kammaniye t̥hite ānejjappatte āsavānaṃ khayañāṇāya cittaṃ abbininnāmesim̐ | so idaṃ dukkhaṃ ti yathābhūtaṃ abbaññāsim̐ ayaṃ dukkhasamudayo ti yathābhūtaṃ abbaññāsim̐, ayaṃ dukkhanirodho ti yathābhūtaṃ abbaññāsim̐, ayaṃ dukkhanirodhagāminī paṭipadā ti yathābhūtaṃ abbaññāsim̐ | ime āsavā ti yathābhūtaṃ abbaññāsim̐, ayaṃ āsavasamudayo ti yathābhūtaṃ abbaññāsim̐, ayaṃ āsavanirodho ti yathābhūtaṃ abbaññāsim̐, ayaṃ āsavanirodhagāminī paṭipadā ti yathābhūtaṃ abbaññāsim̐ |* Cf. Bronkhorst 1986: § 8.4.3; 2009: 18–19.

25 See, e.g., Ecker *et al.* 2012: 9–10: “these hidden learnings soon come into the client’s awareness in the retrieval work, in part through use of specialized mindfulness practices”; similarly, p. 53: “mindfulness practice would continue to firm up ... integration of the pro-symptom emotional learning [once] retrieved”; etc.

26 In the case of “trauma processing, the client repeatedly cycles through [a number of phases] with each new target memory” (Baldwin & Korn 2021: 149). Note that memories are not verbalized in all therapies: “People may be able to heal from trauma without talking about it” (Van der Kolk 2014: 303). See further Jellestad *et al.* 2021.

Absorption appears to be different. Mental absorption can have varying degrees of depth.<sup>27</sup> It reduces or even suspends associations with other mental contents: the greater the depth, the more associations with other mental contents it can suspend. This includes, in the case of deep absorption, associations with mental contents that are not normally accessible to consciousness.<sup>28</sup> This would mean that deep absorption, unlike “normal” consciousness, *has access* to such mental contents. Moreover, mental absorption does not only suspend, it also focuses attention; presumably it can focus attention on some of those hidden mental contents.<sup>29</sup> This would imply that in a state of deep absorption, attention *can* be focused on hidden memories, memories of which one is not aware.<sup>30</sup> This, I propose, justifies our first assumption.

Turning now to our second assumption (memories can be emptied of their emotional charges), the possibility of access through absorption does not automatically lead to memory reconsolidation. But once there is access, these memories *can* be emptied of their emotional charges through memory reconsolidation. This, it may be recalled, is exactly what memory reconsolidation is all about. What I suggest at this point is that memory reconsolidation is what is meant by the expression “destruction of the influxes.”

We can now conceptualize what supposedly happens, as follows. The practitioner, while in a state of deep mental absorption, directs attention to emotionally charged memories (or memory networks) in short succession. Each of them is reactivated, and the emotional charge is replaced with a neutral one, neither aversive nor appetitive, thus producing “prediction error.” This is parallel to what happens in successful psychotherapy that uses memory reconsolidation. But presumably there is an important difference. We may assume that in this state of deep absorption access to hidden memories is easier, more direct, so that far more memories can be dealt with in quick succession. Remember that the person concerned has abandoned all attachments and sources of concern during preliminary practice, well before she reaches this stage. This would allow her to associate neutral feelings (“prediction errors”) even with memories that so far had looked threatening or enticing, thus replacing the original emotional charge. Once this has been accomplished for all emotionally charged memories, the state of freedom is reached.

This, I submit, is an interpretation of these early Buddhist texts that makes sense in the light of modern neuropsychology. It does not tell us by what means or practices the practi-

27 See, e.g., Mohr 2018.

28 For details, see Bronkhorst 2022, esp. § 4.

29 Bronkhorst 2017: 10–11. Cp. Dehaene 2020: 154: “Attention acts as an amplifier and a selective filter.”

30 Among those hidden mental contents, we may count memories of overwhelming traumatic stress that are subject to dissociative amnesia, but that can be recalled in state-dependent memory (wherein memories are difficult to recall unless the conditions at encoding and recall are similar); see Radulovic *et al.* 2018. Overwhelming traumatic experiences share certain features (speechlessness, no sense of time; see Van der Kolk 2014: 50ff.) with states of deep absorption (Bronkhorst 2022) (itself often looked upon as a state of dissociation) and may therefore be more easily recalled in such a state.



tioner is supposed to reach the depth of absorption required to set the process of transformation in motion. It also leaves open the question about what kind of personality – or indeed, what kind of person – would result from such a procedure according to neuropsychology.<sup>31</sup> At this point the Buddhist texts are clear: the person who has gone through the whole of this process will be without desire. Desire – or thirst (*trṣṇā*) as the texts call it – is that which stands in the way of freedom, and the freed person does not have it any longer.<sup>32</sup> Another characteristic of such a person, still according to those texts, is absence of suffering. Since the Buddha himself is recorded to have suffered (literally) from ill health toward the end of his life, we may assume that it is primarily mental, or psychological, suffering that is eliminated according to those texts.<sup>33</sup>

Our attempt to read these early Buddhist texts in the light of modern neuropsychology has led us to a possible understanding of what was once meant by “influxes” (*āsrava*) and of the process that leads to their destruction. We can now think of the process in terms of memory reconsolidation, and of the influxes themselves as the emotionally charged memories that are erased.

The Buddhist path we have considered does not specify any liberating insight. Other early Buddhist texts do. Indeed, a variety of different liberating insights are mentioned at different places in the ancient canon. These include knowledge of the four noble truths; awareness that the five aggregates appear and disappear, that they are empty, void, and without substance; understanding of the doctrine of conditioned origination; or comprehension of the selflessness of the person.<sup>34</sup>

I propose the following explanation for this strange state of affairs. We are not the only ones who found the passage about influxes and their destruction difficult to understand. Many Buddhists, already at an early stage of the development of that religion, felt the same. They felt more at ease with a specific insight that supposedly guaranteed access to freedom. Since the

31 Freud (1937: 219–220; referred to in Lopez 1992: 182) talked of “a level of absolute psychical normality – a level, moreover, which we could feel confident would be able to remain stable, as though, perhaps, we had succeeded in resolving every one of the patient’s repressions and in filling in all the gaps in his memory.” Freud’s normality is not quite what the Buddhist texts promise.

32 Indeed, according to the second Noble Truth, suffering is due to thirst, i.e., desire, and according to the third, cessation of the former can be brought about through the latter’s complete annihilation. For more on desire, see below.

33 The Buddhist tradition makes no secret of the fact that the historical Buddha apparently suffered from ill health toward the end of his life (and that indeed he *did suffer*). According to the *Mahā-parinibbānasutta*, having eaten his last meal “the Lord was attacked by a severe sickness with bloody diarrhoea, and with sharp pains as if he were about to die. But he endured all this mindfully and clearly aware, and without complaint” (tr. Walshe 1987: 257; this translates *Dīghanikāya* vol. II, p. 127–128). During an earlier bout of illness, the Buddha supposedly said that his body only knows comfort when he enters into mental absorption (*Dīghanikāya* vol. II, p. 100; for a translation, see Walshe 1987: 245).

34 Bronkhorst 2009: 30–31.

earliest sources do not clearly describe such an insight, these Buddhists came up with a variety of them, often linked to the elements of Buddhist doctrine that each of them considered most important. The goal of the Buddhist path, in their view, was to obtain that supreme insight. Those who emphasized the path of meditation followed by the destruction of the influxes may soon have become a minority.<sup>35</sup>

An interesting story in the ancient canon illustrates and confirms this.<sup>36</sup> Here two monks – Musila and Nārada – are questioned about their spiritual state. We learn from Musila’s answer that he has attained direct insight into the central tenets of Buddhist doctrine and now thinks that his influxes have been destroyed. Nārada, too, has attained those insights, but rejects the conclusion that his influxes have been destroyed. He explains this with the help of a simile. Just as when a man who is hot and thirsty finds a well in the wilderness, he sees the well and knows that it contains water, but alas, he cannot reach and touch the water, in that same way he, Nārada, has not reached the goal despite his insights.

The subsequent history of Buddhism in India illustrates the importance that came to be attached to correct insight, sometimes at the expense of meditational practice. Theoretically, the idea of the destruction of the influxes was maintained in some schools, as in the scholastic elaborations of Abhidharma Buddhism. To quote Collett Cox:

each of the extensions and refinements of the path-structure [in Sarvāstivāda-Vaibhāṣika] should be seen as a systematic elaboration of methods still guided by what appears to be the original soteriological goal of the destruction of the fluxes (*āsravakṣaya*), rather than as an attempt to displace this goal and erect either concentration or knowledge as the ultimate religious objective.<sup>37</sup>

Certain Buddhists went on practising meditation, but the destruction of the influxes appears to have received ever less attention.<sup>38</sup> In other words, the practice of memory reconsolidation, if it survived at all, became ever less important in the Buddhist traditions.

To find further evidence for the use of memory reconsolidation in Indian religious literature, we look for a combination of absorption and mental reprogramming, with the former being a precondition for the latter. There are many texts, both in Buddhism and outside of it, that speak about absorption.<sup>39</sup> But few treat absorptions as a preliminary to a procedure that

35 Kuan (2008: 140–141) speaks of “the tendency of the tradition to redefine ‘liberation by wisdom’ (*paññāvimutti*) as being liberated by insight alone without high meditative attainments.” This applies to both Theravāda and other Buddhist traditions. Note that the distinction between those who emphasized insight (*darśana*) and those who preferred cultivation (*bhāvanā*) is still present in more recent forms of Buddhism; see Buswell & Gimello 1992: 13–17 and Cox 1992.

36 See Bronkhorst 2019.

37 Cox 1992: 90.

38 I find, for example, nothing that might correspond to memory reconsolidation in Schlingloff 1964/2006 (“Yogalehrbuch”) or Pozdnejev 1927.

39 The *Maitri* or *Maitrāyaṇīya Upaniṣad* (6.18), for example, enumerates what it calls the six limbs (*aṅga*) of Yoga: restraint of the breath (*prāṇāyāma*), withdrawal of the senses (*pratyāhāra*), medita-

will bring about a mental transformation. A few passages in the *Pātañjalayogaśāstra* (= *Yogasūtra* + *Yogabhāṣya*) constitute an interesting exception.<sup>40</sup> The first of these deals with mental traces (*saṃskāra*) that oppose and overcome, with the help of absorption, other mental traces. The opposing mental traces are linked with the state of absorption (*samādhi*), the ones that are overcome with everyday wakefulness (*vyutthāna*). The passage reads:

When the yogin has attained the insight connected with absorption, the mental trace (*saṃskāra*) of that insight comes about anew and anew. **The mental trace born from that [insight] impedes other mental traces** (*sūtra* 1.50).

The mental trace that arises from the insight connected with absorption obstructs the stock of mental traces that has arisen out of the insight connected with everyday wakefulness. Since the mental traces connected with everyday wakefulness have now been overcome, no mental contents arise from those any longer. Once those mental contents have been suppressed, absorption comes about, followed by the insight connected with absorption, and then the mental traces produced by that insight. In this way the stock of mental traces increases again and again, followed by insight, then mental traces.<sup>41</sup>

Part of this passage reminds us of memory reconsolidation: mental traces (the ones arising from the insight connected with absorption) obstruct mental traces connected with everyday wakefulness. Replacement of some, or even all, “ordinary” mental traces with mental traces related to some better insight is precisely what we would expect successful memory reconsolidation to achieve.

There is no need to consider the details of what then follows, which takes us away from memory reconsolidation. The process culminates in the dissolution of the mind along with the mental traces connected with isolation, at which point the soul (*puṣa*) is freed.<sup>42</sup> The

tion (*dbhāna*), fixation of thought (*dbāraṇā*), contemplation (*tarka*), and absorption (*samādhi*). It does not tell us what one does in those states.

40 It is well-known that the *Yogaśāstra* has undergone Buddhist influence; see Senart 1900; La Vallée Poussin 1937; Bronkhorst 1986: § 6.3; Wujastyk 2018; Gokhale 2020; O’Brien-Kop 2022. Indeed, O’Brien-Kop (2022: 19, 113ff) criticizes a too rigid distinction between Buddhism and “classical yoga” and argues for “integrating the findings of contemporary scholars in Buddhist studies within current research in ‘classical yoga’ scholarship.”

41 Maas 2006: 83–87; on *sūtras* 1.50–51: *samādhiprajñāpratīlambhe yoginaḥ prajñākṛtāḥ saṃskāro navaṇo nava jāyate | tajaḥ saṃskāro ’nyasaṃskārapratibandhī* (1.50) | *samādhiprajñāprabhavaḥ saṃskāro vyutthānaprajñāprabhavaṃ saṃskārāśayaṃ bādhathe | vyutthānasaṃskārābbhāvāt tatprabhavāḥ pratyayā na bhavanti | pratyayanirodhe samādhir upatiṣṭhate | tataḥ samādhijā prajñā tataḥ prajñākṛtāḥ saṃskārā itī navaṇo navaḥ saṃskārāśayo vardhathe | tataś ca prajñā tataś ca saṃskārā itī |*

42 On *sūtra* 1.51 (ed. Maas, p. 86–87): ... *saba kaivalyabbhāgiyaiḥ saṃskārāiś cittam nivartate, tasmin nirvṛte puṣaḥ svarūpapratīṣṭhaḥ suddhaḥ kevalo mukta ity ucyata itī*.

*sūtra* under which this is described (1.51) speaks of seedless absorption (*nirbīja samādhi*).<sup>43</sup> Given that the *Yogasāstra* states toward its end in so many words that a person can be freed while still alive,<sup>44</sup> we may assume that this state of absorption is thought of as the state of freedom, in agreement with the particular philosophy (Sāṃkhya) that underlies this text.

Mental traces (*saṃskāra*) are different from afflictions (*kleśa*).<sup>45</sup> In spite of that, they are suppressed in parallel fashion, with similar consequences. Indeed, *sūtra* 4.28 states that the abandonment of the mental traces is like the abandonment of the afflictions and has been described in connection with the latter.<sup>46</sup> More interesting is the claim (made under *Yogasūtra* 2.4) that, if the seeds of someone's afflictions have been burned, those afflictions will not be awakened even if they are confronted with that on which they rest. This, of course, is exactly what happens in the case of erasure. The passage further claims that the skilled person whose afflictions have been destroyed lives in his final body. That is, he will not be reborn and is freed.<sup>47</sup>

There is one further passage that deserves our attention. It is *sūtra* 3.18 and its *bhāṣya*. The *sūtra* states: "As a result of perceiving the mental traces, there is knowledge of earlier lives."<sup>48</sup> The *bhāṣya* explains: "Mental concentration (*saṃyama*)<sup>49</sup> on those [mental traces] is capable of perceiving the mental traces. And they cannot be perceived without experiencing place, time, and cause."<sup>50</sup> It is tempting to understand this, not in terms of previous lives, but in

43 In and under *sūtra* 1.18 it is stated that mental traces remain (*saṃskārasaṣa*) in the absorption called *asaṃprajñāta* or *nirbīja*.

44 *Bhāṣya* on *sūtra* 4.30: *kleśakarmanivṛttau jivann eva vidvān vimukto bhavati* (p. 202f). "When his *kleśas* and karma have ceased to exist, the wise is freed while still alive." Mallinson & Singleton (2016: 399) comment: "In the *Pātañjalayogaśāstra* the commentary to 4.30 notes with regard to the 'Cloud of Virtue' *samādhi* that the wise man is liberated while living ... However, the continued presence of the *jīvanmukta*'s body in the liberated state is philosophically problematic on account of the two stages of *samādhi* (with and without cognition ...), and because the modifications must be entirely abolished before the highest wisdom manifests – facts which did not escape the text's commentators, and which ultimately made living liberation an unsustainable notion within Pātañjala yoga."

45 There are five afflictions (*kleśa*): *avidyā* "ignorance", *asmitā* "egotism", *rāga* "desire", *dveṣa* "aversion", and *abhiniveśa* "tenacity of mundane existence" (*Yogasūtra* 2.3).

46 In and on *sūtras* 2.10–12.

47 On *sūtra* 2.4: *dagdbakleśabijasya saṃmukhibhūte 'py ālambane nāsau [i.e., prabodhabh] punar asti | ... ataḥ kṣīnakleśaḥ kuśalāś caramadeha ity ucyate* | (p. 60). On the meaning of *kuśala* ("skilled person"), see Maas 2014: § 4.1.5.

48 *Sūtra* 3.18: *saṃskārasākṣātkaraṇāt pūrvajātijñānam*.

49 Mental concentration (*saṃyama*) comprises holding (*dhāraṇā*), meditation (*dhyāna*) and absorption (*samādhi*). *Sūtra* 3.4 with *bhāṣya*: *trayam ekatra saṃyamaḥ* (3.4) | *tad etad dhāraṇādhyānasamādbitrayam ekatra saṃyamaḥ* | (p. 120).

50 On *sūtra* 3.18: *teṣu saṃyamaḥ saṃskārasākṣātkriyāyai samarthaḥ | na ca deśakālanimittānubhavair vinā teṣām asti sākṣātkaraṇam* | (p. 144f).

terms of earlier experiences in this life that produce the mental traces concerned.<sup>51</sup> We know that getting access to them is crucial for memory reconsolidation. We also know that access to them can be difficult, and we have suggested that mental concentration – absorption especially – can provide access to those memories. This passage appears to be saying just that.<sup>52</sup>

I have not so far come across passages in other Indian religious texts that can easily be interpreted in the light of memory reconsolidation. They may exist, and I look forward to the findings of others in this respect. But care is required. One should not too easily interpret difficult passages in this manner. Memory reconsolidation is a recent discovery in modern psychology, and it is far from evident that this phenomenon was widely known in ancient India. There is the following Dutch saying: *Hij heeft de klok horen luiden maar weet niet waar de klepel hangt* (“He has heard the bell ring but does not know where the clapper hangs”). It is used with respect to people who know something by hearsay that they are clueless about. The passages of the *Yogaśāstra* discussed in the foregoing leave the impression that this saying may be applicable here. This would hardly be surprising. It has been shown that the person who brought *Yogasūtras* and *Yogabhāṣya* together (presumably someone called Patañjali) did not always interpret the *sūtras* as they were originally intended and what is more, he may not himself have had any direct experience of yogic states.<sup>53</sup> The most we can conclude from the *Yogaśāstra* passages analysed above is that practices involving reconsolidation were known in certain yogic circles. They make their appearance in these passages but have been adjusted to the theoretical requirements of the person we call Patañjali.

### Desire: Some concluding thoughts

I wish to conclude with a few words about desire. The central role of desire in Buddhism as an obstacle to freedom can be understood in the light of another recent development in modern psychology: the distinction between “wanting” and “liking.” Buddhist desire (“thirst”) is most plausibly interpreted as corresponding to “wanting.” Berridge and Robinson describe the difference between “wanting” and “liking” as follows:

- 51 According to at least one theory of memory formation and retrieval, “retrieving a memory can facilitate reinstatement of the context bound to the content of that memory, giving rise to a sense of mental time travel” (Nadel & Sederberg 2022: 17, with a reference to Tulving 1985). Compare also: “Our bodies are the texts that carry the memories and therefore remembering is not less than reincarnation.” (Katie Cannon as quoted in Van der Kolk 2014: 221). See already Eliade 1958: 185, n. 61: “The reader will certainly have noted the correspondence between the yogic technique for recollecting former lives and the psychoanalytical method of reconstituting and, through a corrected understanding, assimilating one’s memories of earliest childhood.”
- 52 The early Buddhist texts, too, mention knowledge of earlier lives, for example in the *Bhayabherava-sutta* (*Majjhimanikāya* no. 4). Perhaps this can be interpreted similarly.
- 53 Bronkhorst 1984.

Rewards are both “liked” and “wanted,” and those two words seem almost interchangeable. However, the brain circuitry that mediates the psychological process of “wanting” a particular reward is dissociable from circuitry that mediates the degree to which it is “liked.” Incentive salience or “wanting,” a form of motivation, is generated by large and robust neural systems that include mesolimbic dopamine. By comparison, “liking,” or the actual pleasurable impact of reward consumption, is mediated by smaller and fragile neural systems, and is not dependent on dopamine. The incentive-sensitization theory posits the essence of drug addiction to be excessive amplification specifically of psychological “wanting,” especially triggered by cues, without necessarily an amplification of “liking.” This is due to long-lasting changes in dopamine-related motivation systems of susceptible individuals, called neural sensitization. A quarter-century after its proposal, evidence has continued to grow in support of the incentive-sensitization theory. Further, its scope is now expanding to include diverse behavioral addictions and other psychopathologies.<sup>54</sup>

Addictions – whether to substances or to behaviors (such as gambling) – illustrate the most noticeable and most extreme forms of wanting. But wanting is not limited to addicts. It is, as a matter of fact, impossible to draw a hard- and fast-line separating habit and addiction. To quote Marc Lewis:

... addiction develops – it’s learned – but it’s learned more deeply and often more quickly than most other habits, due to a narrowing tunnel of attention and attraction. A close look at the brain highlights the role of desire in this process. The neural circuitry of desire governs anticipation, focused attention, and behaviour. So the most attractive goals will be pursued repeatedly, while other goals lose their appeal, and that *repetition* (rather than the drugs, booze, or gambling) will change the brain’s wiring. As with other developing habits, this process is grounded in a neurochemical feedback loop that’s present in all normal brains. ... Addiction is unquestionably destructive, yet it is also uncannily normal: an inevitable feature of the basic human design.<sup>55</sup>

We are at present not interested in addiction in its more extreme forms, but rather in the neurochemical feedback loops that are present in all normal brains. Or perhaps better, given the highly impressionable nature of young children, we can say that we are interested in the “mini-addictions” they create and which together account to a large extent for the personality

54 Berridge & Robinson 2016: 670.

55 Lewis 2015: 7–9.

they acquire when growing up.<sup>56</sup> Seen this way, the following observations about addiction are equally useful for understanding “normal” human behavior:

Like other developmental outcomes, addiction isn't easy to reverse, because it rides on the restructuring of the brain. Like other developmental outcomes, it arises from neural plasticity, but its net effect is a reduction of further plasticity, at least for a while. Addiction is a habit, which, like many other habits, gets entrenched . . .<sup>57</sup>

Habits can start with desire or attraction, but also anxiety and other negative emotions can cultivate new habits. And once entrenched, habits can be difficult to extinguish. They are then embodied forms of “wanting.” We may assume that, once the webs of entrenched habit have been disentangled and their emotional dimension neutralized by means of memory reconsolidation, “wanting” disappears.

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- 56 Lewis (2015: 53f) speaks of the creation of a breeding ground of personal habits: “And one way to capture the combination of those habits is with the word ‘personality.’” To the “mini-addictions” we must no doubt add mini- (or not so mini-) traumas as elements that contribute to the formation of the personality.
- 57 *Ibid.* Entrenchment plays a role in psychopathologies: “We propose that many, if not most, psychopathologies develop via the gradual (or rapid – in the case of acute trauma) entrenchment of pathologic thoughts and behaviors, plus aberrant beliefs held at a high level, e.g., in the form of negative self-perception and/or fearful, pessimistic, and sometimes paranoid outlooks” (Carhart-Harris & Friston 2019: 321).

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## The Choice of Devanāgarī\*

*Alessandro Grabeli*

More profound than all knowledge of hermeneutical rules is the application to oneself: “above all apply the rules to yourself and then you will have the key to understanding Solomon’s proverbs.”

Gadamer 2004: 26.

### 1. Introduction

In the rendition of Sanskrit texts, what drives the scholars’ selection of either Devanāgarī<sup>1</sup> or Roman characters? This is a crucial decision, bound up with cognitive, editorial, typographical, social and sometimes even ideological premises and consequences. In South Asia, the overwhelming majority of Sanskrit editions has been typeset in some sort of Devanāgarī typeface.<sup>2</sup> In the rest of the world, by contrast, there are printed and digital editions in either or both scripts, with an increasing revival of Devanāgarī in the recent past.

Historical examples of Devanāgarī editions are the pioneering Bibliotheca Indica series in Kolkata, the massive production of the Nirnaya Sagar Press in Mumbai, the Chowkhamba Sanskrit Series in Varanasi, and the Pune critical edition of the *Mahābhārata*, but also early European editions such as *Śatapathabrāhmaṇa*. Among the more recent critical editions in Devanāgarī characters, examples are Torella 1994, Goodall 1998, P. Olivelle & S. Olivelle 2005,

\* I am thankful to Elisa Freschi, Philipp Maas and Jonathan Peterson for reading this paper and giving me valuable feedback. Back to the time of my research projects in Vienna, I am indebted to the FWF, to Karin Preisendanz, and to Oliver Frey, who helped me finding some of the material through which I built the background of this paper. I am grateful to the participants of the Sushruta Workshop in July 2022, where I presented its early draft.

- 1 On the Nāgarī-Devanāgarī nomenclature, see Maurer (1976: 103), who argues that the first attestation of the term “Devanāgarī” (“Diewnāgur”) occurs in Nathaniel Halhed’s *A Code of Gentoo Laws*, published in London in 1776, while “Nāgarī” is the older term. I tend to use “Devanāgarī” when referring to the printed character, while “Nāgarī” may be better serving as an umbrella term covering regional evolutions of the character (Jainā Nāgarī, Kāśmirikā Nāgarī, and Devanāgarī).
- 2 Sanskrit has historically been printed in a variety of regional scripts as well – Bengali, Gujarātī, varieties of Grantha, Kannāḍa, etc.

Steinkellner, Krasser, & Lasic 2005, and Kataoka 2011. The Murty Classical Library of India (<https://www.murtylibrary.com>) is a present project of Devanāgarī editions with translations on facing pages. A digital repository that offers Sanskrit texts both in Devanāgarī and Roman is SARIT (<https://sarit.indology.info/>).

Instances of editions in Roman are Whitney's edition of the *Taittirīyasambhitā*,<sup>3</sup> Gnoli 1960, Preisendanz 1994, Wezler & Motegi 1998, and Maas 2006. A peculiar transliteration experiment has been the editions and translations of the Clay Sanskrit Library (<https://claysanskritlibrary.org/>). GRETIL (<http://tinyurl.com/5n88v3fz>), a repository that offers a large amount of machine-readable Sanskrit texts in a variety of formats, deserves a special mention here.

Cogent arguments in favor of either Devanāgarī and Roman can be advanced. In the following pages, I will present some plausible viewpoints, prefacing it with the disclaimer that they are unavoidably presented from the “distorting mirror” of my own subjectivity. The attempt is not to shed all prejudices and find the ultimate truth, but rather to sort out “prejudices that enable understanding from the prejudices that hinder it and lead to misunderstandings.”<sup>4</sup>

My main concern is the impact of typographical choices on textual criticism, where methodological reflections are mostly devoted to retrieval and analysis of data such as collation and selection of variants, stemmatics, and reconstruction of ideal texts. The typographical decisions needed for the presentation of one's research, by contrast, are rarely addressed and discussed, so this discussion about the choice of the script aims at filling a part of this gap.

## 2. Hermeneutics and typography

### 2.1. Typography as interpretation

The choice between Devanāgarī or Roman script is a typographical decision. I understand “typography” as an hermeneutic operation: “Typography is to literature as musical performance is to composition: an essential act of interpretation.”<sup>5</sup> It is “the craft of endowing human language with a durable visual form, and thus with any independent existence.”<sup>6</sup> Therefore, the first task of a typographer is “to read and understand the text; the second task is to analyze and map it. Only then can [the] typographic interpretation begin.” “Interpretation,” according to Bringhurst, means “to analyze and reveal the inner order of the text, as a musician must

3 Weber's early editions, in the forties and fifties, are in Devanāgarī, while later ones are in Roman. The shift coincides with his increasing interest in Jaina material and Prākṛta language, but the actual reasons need to be further researched. For a biographical sketch and his massive bibliography, see Parpola 2003.

4 Gadamer 2004: 295.

5 Bringhurst 2004: 19.

6 Bringhurst 2004: 11.

reveal the inner order of the music he performs ... The typographic performance must reveal, not replace, the inner composition.”<sup>7</sup>

This hermeneutic dimension of typography certainly concerns Sanskrit editors who are engaged in the reconstruction of a work of the past. Such “reconstruction” is an actualization of the work: “Hegel states a definite truth, inasmuch as the essential nature of the historical spirit consists not in the restoration of the past but in *thoughtful mediation with contemporary life*.”<sup>8</sup> In this sense, Bringhurst’s ideal interpreter-typographer matches the interpreter-philologist cherished by Gadamer. Both roles entail some degree of awareness of one’s subjectivity.

Hermeneutics in the sphere of philology and the historical sciences is not “knowledge as domination” – i.e., an appropriation as taking possession; rather, it consists in subordinating ourselves to the text’s claim to dominate our minds.<sup>9</sup>

The ultimate purpose is to “explicitly and consciously” bridge “the temporal distance that separates the interpreter from the text” and overcome “the alienation of meaning that the text has undergone.” In this light, the choice of the script is another aspect of what Gadamer considers “the central problem of hermeneutics,” “the problem of application” of hermeneutic rules.<sup>10</sup>

Now, what are the typographical rules that we need to follow when choosing a script? A good place to start is this list of five functions of the art of typography:<sup>11</sup>

1. Inviting the reader into the text.
2. Revealing the tenor and meaning of the text.
3. Clarifying the structure and the order of the text.
4. Linking the text with other existing elements.
5. Inducing a state of energetic repose, which is the ideal condition for reading.

The selection of a specific script and font is a functional decision that should answer to these expectations. (1) Relates to the choice of the script in view of an intended audience; (2), (3) and (4) concern the historicity of the new edition in its hermeneutic application; (5) involves the problem of readability.

7 Bringhurst 2004: 20.

8 Gadamer 2004: 157.

9 Gadamer 2004: 310.

10 Gadamer 2004: 304.

11 Bringhurst 2004: 24.



## 2.2. The nature of types

Before the digital age, printing types were definable as “three-dimensional representations of letters of the alphabet . . . cast in an alloy of lead, antimony, and tin . . .,”<sup>12</sup> a typeface as “a group of characters whose forms are shaped in accordance with a particular set of design principles which share certain design features,”<sup>13</sup> a font (fount) as “a set of letters and other symbols in which each sort was supplied in approximate proportion to its frequency of use, all being of one body-size and design,”<sup>14</sup> or as “a concrete rendering of a typeface in a particular character set for a particular size-range for a particular imaging system.”<sup>15</sup> In the world of digital type, the font is “the glyph palette itself or the digital information encoding it.”<sup>16</sup>

As for their typographical function, faithful to the very etymology of “type” from the Latin *typus* (Greek τύπος, “mark, model, image”), “letterforms have tone, timbre, character, just as words and sentences do.”<sup>17</sup> Bringhurst calls them “subsemantic particles . . . letters cast on standardized bodies of metal, waiting to be assembled into meaningful combinations.”

Digital types, as digital typography, have been developed on the template of metal types. Most nomenclature, principles, and optics remains the same, so the following reflections should be applicable to the digital craft as well.<sup>18</sup>

## 2.3. Readability and legibility of fonts

When assessing the quality of a given typeface, learned typographers like to distinguish readability from legibility, the “key elements that help readers more readily comprehend the meaning of text placed on paper and the screen.”<sup>19</sup> Although the two terms may appear to be synonyms to the uninitiated, we actually speak of legibility of types and readability of texts, respectively:

Let’s distinguish between legibility and readability. Legibility is an optical measure of the visual clarity of a character and the efficiency with which it can be recognized. Readability is a subjective measure of the ease and comfort with which a typeface is read, and may have as much to do with habit and custom as with

12 Gaskell 1972: 10.

13 Ross 1999: 237, quoting Charles Bigelow, *Principles of Type Design for the Personal Workstation*, p. 2 (unpublished).

14 Gaskell 1972: 33.

15 Ross 1999: 236, again quoting Bigelow.

16 Bringhurst 2004: 325f.

17 Bringhurst 2004: 22.

18 For a compelling narrative about the continuity and innovations of digital typography, see Bringhurst 2004, ch. 9: 179–197. More specifically, on the technical aspects of digital typography, one may start from the insightful Bigelow & Day 2014, and <https://bigelowandholmes.typepad.com/>.

19 Hall 2003: 274.

the inherent characteristics of a typeface. Legibility can be quantified, whereas readability cannot. Legibility is often applied to letters in isolation, whereas readability applies to the act of reading a body of type.<sup>20</sup>

The legibility of type is thought to be objectively measurable. In a seminal psychological study, Burt (1959) experimented legibility and readability on a sample of readers. The test was then done on full pages, read both silently and loudly, and other factors such as fatiguability were taken into consideration. The children participating in the experiment were tested both in class and individually, in order to assess the weight of social factors. Four observable behaviors in readers were tracked:

1. Ease of reading letters, words, or sentences, judged by the distance at which they can be read.
2. Accuracy of reading letters or words with brief tachistoscopic exposures.
3. Speed of reading passages of prose, when the reader's aim is to grasp the content of the passages.
4. The observation of the eye movements, eye blinking, and other objective symptoms.

While this method proved to be effective for isolated letters or words, it was soon appearing inadequate to assess the legibility of longer texts, thus vindicating the need of a different term, namely readability, to express this more subjective aspects.

The graphemes of classical and, lesser so, neoclassical type-faces proved more recognizable than the modern ones, showing how the reciprocal distinction among glyphs is a crucial criterion for the legibility of a type-face.

Caslon for instance, fared better than Bodoni (see Figure 11.1 and Figure 11.2, below), one of the reason being the hypermodulation of the latter type-face, particularly the disparity of thickness of vertical strokes.<sup>21</sup>

The quick brown fox jumps over the lazy dog

Figure 11.1: Adobe Caslon Pro Regular

The quick brown fox jumps over the lazy dog

Figure 11.2: LTC Bodoni 175 Pro Regular

The desirable degree of thickness proved to be related to its balance with the counters, i.e., “the white space enclosed in a letterspace.”<sup>22</sup>

20 Moye 1995: 208.

21 Burt 1959: 7f.

22 Bringhurst 2004: 324.

For readers who are hypermetropic or astigmatic, legibility is improved by increasing the heaviness of the type. But the optimal thickening is severely limited ... excessive thickening tends to reduce the size of counters [i.e., the white inner spaces] ...<sup>23</sup>

The size is also an important criterion for legibility, since children needed bigger sizes in comparison to adults.<sup>24</sup> Since this principle is caused by the increased proficiency in adults, it may be applicable also to the case of new scripts learned by adults as it is the case for many non-Indian Sanskrit students:

With adults our experiments were in the main restricted to reading matter set in 10–point Times Roman. With this type, measure shorter than 20 ems or longer than 33 ems diminished speed and ease of reading ... For literary material the narrower measure is desirable ... for scientific the wider ... With long lines of solid type the eye finds it difficult to pick up the right line in turning from the end of a given line to the beginning of the next; and large pages filled with solid-looking panels of printed matter are apt to repel all but the hardened scholar. On the other hand, short measures, particularly when the type is big, prevent the eye of the trained reader from taking in large phrases with a single fixation and from making the most of the subsidiary help given in the horizontal direction by peripheral vision. Moreover, they necessarily entail widely varying spaces between the words, and increase the number of broken words at the end of lines – features ... which can greatly hinder comfortable reading ... Where the reading matter requires to be read mentally word by word (as in poetry), small measures, wide interlinear spacing, and even small type with fairly broad spaces between the words, are an advantage.<sup>25</sup>

The size is directly related to the leading, i.e., the vertical space within lines, which proved to be another crucial determinant of legibility: “We found that the introduction of one or two points of leading would appreciably increase the ease of reading ... little seems to be gained by 3-point leading; 4-point leading usually diminished legibility.”<sup>26</sup> The Devanāgarī

23 Burt 1959: 10.

24 See Burt 1959: 11–14.

25 Burt 1959: 13f. No sanserif type-faces were used in the study. Their lesser legibility, in print, is a widely accepted fact. On screen, however, they are often recommended as the better choice. Bringhurst (2004: 193) recommends “blunt simplicity” for the sake of legibility on the screen, where type-faces should have “low contrast, a large torso, open counters, sturdy terminals, and slab serifs or no serifs at all.”

26 Burt 1959: 13.

typesetter needs to pay particular importance to this aspect, due to the cumbersome ascenders and descenders typical of the script.<sup>27</sup>

In contrast to these aspects that he deemed to some extent measurable, Burt noticed the impact of subjective factors:

Nearly all tended to read with greater facility the kind of types that they preferred, and were inclined to confuse intrinsic legibility with private aesthetic preferences ... it seemed evident that *almost everyone reads most easily matter set up in the style and size to which he has become habituated.*<sup>28</sup>

While acknowledging the limitations of his study and the urgency for further research, Burt concludes that “the introspective data obtained during our experiments on typographical preferences disclose a highly complex motivation – the customary reading and the cultural interests of the reader playing an unexpectedly important role.”<sup>29</sup>

### 3. In defense of Roman script

#### 3.1. A short history of Roman transliteration

The “Latin alphabet,” in European history, was named as such in opposition to the “Greek alphabet.” In typography “Latin Roman” is ambiguously used on the one hand to distinguish Renaissance type faces such as Aldus, Jenson, Garamond, etc., from Gothic forms (black letter) and their sub-varieties, and on the other hand to differentiate Roman typefaces from Italic or cursive ones, within this very set of Renaissance faces (see Figure 11.3).<sup>30</sup> In the present context “Roman script” helps us avoiding the language-script conflation in the “Latin alphabet” terminology, for in the last millennium the alphabet has obviously been used to write countless languages, other than Latin.

In its adaptation to Sanskrit, “Roman script” refers here to the IAST scheme of transliteration or transcription.<sup>31</sup> Before the development of an efficient printing technology in Devanāgarī, William Jones (1746–1794) had already proposed a system to transcribe Asian languages

27 Relatedly, this is one of the reason for the use of the *pr̥ṣṭhamātra* in some manuscripts, for instance BORI 390/1875-76, wherever extenders – i.e., descender and ascenders such as vowel signs below the baseline or above the headline – are not usable for want of interlinear space.

28 Burt 1959: 17f.

29 Burt 1959: 30.

30 For an historical and typographical introduction on the history of Roman types, see Gaskell 1972: 26–39 and Bringhurst 2004: 119–142.

31 In relation to IAST and Sanskrit language, the distinction between “transliteration” and “transcription” does not seem relevant to me. While discussing Old Javanese sources, for instance, Aciri and Griffiths (2014: 367) use “Romanisation” as an umbrella term, and insist on the necessity of distinguishing transcription from transliteration, citing Wellisch 1978: 17f. Wellisch (1978: 18) defines “transcription” as either a paedography or a technography, while the latter as a technogra-

in Roman script,<sup>32</sup> one of the first steps in the evolution of the present-day International Phonetic Alphabet (IPA) and International Alphabet of Sanskrit Transliteration (IAST).<sup>33</sup> Jones's system was gradually improved and standardized through milestones such as Monier-Williams 1890, and through the proposals of Committee 1895 and Burgess 1897 during the Tenth Congress of Orientalists in Geneva, along with the growth of knowledge in the fields of phonetics and phonology.<sup>34</sup> The IAST is the outcome of this gradual evolution and has become the academic standard for rendering the Sanskrit language.

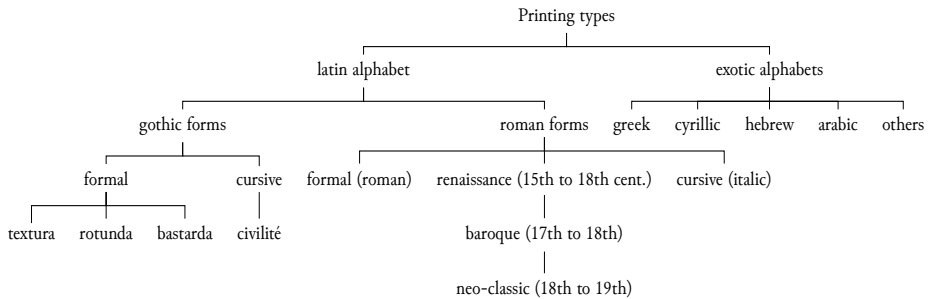


Figure 11.3: Synopsis of historical Roman typefaces, based on Gaskell 1972: 9

Even before the advent of the press, the surge of Devanāgarī as a panIndian Sanskrit script remains a modern event, so the claims in support of an ancient tradition of Devanāgarī are rather shallow. What is the rationale of using Devanāgarī to transliterate works that were originally composed in Śāradā, Banglā, Grantha, or any other indic script? Why not using the original script, according to the regional provenance of the work? And if a wider audience is aimed at, isn't it more reasonable to adopt the Roman script?

phy only. A technography is “a convenient and highly effective means of graphic communication between experts,” while a paedography has the main purpose of teaching “persons who are unfamiliar with the sounds of a language.” IAST may certainly be used to serve either or both purposes. This is in part a consequence of the quasi-phonological nature of Devanāgarī itself. Cf. Wellisch (1978: 313), who argues that “any transliteration mixed with phonological elements ... ceases to be transliteration and becomes, by definition, a transcription.”

- 32 In Jones 1807, discussed in Trautmann 2006: 66–72. Cf. Robins 1967: 227: “Sir William Jones ... praised the phonological appropriateness of the Devanagari syllabary and of the Arabic script to the disadvantage of English alphabetic spelling. Unlike most of his contemporaries he clearly distinguished between letter and sound, and he vigorously protested against the paedagogical reference to ‘five vowels’ in English.”
- 33 I am here focusing on the IAST as the most widely used system in academic works, despite the existence of other useful methods such as the Harvard-Kyoto.
- 34 Other transliteration schemes were in use after Jones’s seminal paper, notably the one used in Böhrling and Roth 1852–1875, but the deliberation of Committee 1895 was going to stand the test of time.

### 3.2. Roman script is more accurate

The IAST transliteration has long been used in academic publications all over the world, and as such it is the accepted Sanskrit script. With the assistance of minimal additional marks, it uses the universally known Roman alphabet, with the obvious advantage of accessibility. It is an unambiguous script that has proven to be well-suited to the sophisticated phonology of Sanskrit, whose study has contributed to the very modern concept of phoneme through the work of fathers of modern linguistics such as Saussure and Bloomfield.<sup>35</sup>

Jones (1807: 253) was aiming at a transliteration that could apply to any “Asiatick Literature, or to translate from the Asiatick Languages . . . to express Arabian, Indian, and Persian words . . . in the characters generally used among Europeans.” His system was clearly inspired by the Sanskrit alphabet and ultimately rooted in ancient Sanskrit phonetics. In this sense, therefore, even the IAST is an evolution from Sanskrit language and form the Sanskritic tradition, just like Devanāgarī.

From the philologist’s view, moreover, there is a compelling argument in favor of IAST. This analytical script, in fact, offers undisputable advantages. The transliteration forces the editor to disclose his understanding of the text by means of word separations, which in many cases can be omitted in editions based on the model of alphasyllabic scripts. Editors of Sanskrit texts composed in an Indic script can easily save themselves a number of difficult editorial decisions.

Devanāgarī does not allow an equal depth of textual analysis, due to the lack of graphical division of vowels and because even word separations are often graphically indistinct. How much more readable is this grammatical sūtra, *sanval lagbuni caṅpare ’naḡlope* (A, 7.4.63), in respect to सन्वल्लुगुनि चङ्गेऽनग्लोपे, or even worse, सन्वल्लुगुनि चङ्गेऽनग्लोपे, without the *avagraba*, as found in some manuscripts:<sup>36</sup> In the *Vyākaraṇamahābhāṣya*, p. 15–16, यत्तर्हि तदिङ्गितं . . . यत्तर्हि तच्छुक्लो . . . यत्तर्हि तद्भिन्नेषु are these *tad iṅgitam*, *tac chuklaḥ*, *tad bbinneṣu*, or rather *tadiṅgitam*, *tacchuklaḥ*, *tadbbinneṣu*? In NV, ad NS 1.1.1, पदानामर्थाः प्रमाणादयः षोडशात्मानः ॥ तच्छास्त्रं पुरुषश्रेयोऽभिधत्ते (p. 1,14), is तच्छास्त्रं “that discipline” or “the discipline of those [sixteen categories]”? Possible ambiguities that prove the analytical superiority of IAST abound in any Sanskrit genre.

35 On Bloomfield’s study of Pāṇini and on its impact on linguistics, see Emeneau 1988. The phonological nature of the Sanskrit *varṇamālā*, however, needs to be qualified. “Phoneme,” as a translation of *varṇa*, presents some problems, some of them shared by the very “phoneme” category in phonology (see note 41 below). Some authors have refrained from using this term. Brough (1953) has “speech-entity” or “sound”, and only occasionally “phoneme.” Cardona (1997) often uses “sound,” but also speaks of “morphophonemic” rules dictating changes of *varṇa*. The hypostatization of *varṇas* done in Mīmāṃsā and Nyāya was fiercely disputed by several Sanskrit authors, for reasons not so distant from those who have questioned the phonemic phonology of modern linguistics (see Lyons 1962). For instance, is the phoneme a segmental or suprasegmental entity?

36 *sanvat*, “[the operation is] like *saN*” is an indeclinable. It is not in compound with *lagbuni*.

Besides, as reported by Naik,<sup>37</sup> despite all the efforts to standardize Devanāgarī its limits have been exposed by M. M. Gogate in 1964. Gogate advocated the use of Roman script to write Marathi language, because Devanāgarī “is not logical, is inconvenient for printing and indexing, and is inferior to the Roman script.” The confusion between *anusvāra* and class nasals, the different ways of writing the *r*, the diverse ways of writing conjunct consonants, and the typographic challenges posited by the presence of the cumbersome ascenders and descenders are all complications that affect Sanskrit texts as well.

### 3.3. Roman script is ideologically neutral

While the IAST has a long-established scientific status, the adoption of Devanāgarī in academic works may send wrong or unintended signals, since Devanāgarī has long been transformed into an essential character of Hindu identity:

The Hindi-Nagari movement in the sense of organized groups seeking change through political action began in the late 1860s and continued with varying intensity well into the twentieth century. The supporters of Hindi and the Nagari script did not achieve final success until shortly after independence in 1947.<sup>38</sup>

During the course of the 19th century, Urdu language, written in a Perso-Arabic script, increasingly became a symbol of Islamic identity, while Devanāgarī triumphed as the Hindi script<sup>39</sup> and was eventually identified with Hinduism, to the extent that Devanāgarī, the script, has often been conflated with Sanskrit and Hindi, the languages.<sup>40</sup>

### 3.4. Roman script has a wider audience

The IAST is a readily learnable system. It adds a few standard diacritics – macron, upper dot, lower dot, acute accent – to the universally known English alphabet. Beginner students of Sanskrit and occasional readers can read the language with minimal effort. This is not the case with Devanāgarī, which can be mastered only through a dedicated endeavor and a prolonged exposure. The IAST can even be used to communicate Sanskrit words to students who do not know the language, as often needed during undergraduate and graduate courses of

37 Naik 1971: 555f.

38 King 1994: 126.

39 As described in King 1989 and Ahmad 2008.

40 The confusion was often instrumentalized during the Hindi–Urdu controversy in the nineteenth century, “From the very beginning the different parties to the debate consistently confused the names for the language and script. ‘Hindi’, ‘Hindi character’, ‘Nagari’, and ‘Nagari character’ seemed interchangeable, as did ‘Persian’, ‘Persian character’, and ‘Urdu’” (King 1989: 188).

South Asian philosophy, history, religion, and so forth. It unambiguously captures the quasi-phonemic spirit of Sanskrit language,<sup>41</sup> and it should therefore be considered the standard way of writing Sanskrit by students, teachers, philologists, philosophers, linguists, etc.

### 3.5. Roman script offers technical advantages

Roman characters make the scholars' life much easier, because of its straight-forward machine readability. Tasks such as typing, editing, typesetting, creating and searching through databases, etc., are readily available through dedicated softwares, without complications. Sharing texts with colleagues becomes simpler. In the new millenium, after the popularization of the Unicode standard and its recognition by any operative system, the IAST encoding has now become seamlessly portable throughout any operative system, device and website.<sup>42</sup>

## 4. In defense of Devanāgarī

### 4.1. A short history of Devanāgarī

South-Indian scripts appeared in print as early as in 1577.<sup>43</sup> North-Indian scripts, however, at first presented insurmountable technical difficulties, due to their alphasyllabic nature and to the amount of possible ligatures. The astonishing consequence, in comparison to the typographical achievements accomplished elsewhere, is that an efficient printing technology was devised only at the end of the eighteenth century, more than three centuries after Gutenberg's earliest successful effort.<sup>44</sup> The 42-lines Bible was printed in 1456,<sup>45</sup> while the first Devanāgarī print with movable characters appeared only at the end of the eighteenth century. "The earliest book issued in Europe containing a substantial amount of Hindi printed in Devanagari movable metal types was the *Alphabetum Brammbanicum seu Indostanum* from the Propaganda Fide Press, Rome, 1771."<sup>46</sup> In India, the earliest typeset Devanāgarī is found in *The New Asiatic Miscellany. Consisting of Original Essays, Translations, and Fugitive Pieces*

41 The phonemic value of the length and pitch of vowels is recognized already in Pāṇini's grammar, but the Sanskrit alphabet also lists some cases that do not meet the criterion of minimal pair, notably the nasal consonants (Emeneau 1946). These, however, are sporadic exceptions of what can otherwise be considered as quasiphonemic system.

42 On the revolutionary significance of the Unicode standard on digital typography, see Bringhurst 2004: 181.

43 For details see Naik 1971, vol. 1: 228 and Kesavan 1985: 26ff.

44 Bringhurst (2004: 119) adds that "movable type was first invented not in Germany in the 1450s, as Europeans often claim, but in China in the 1040s."

45 Febvre & Martin 1977: 53.

46 Shaw 1981: 32. On the *Alphabetum Brammbanicum seu Indostanum* see also Naik 1971, vol. 1: 239–244.



from 1789. A history of Devanāgarī fonts is still a desideratum, so some of its milestones are retraced in the next pages (my own synopsis is shown in Figure 11.4).

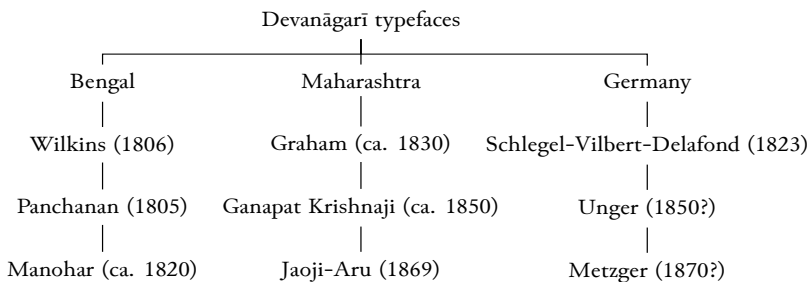


Figure 11.4: Synopsis of historical Devanāgarī typefaces

Even though fonts ought to be named after their creators, it is clear that tasks such as designing, engraving, casting, and typesetting are complex operations that are hardly achievable by a single individual. For quality results specialists are required, so the pioneers of Devanāgarī foundry mentioned below – Wilkins, Panchanan, Manohar, Graham, etc. – could have never achieved success unassisted, and in fact the amazing typefaces cut by Vibert and Metzger were done by specialized typefounders. Besides, theirs were enterprises that needed considerable funding.

Two crucial problems related to funds and skills, that beset printers both in Europe and in India, were the difficulties of procuring printing-worthy paper and to import antimony, the metal used in the alloy for casting types.<sup>47</sup> Indian hand-made paper, “a dingy, porous, rough substance” was considered at that time inferior to European paper, which was in contrast “higher in quality but also in price.”<sup>48</sup> This problem of costs led to the early establishment of paper mills, notably the Serampore mill, set up by William Carey. As for antimony, it needed to be shipped “from Europe and Arabia,”<sup>49</sup> thus being quite expensive and yet a necessary ingredient: “Printing types ... were cast in an alloy of lead, antimony, and tin called type-metal; it was hard enough to wear well yet had a low melting point, and it neither shrank nor expanded when it cooled.”<sup>50</sup> In Europe antimony was employed by the beginning of the sixteenth century, but the quality of the alloy kept improving until the end of the eighteenth

47 On the paucity of good paper and antimony in India, see Shaw 1981: 34ff.

48 Shaw 1981: 35, quoting William Carey’s biographer George Smith. The quality of paper should here be understood in terms of aspects such as polish, brightness, weight, which are functional to better printing results. In terms of durability, some hand-made paper could actually be considered superior.

49 Shaw 1981: 34.

50 Gaskell 1972: 9.

century. This shows how delicate and specialized the operations of casting types were.<sup>51</sup> In any case, unlike in the history of European typography, generally Devanāgarī typefaces are not linked to the original typographers or engravers, so I'll indulge in a digression on the achievements of these pioneers.

#### 4.1.1. Wilkins's early efforts

The history of the Devanāgarī press begins in Bengal. The earliest attempts, in fact, were in Bengali script, and only later in Devanāgarī.<sup>52</sup> A key factor was the entrepreneurship of Nathaniel Halhed (1751–1830) and Charles Wilkins (1749–1836), both servants in the East India Company.<sup>53</sup> Halhed, in 1778, published a Bengali grammar adopting the first Bengali font where he mentioned some of the obstacles encountered in the process:

That the Bengal letter is very difficult to be imitated in steel will readily be allowed by every person who shall examine the intricacies of the strokes, the unequal length and size of the characters, and the variety of their positions and combinations.<sup>54</sup>

Wilkins was reportedly responsible for cutting the punches and, most importantly, for devising a new technique to accommodate the complex patterns of ascenders, descenders, i.e., vowel-extenders of consonants, and ligatures:

The advice and even solicitation of the Governor General prevailed upon Mr. Wilkins, a gentleman who has been some years in the India Company's civil service in Bengal, to undertake a set of Bengal types. He did, and his success has exceeded every expectation. In a country so remote from all connexion with European artists, he has been obliged to charge himself with all the various occupations of the Metallurgist, the Engraver, the Founder and the Printer.<sup>55</sup>

Once a viable solution for the problems of the Bengali script was found, the creation of a Devanāgarī font was only a matter of time. Unlike Halhed, Wilkins was invested in Sanskrit and soon began working at a Devanāgarī font, which was ready by 1795.

51 See Febvre & Martin 1977: 57.

52 See Naik 1971, vol. 1: 242–261, Kesavan 1985: 181–184.

53 Further details about Halhed's printing mission and his activities in Bengal can be found in Priolkar 1958: 51ff., Kesavan 1985: 181ff., and Rocher 1983.

54 Halhed 1778: xxiii.

55 Halhed 1778: xxiv.

Stimulated and encouraged by the example of Mr. Halhed, also a Bengal civilian, the first Englishman who directed his attention to Sanskrit, although better known by his grammar of the Bengali language, Mr. Wilkins engaged about the year 1778 with ardour in the study [...] An undeniable proof of the success which had rewarded his diligence was manifested in 1784 by the publication of [...] the 'Bhagavad Gita', which was printed in London [...]. Upon the return of Mr. Wilkins to England, he brought with him translations of three popular native grammars, and from these, and other original authorities, he compiled a grammar, of which the first pages were printed in 1795.<sup>56</sup>

As soon as he was ready to print, however, calamity struck. Wilkins himself wrote:

At the commencement of the year 1795, residing in the country, and having much leisure, I began to arrange my materials, and prepare them for publication. I cut letters in steel, made matrices and moulds, and cast from them a fount of types of the Devanāgarī character, all with my own hands; and with the assistance of such mechanics as a country village could afford, I very speedily prepared all the other implements of printing in my own dwelling-house; for by the second of May of the same year, I had taken proofs of sixteen pages, differing but little from those now exhibited in the first two sheets [...] when alas! The premises were discovered to be in flames [...] the whole building was presently burnt to the ground. Greatest part of the punches and matrices was saved but types were ruined.<sup>57</sup>

After the fire, at first Wilkins abandoned the idea of printing his grammar. In 1808, however, after the foundation of the East India College at Hertford, he eventually found the motivation to use his own font in the edition of his *Grammar of Sanskrit Language*:

The study of the Oriental languages was one of the principal objects of this munificent institution, and that of the *Sanskrit* a desideratum. But as there was not any grammar of this to be procured, I was called upon, and highly encouraged to bring forward that which I had been so many years preparing, I accordingly had other letters cast from my matrices, and sent it immediately to press [...].<sup>58</sup>

Even before 1808, Wilkins's font had appeared in some Tanjore publications at the press set up under the patronage of King Serfoji II Bhonsle. The first book, the *Bālabodhamuktāvalī* (a

56 Wilson 1843: 273f.

57 Wilkins 1808: xii.

58 Wilkins 1808: xiii.

translation of Aesop fables in Marathi), was printed in śaka 1728 *ṣṣayanāma saṃvatsarī kārtika śuddha 2,*” which corresponds to November 1806 (see Figure 11.5 below).<sup>59</sup>

Wilkins is thus acknowledged as the inventor of the new technology and even “the father of Bengali printing”,<sup>60</sup> as well as “the father of Devanagari typography.”<sup>61</sup> He was likely assisted, however, by other less known and yet indispensable specialists, such as the engraver Joseph Shepherd, who may have actually cut the original punches, and the local Panchanan Karmakar (“blacksmith”), who may have contributed to the punches and may have helped to find the proper balance in the types’ alloy.<sup>62</sup>

एक्यापर्वताबहूनएकनिर्मलपाण्याचाओ  
हलयेनहोतातेथेथेक्याउष्णकांनीएकदि  
वसीएकलाउगावएकयेउकाउभयसांही  
एक्याचमुहूर्त्तपाणीप्यावयासआलेलाउ  
गाउन्ननप्रदेशीउभा राहिलाहोतावयेउ  
काखालपटप्रदेशीकाहीदूरअनरानेउभा  
होतालाउग्यासेमनीकोण्याप्रकारेहीयेउ  
क्यासीदाटबलेभाउणेकरावयावेहोनेनद  
नुसारयेउक्यासविचारूलागलाजेअरेयेउ  
क्यानिर्मलआहेनेपाणीउहुलूनमलाप्याव

Figure 11.5: Wilkins’s font, Balbodha Muktāvali, 1806 (Naik 1971, vol. 1: 263)

#### 4.1.2. Panchanan’s and Manohar’s fonts at the Baptist Mission

By the time Wilkins had left India, some of his know-how was left in Karmakar Panchanan’s hands. Panchanan was soon employed at William Carey’s Baptist Mission in Serampore, where more massive Devanāgarī printing eventually took off. William Carey, who had come to India as a missionary and was searching for printing solutions with proselytistic intentions, managed to acquire a printing press in 1798. Two years later, along with William Ward and Joshua Marshman, he established the Baptist Mission.<sup>63</sup> In addition,

59 Naik 1971, vol. 3: 15. Naik dates the book as 1809, but this cannot be right. The date is correctly interpreted as 1806 in Blumhardt 1892: 2. Serfoji’s press is discussed in Naik 1971, vol. 1: 262ff. It is not clear how and when exactly Wilkins’s types made their way to Tanjore.

60 Another less known pioneer of Bengali printing was Willem Bolts. See Kesavan 1985: 201–205.

61 Naik 1971: 261.

62 On a variety of views on the key roles of Shepherd and Panchanan, see Naik 1971, vol. 1, ch. 9, Shaw 1981: 69–71, Kesavan 1985: 206f., Ogborn 2007: 242f., and especially Ross 1999: 10ff.

63 Kesavan 1985: 189f.

[o]ne of the very happy features of Carey's initiative was the training of a fine Indian punch-cutter and type caster, Panchanan Karmakar ... Panchanan was employed by the famous Sanskrit scholar Colebrooke, along with his son-in-law Manohar, who was also trained in the art of punch cutting. Carey enticed Panchanan out of Colebrooke's service ...<sup>64</sup>

The first book containing Panchanan's Devanāgarī types is probably William Carey's Marathi grammar, printed in 1805.<sup>65</sup> In these years Panchanan employed his "nephew and son-in-law,"<sup>66</sup> Karmakar Manohar as assistant, "an expert and elegant workman, who was subsequently employed for forty years at the Serampore press."<sup>67</sup>

श्रीमन्तास् म्हाटली तदनन्तर श्रीमन्त काय  
बोललेत श्रीमन्ताचा मनोदय काय आहे ?  
जे श्रीमन्ताचा मनोदय असेल त्याच प्रमाणे  
वर्तणुक करू ।

अहो एक गेष्म कानांत आयकूं जा  
साहेबांचे कानांत म्हणून जे आज्ञा करीत ते  
सत्वर येऊन अम्हास सांगा तदनन्तर आप  
ले विचारांत जे गोष्म दृष्ट येइल ते करू ।

Figure 11.6: Panchanan's font, *A Grammar of the Mabratta Language*, 1805 (Naik 1971, vol. 3, fig. 54a)

Some of the fonts of the Baptist Mission Press, first in Serampore and then in Kolkata, were destined to be widely used throughout the nineteenth century and beyond in historical projects such as the Bibliotheca Indica Series in Kolkata and the Vizianagaram Sanskrit Series in Varanasi.<sup>68</sup>

64 Kesavan 1985: 191. Ross (1999: 44), however, closely compares the respective quality of Wilkins and Panchanan productions, and notes that "in comparison to the earlier founts of Wilkins ... the fount of Bengali types first used by the Baptist missionaries has to be regarded the inferior, both in relation to the design of its letterforms and to its poor alignment."

65 Naik 1971, vol. 1: 274, and vol. 3, fig. 54a; see figure 11.8 below.

66 Naik 1971, vol. 1: 277, and vol. 3, fig. 54a.

67 Marshman 1859: 179.

68 See Marshman 1859: 179: "[Manohar] was subsequently employed for forty years at the Serampore press, ... whose exertions and instructions Bengal is indebted for the various beautiful founts of the Bengalee, Nagree, Persian, Arabic, and other characters which have been gradually introduced into the different printing establishments."

### 4.1.3. Graham's font at the American Mission in Bombay

With preaching purposes akin to Carey's in Bengal, the American (protestant) Mission Press was established in 1816 by Gordon Hall and fellow missionaries. The first publication, a pamphlet in Marathi language, was printed in 1817 using a press and types acquired in Kolkata.<sup>69</sup> The New Testament printed and reprinted at the American Mission Press in 1826 and 1830 still feature the Baptist Mission's Devanāgarī.<sup>70</sup>

An apprentice of Gordon Hall at the American Mission Press, Thomas Graham, began working at new fonts of his own. His pioneering work culminated in an improved design, reduction of sizes, and most importantly in a new technique of splitting conjunct consonants and thus reducing the amount of characters, the "Bombay (or degree) Type" system (see Figures 11.7–10).<sup>71</sup>

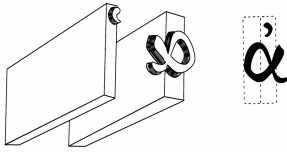


Figure 11.7: Overhanging Greek breathing, based on Gaskell 1972: 32

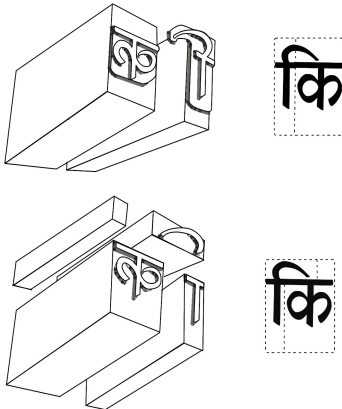


Figure 11.8: Akṣhaṇḍa and degree systems with overhanging mark, based on Naik 1971, vol. 2: 328

69 Naik 1971, vol. 1: 288.

70 Naik 1971, vol. 1: 289, and vol. 3, fig. 77.

71 On the akṣhaṇḍa and degree systems see Naik 1971, vol. 1: 297ff., and, more clearly explained, Ross 1999: 135ff.

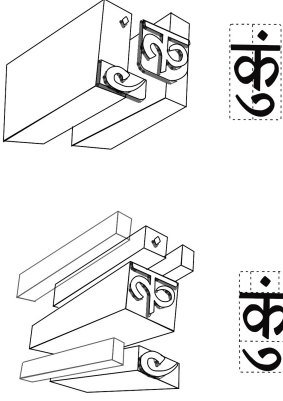


Figure 11.9: *Akbaṇḍa* and degree systems with hanging and overhanging mark, based on Naik 1971, vol. 2: 328

तें झालेले वर्तमान मडमीने आपल्या खोर्लीतून पाहिले, आणि चाकराकडून त्या ह्यातारीला खाया ला व पांघरायाला पाठवून दिले. मग जेव्हां शेरिबाईची मडमीशीं गांठ पडली, तेव्हां दोघींची संभाषणे याप्रकारे झालीं; मडमीने तिला विचारिले, अगे तूं जेवीत असतां कोण तुझ्याजवळ आली होती बरे?

Figure 11.10: Graham's font, *Chamatkarik Gosti*, 1838 (Naik 1971, vol. 1: 298)

Among the collaborators of Graham there was Ganapat Krishnaji (ca. 1800–1861), who established the first printing press and foundry run by non-foreigners in Maharashtra.<sup>72</sup>

72 Naik 1971: 308; see Figure 11.11 below.

श्रीगणेशायनमः ॥ ॥ वर्गाइति । इहवक्ष्यमाणेऽस्मिन्काडेअगैष्टेच्छाखानगरादिभिरुपागैष्टसाभेशादिभिःसाहितैःपृथ्वीपुरादिशब्दैर्वर्गाउदिताः ।  
वक्तुःमारब्धाइत्यर्थः । तत्रक्षमाभृच्छेलः । ऋगादिभिरित्यादिशब्देनपक्षिणांगदः । “यद्वाच्यगानत्तिपुनःपुनःसच्छगादीसिंहः” १ ॥ भूः । भूमिः । अ  
चला । अनता । रसा । विश्वभरा । स्थिरा । धरा । धरित्री । धरणिः । क्षोणिः । क्षौणिः । क्षौणी ॥ ज्या । काश्यपी । क्षितिः ॥ २ ॥ सर्वसहा ।

वर्गाःपृथ्वीपुरक्षमाभृदह्नौपधिच्छगादिभिः ॥ नृद्वह्नक्षत्रविट्शूद्रैःसांगोपांगैरिहोदिताः ॥ १ ॥ भूर्भूमिरचलाःनंतरा  
साविश्वंभरास्थिरा ॥ धराधरित्रीधरणिःक्षौर्णिर्ज्याकाश्यपीक्षितिः ॥ २ ॥ सर्वसहावसुमतीवसुयोर्वीवसुंधरा ॥  
गोत्राकःपृथिवीपृथ्वीक्षमाःवर्निर्मदिनीमही ॥ ३ ॥

वसुमती । वसुधा । उर्वी । वसुंधरा । गोत्रा । कुः । पृथि  
वी । “पृथवी । पृथ्वीपृथिवीपृथ्वीतिशब्दाणवः ।” पृथ्वी । क्षमा । अवनिः । “अवनी ॥ मेदिनी । महो । “महिः” इति सप्तविंशतिर्नामनि  
भूमः । अत्रभूमौधरणीत्यादयोऽङोपताअपि । कदिकारादिकिनइतिगणस्यत्र ॥ ३ ॥

Figure 11.11: Ganapat Krishnaji’s font, *Amarakoṣa*, 1862

#### 4.1.4. The Nirnaya Sagar font

The renowned Nirnaya Sagar Press was founded by Jaoji (or Javaji) Dadaji Chaudhary (1839–1892) in 1869.<sup>73</sup> Jaoji and his colleague Ranoji Raoji Aru (1848–1922) had acquired their skills at punch-cutting, type-casting, etc., under Graham at the American Mission Press. Later, they both worked at the Times of India newspaper, when in 1859 it had acquired the Mission Press. Ranoji then joined the Education Society Press, where Graham was the “Foundry Superintendent,” while Jaoji was employed at the Indu-Prakash Press. After Jaoji had established his own foundry, Ranoji eventually joined him. An outcome of their collaboration was the production of “several elegant Devanagari type founts which still remain unsurpassed.”<sup>74</sup>

॥ श्रीगणेशायनमः ॥ ॥ श्रीगुरुभ्योनमः ॥ श्रीसांबसदाशिवायनमोनमः ॥  
लक्ष्मीन्दसिंहचरणद्वयमादरेणनलाचतुर्विधपुमर्थनिदानभूतम् ॥ भद्रोजिदीक्षित  
कृतिकृतिभिर्विभाव्यामालोक्यबालमतयेवितनोमिटीकाम् ॥ १ ॥ अथेति ॥ नि  
त्यानित्यवस्तुविवेकइहामुत्रार्थफलभोगविरागः शमादिषट् मुमुक्षुत्वंचेति साधनं  
संपन्नाएतेमांपृच्छंतीतिनिर्णयानंतरं यतएतेऽल्पश्रवणमात्रेणकृतार्थोभविष्यत्ये  
॥ श्रीगणेशायनमः ॥ सुतउवाच ॥ अथातःसंप्रवक्ष्यामिशुद्धं  
कैवल्यमुक्तिदम् ॥ अनुग्रहान्महेशस्यभवदुःखस्यभेषजम् ॥१॥  
वतथापिगुरुमुखादेतच्छास्त्रस्याध्येतारोऽन्येऽपिमुक्ताभविष्यन्ति । अतःकारणाद्धि  
दं वक्ष्यमाणगीताशास्त्रार्थयुष्मान्प्रतिवक्ष्यामि । एतच्छास्त्रस्यवक्तृत्वेश्रोतृत्वेमहे  
श्वरानुग्रह एवकारणमित्याह ॥ अनुग्रहादिति ॥ तदुक्तम् । “ ईश्वरानुग्रहादेवपुं  
सामद्वैतवासना । महाभयकृतत्राणपराणामेवजायते” इति ॥ कीदृशगीताशास्त्र

Figure 11.12: Nirnaya Sagar font, *Śivagītā*, 1886

73 Naik 1971, vol. 1: 308–314.

74 Naik 1971, vol. 1: 314; see figures 11.12f. below.



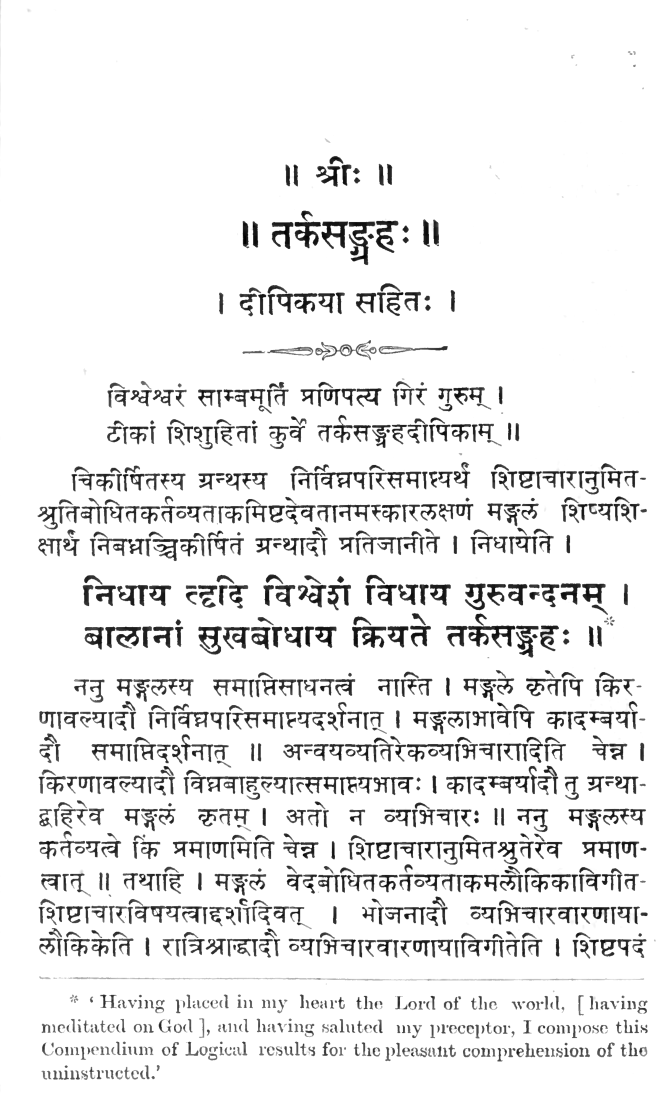


Figure 11.13: Nirnaya Sagar font, *Tarkasamgraha*, 1876

#### 4.1.5. Vibert's and Delafond's fonts

Wilkins's font was the only available Devanāgarī font in Europe, until August Wilhelm von Schlegel (1772–1829), professor of Sanskrit at Bonn, in 1821 commissioned a new typeface to the French typographer Vibert (ca. 1775–?), the Didot family's punchcutter. The first printed

work, Schlegel's edition of the *Bhavavadgītā*, is dated 1823 (figure 11.14). This is the Jainā-styled Nāgarī that will later be used in many European publications.<sup>75</sup> A smaller size, with the same design, was prepared in 1825 by Delafond in Paris.<sup>76</sup> Under the aegis of Franz Bopp, the Akademie der Wissenschaft in Berlin acquired Schlegel's matrices and equipment in 1821. Later, the fonts were purchased by Brill in Leiden.<sup>77</sup> It is the typeface used in many European publications such as Böhntlingk & Roth 1852–1875 and Speijer 1886.

पश्याम देवांस्तव देव देहं सर्वांस्तथा भूतावशेषसंघान् । ब्रह्मणा  
मीशं कमलासनस्थमृषींश्च सर्वानुरगांश्च दिव्यान् ॥ अनेकबाहूद्र  
वक्रनेत्रं पश्यामि त्वां सर्वतो ऽनन्तत्रयं । नान्तं न मध्यं न पुनस्तत्रा  
अनादिमध्यान्तमनन्तवीर्यमनन्तबाहू शशिसर्पनेत्रं ।

Figure 11.14: Schlegel's font, *Bhagavadgītā*, 1823 (Faulmann 1882: 733)

Later nineteenth-century Devanāgarī typefaces produced by German foundries, according to Faulmann, are ascribed to Unger<sup>78</sup> and Friedrich Ludwig Metzger, who cut the elegant “Garmond-Devanagari” (figures 11.15f).

पश्यामि देवांस्तव देव देहं सर्वांस्तथा भूतविशेषसंघान् । ब्रह्मणामीशं  
कमलासनस्थमृषींश्च सर्वानुरगांश्च दिव्यान् ॥ अनेकबाहूद्रवक्रनेत्रं प  
श्यामि त्वां सर्वतो ऽनन्तत्रयं । नान्तं न मध्यं न पुनस्तत्रादिं पश्यामि  
अनादिमध्यान्तमनन्तवीर्यमनन्तबाहू शशिसर्पनेत्रं ।

Figure 11.15: Unger's font, *Bhagavadgītā* (Faulmann 1882: 733)

१ आरंभ में बचन था और वुह बचन परमेश्वर के संग था और वुह बचन २  
परमेश्वर था । वुही आरंभ में परमेश्वर के संग था । ३ सब कुछ उस्से रचा गया  
था और उस बिना कुछ न रचा गया जी रचा गया । ४ उस में जीवन था और वुह  
जीवन मनुष्यन का उंजियाला था । ५ और वुह उंजियाला अंधियारे में चमकता है

Figure 11.16: Metzger's font (Faulmann 1882: 734)

75 Naik (1971, vol. 1: 301) claims that the font was cut in Germany and appeared in print in 1811, but this information does not match Naik's very source, namely Faulmann 1882: 733–734.

76 Glaister 1979: 136.

77 Glaister 1979: 136.

78 The renowned Johann Friedrich Unger, however, died in 1804, and these seem to be a much later product.

## 4.2. Devanāgarī is not intrinsically inaccurate

The claim that Devanāgarī is a less analytic script relates to its usage. In fact, if one desires to split words and even phonemes, Devanāgarī is as flexible as Roman script. For instance, in the examples cited, one could as well write सन्त्ल् लघुनि चहरे अनग्लोपे (A, 7.4.63), and यत् तर्हि तद् इक्षितं ... यत् तर्हि तच्च छुक्को ... यत् तर्हि तद् भिन्नेष्वभिन्नम् (*Vyākaraṇamahābhāṣya*, p. 15–16), and तस्य शास्त्रस्य ... तच्छास्त्रम् ...<sup>79</sup> This is open to the editor's wish. The strategy of breaking a sandhi for the sake of disambiguation has been long applied in the Sanskrit tradition, and any scholar is free to adopt it too, whenever needed.<sup>80</sup> This practice is supported in grammatical treatises. For instance, in the fifteenth century Puruṣottama wrote that in slow-paced utterances, for teaching purposes, there may be no sandhi and that this is supported by the learned,<sup>81</sup> and in the sixteenth century Jivagosvāmin stated that sandhi is mandatory within a word, between preverb and verb, but optional in *sūtras* and elsewhere.<sup>82</sup> And when a clarification on the interpretation of compounds and the like is needed, an editor can always supply it by means of commentaries, notes, and translations.

Besides, Devanāgarī better represents the phonetic fact, reflected in the grammatical and prosodical tradition, that most consonants require a vowel sound in order to be uttered. So it makes full sense to think of syllables – consonants followed by a vowel, or vowels at the beginning of words – as the actual elements of speech and therefore of written speech. Accordingly, traditionally trained Sanskrit scholars read Sanskrit by way of syllables, a habit that is particularly evident when scanning and editing the beginnings and ends of verse lines.

A reason for the bias in favor of Roman script may actually be this very peculiarity of Devanāgarī, which is hardly fitting in the available classifications. Nāgarī and similar scripts are “difficult to classify in terms of the traditional typology of writing systems which recognizes three main script types, namely, logographic, syllabic, and alphabetic.”<sup>83</sup> Pāṇini's metalan-

79 *Nyāyavarttika* ad NS 1.1.1, p. 1,14.

80 An astonishing example of this practice in a Devanāgarī edition, with copious word divisions by means of *virāmas*, is Hertel 1908. The then-editor of the Harvard Oriental Series, C. R. Lanman, offers a compelling scholarly justification of this unconventional choice in the introduction (Hertel:1908, xxviii–xxxix). I am grateful to Philipp Maas (personal communication) for raising my awareness about Lanman's introduction and Hertel's edition.

81 *vilambitocāraṇe tu sandhyabhāvaḥ kvacidbhavet. iti śiṣṭasampradāyasiddham* (*Prayogaratnamālā*, 1.155, p. 120). See Abhyankar 1961, s.v. *vilambitā vṛtti*, where the slow utterance is mentioned as a preceptor's pedagogical strategy in Prātiśākhya literature.

82 *sandhir ekapade nityaṃ nityaṃ dbātūpasargayoḥ | anityaṃ sūtranirdēse 'nyatra cānityaṃ iṣyate* (*Harināmāmrtaṭyākaraṇa*, p. 5).

83 Salomon 1998: 15. “The Indian system is syllabic in the sense that its basic graphic unit is the syllable (*akṣara*), but it differs from a pure syllabary in that the individual phonetic components of the syllable are separately indicated within the syllabic unit. It thus resembles an alphabet insofar as the vowels have a separate and independent notation but cannot be called a true alphabet in that the vowels do not have a fully independent status equal to that of the consonants ... Although the

guage also corroborates this advantage of Devanāgarī. In the *pratyahārasūtras* all the consonants are listed with an intrinsic *a* vowel, सङ्घवर्द्ध, झञ्ज, etc.<sup>84</sup> Indic scripts used to write Sanskrit, that is, Brāhmī-derived scripts, mirror this phonetic intuition.

The study of Sanskrit works via Roman characters removes the editor a step away from the linguistic universe of the original authors, who definitely wrote in some sort of Indic script, when not directly in Nāgarī. These authors thought and wrote in alphasyllabic scripts, never in Roman letters. By reading, thinking and writing in Devanāgarī the scholar is just closer to the actual tradition of the work he is investigating. The visual representation helps in the judgment of the weight of variants, on specific typologies of errors such as dittography and haplography, on the likelihood for errors to be genetically derived, and so on. Roman script, by contrast, does not offer the same hermeneutic advantages.

In short, the alphasyllabic character of the script is consistent with the very nature of the Sanskrit language, while the arbitrary division of syllables created by the Roman characters is just an unneeded distraction.

### 4.3. Roman script is not ideologically neutral

While there may be issues of concern with the ideology behind modern Devanāgarī, the Roman script has also been used as an ideological weapon, too. After all, it is a fruit and perhaps even a seed of the Orientalistic bias. Let's just look at its first propounder, Sir William Jones, both glorified and criticized as one of fathers of Orientalism. He has been described as the first scholar who studied Sanskrit “for a non-utilitarian standpoint,”<sup>85</sup> but has also been blamed as one of the early causes of the Orientalistic bias: “To rule and to learn, then to compare Orient with Occident: these were Jones goals [...]”<sup>86</sup>

Jones has been criticized from totally different angles and reasons, for instance by his contemporary James Mill (1773–1836), in *The History of British India*, because his “illusions about the Hindus” and for being worse than Rousseau in his “his rhapsodies on the happiness and virtues of savage lives.”<sup>87</sup> He was a complex figure who “wrote devotional hymns to Hindu

Indic scripts do have alphabetic symbols for the vowels in the ‘full’ or initial vowel characters, these were never extended beyond their restricted use for vowels not precede by a consonant, and thus did not attain full alphabetic status.” This peculiarity of the script is called *bārākhāḍī* or *svārākhāḍī* by Naik 1971, vol. 1: 178. Linguists use the term “abugida”, one of the two orders used to represent the alphasyllabic script used in Ethiopia and Eritrea (Falk 2010: 185).

84 Cardona (1997: 51) traces back this usage to the *Taittirīyaprātiśākhya* (Whitney 1973, 1.21), *akāro vyañjanānām*, “an *a* forms the names of consonants.” See also *Taittirīyaprātiśākhya* (ed. Whitney 1973), 1.17–18, *varṇaḥ kārottaro varṇākhyā, akāravyaveto vyañjanānām*.

85 Master 1946: 799.

86 Said 1979: 78.

87 Quoted in Mukherjee 1964: 37.

deities and launched modern linguistics by postulating the Indo-European link, yet he also judged in court that an Indian servant may be beaten to death with a cane [...].”<sup>88</sup>

From the point of view of a traditional South Asian scholar, a Sanskrit edition in Roman script may send the wrong message, because even unintentionally it will appear to be designed either to force traditional scholars into the acquaintance of Roman script, or to exclude them from the intended audience.

#### 4.4. The technical advantages of Roman script are a thing of the past

While Devanāgarī did present challenges in the past, the present technology and the Unicode standardization allow for a full portability of Devanāgarī. The script is now available on any device and operative system. Even Google Translate expects the input of Sanskrit in Devanāgarī, not in IAST or other transliteration systems.

#### 4.5. Devanāgarī has a wider audience

While it is true that IAST is internationally used and academically recognized, it alienates Indian scholars, who are seldom accustomed to read Sanskrit in Roman characters with diacritic marks. Conversely, most Sanskritists with academic training can read both scripts. If a wider and qualified readership is the desired goal, surely Devanāgarī must be the better option.

### 5. Adjudicating the debate

#### 5.1. The historical and ideological reasons

That the early attempts at a Roman transliteration of Sanskrit pre-date the birth of Devanāgarī typography is quite surprising. Even the scribal use of Nāgarī as a *scripta franca* of Sanskrit is a rather recent development: “That a truly transregional form of writing, Devanagari, would not come into wide use until the fourteenth or fifteenth century, at the end of the cosmopolitan period, is only another of the wonderful incongruities of the Sanskrit cosmopolis.”<sup>89</sup> The truly

88 Hoerner 1995: 215.

89 Pollock 2006: 229. Pollock (2006: 273f.) writes of a “Sanskrit Graphic sign” in relation to the ancient Brāhmī script: “Perhaps a more suggestive index of Sanskrit’s relation to local styles of culture is the remarkable adaptability of the Sanskrit Graphic sign itself, a ‘substitutability’ that made it unique among the various ‘immense communities’ of premodernity. Latin carried the Roman script with it wherever it went and tolerated no fundamental deviation from the metropolitan style for centuries to follow ... In southern Asia, no writing system was ever so determinative of Sanskrit (until, ironically, Devanagari attained this status just as the cosmopolitan era was waning). Whereas early Brahmi script ultimately shaped all regional alphabets in South Asia and many in South-east Asia ... that script tolerated modification, often profound modification, wherever it traveled. Through this process, which appears to have occurred more or less synchronously across the Sanskrit world, scripts quickly began to assert a regional individuality in accordance with local aesthetic sensibilities, so much so that by the eighth century one self-same cosmopolitan language,

pan-Indian scope of Devanāgarī, in fact, may even be further postponed, even as late as the eighteenth century.<sup>90</sup>

A fully pan-Indian spread of Devanāgarī may be more or less contemporary to the advent of its printed form. One may even venture into the hypothesis that the advent of the Devanāgarī press was itself a cause behind the transregional diffusion of the script. This said, however, there is no compelling reason why the antiquity of the tradition should determine the present choice of either Devanāgarī or IAST in a Sanskrit edition.

Likewise, the two scripts may have been used to further their respective ideological agendas in the past, but their instrumentalization in other domains does not need to be a decisive factor in their usage for the sake of Sanskrit texts. Especially because the correlation with Sanskrit texts seems to be on the one hand overstated, and on the other hand immaterial. Jones's orientalist bias may be better qualified. His motives behind the judicial writings, in respect to the works on poetic or religious literature, might have been quite different, as argued by Rocher: while Jones's publications on law were commissioned by the Government, his religious and philosophical studies were "Literary delights [...] unrelated to governmental concerns and without governmental applications."<sup>91</sup>

As for the use of Devanāgarī to build an anti-Islamic, Hindu identity, the question of its present use may be raised in relation to works that can alternatively be read in a Perso-Arabic script. It should not concern the Roman-Devanāgarī dichotomy in relation to academic studies of Sanskrit language.

From a strictly philological viewpoint, the choice of Devanāgarī seems to be an arbitrary one in respect to other wide-spread Indic scripts such as Banglā, Grantha, Gujārātī, etc., especially when the original work was written and transmitted in those scripts. Roman script, however, is obviously not a solution to this problem.

undeviating in its literary incarnation, was being written in a range of alphabets a most totally distinct from each other and indecipherable without specialized study." If Pollock is right, there would have first been a unique way of writing Sanskrit, Brāhmī, that was later transformed in regional varieties, that were in turn later abandoned in favor of Devanāgarī.

90 This is my assessment within the limits of specific works and genres (Nyāya, Alankāśāstra, Vaiṣṇava aesthetics). Most manuscripts of the transmissions I've studied more in depth – namely, Vātsyāyana's *Nyāyabhāṣya*, Bhaṭṭa Jayanta's *Nyāyamañjarī*, Mukula's *Abhidhāvṛttamātrkā*, Rūpagosvāmin's *Bhaktirasāmṛtasindhu* – are written in regional scripts such as Śāradā, Grantha or other Southern scripts, Bengali or other Eastern scripts. Insofar as these works are concerned, the Nāgarī manuscripts that I've seen were all produced after 1600 – with the exception of some older Jainā Nāgarī manuscripts – in the area of present-day UP, Rajasthan, Gujarat, Madhyapradesh, and Maharashtra. The use of Nāgarī to write and read the vernaculars, too, is a late phenomenon. In sixteenth-century Goa, missionaries did begin to prepare Devanāgarī to write Marathi, but their project was soon discontinued: "The need for Devanāgarī types was not felt with sufficient urgency" by these missionaries, because of "the meagre prospects of publicity of books" (Priolkar 1958: 12).

91 Rocher 1993: 241f.

## 5.2. The scientific reasons

The graphical adaptability of the Sanskrit language is largely a consequence of its phonological character and of the astonishing sophistication of its grammatical tradition. Throughout the course of history many different scripts have been used to represent Sanskrit in writing. Several of those scripts have produced an impressively stable transmission of Sanskrit texts, exactly because the stability is a feature of the language and not of the script.

Both Devanāgarī and Roman characters have virtues and shortcomings. The claim that one script is intrinsically more “scientific” seems questionable, and may be simply ascribed to habits and cultural influences.

## 5.3. The technical reasons

Here the advantages of Roman script are undeniable, from the viewpoint of the editor in the digital age. All the widely used macros and tags of LATEX and XML-TEI, for instance, are written in Roman characters.

The increasing use of the so-called “Romanagari” in social networks is also a consequence of the computer-friendliness of Roman script.

Romanagari is a portmanteau morph of “Roman” and “Devanagari.” It is a vernacular word coined and used by bloggers and internet users. It refers to Hindi, Marathi, etc. text written or typed in Roman script in opposed to the standard Devanagari script.<sup>92</sup>

The available technology, however, does permit the production of Devanāgarī editions, with additional efforts and labor that may be justified according to the goal. There is no insurmountable technical hindrance, one way or the other, so even the computer-friendliness of Roman script is not a decisive factor. When digital editions are concerned, some multi-script technology is increasingly available (e.g., as in <https://sarit.indology.info/>, <https://saktumiva.org/>), in which case the choice remains open to the reader.

## 5.4. The audience

Three possible audiences may be affected by the editor’s choice of the script:

- The traditional scholar, who is accustomed to read Sanskrit in Devanāgarī.
- The academic scholar, who is accustomed to read IAST.
- The occasional reader, who is acquainted with just one of the two scripts.

Ultimately, the selection of the audience is a prerogative of the author or editor. Quite obviously, with Devanāgarī one cannot reach a public that does not know the script, so if an international and non-specialized audience is desired, for instance for dissemination purposes,

92 Mhaiskar 2015: 196b. In his paper, Mhaiskar discusses social and cognitive advantages and disadvantages generated by the use of Romanagari. Its widespread popularity, however, is undeniable.

there is no debate: Roman script is the way to go, and even the diacritical marks of IAST may become an hindrance. Analogously, an edition may be aimed at a general audience accustomed to reading Hindi or other modern languages in Devanāgarī, in which case the use of IAST would introduce needless complications.

Thus the Devanāgarī-Roman contention concerns an edition aimed at the first two audiences. If we are considering specialists, by contrast, I would argue that the malady is the bias, not the chosen script. Once there is the prejudice that non-Indian scholars do not know Sanskrit properly, how likely is a Devanāgarī edition produced by them to be read by traditional Sanskrit scholars? Vice versa, if the assumption is that Indians are not sound philologists, how likely is a critical edition in IAST produced in India to be appreciated by scholars elsewhere? If an edition is respected and appreciated, instead, most scholars will make the effort to use that piece of scholarship, even if its form does not fully match their habit of reading Sanskrit.

In academic works both Roman and Devanāgarī must be acceptable choices. A functional assessment, rather than an aesthetic one, is the most convincing criterion in the choice of script.

The history of Devanāgarī fonts sketched in this paper needs further research. A study of the legibility of the available Devanāgarī fonts, in particular, is still a desideratum. In terms of legibility, for instance, the Nirnaya Sagar typefaces and their digital reproductions have stood the test of time, and most present-day fonts are directly or indirectly inspired by those faces. Whether this happened because of intrinsic qualities, political decisions, historical accidents, or other reasons, needs to be further assessed.

## Abbreviations

A	Pāṇini, <i>Aṣṭādhyāyī</i>
NS	Gautama, <i>Nyāyasūtra</i>
NV	Uddyotakara, <i>Nyāyavārttika</i>

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BORI 390/1875-76. The manuscript is presently constituted of 432 leaves (435 according to Bühler 1877: xxv). The original foliation runs up to *Nyāyamañjarī* (NM) 3 and restarts from NM 4: 3–149 (= NM 1–3) + 1–270 (= NM 4–12) + 282–286 (an unidentified work) + 7 (parts of *Raghuvaṃśa* 15.11–78).



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## Sequencing, Assembling, and Annotating: A Genomic Approach to Text Genealogy\*

Wendy J. Phillips-Rodríguez

### Introduction

Originally, the discipline of stemmatics was created as a method to edit texts that exist in many versions. As such, and despite its limitations, it is still probably the preferred practice among textual scholars due to its cogency.<sup>1</sup> The information revealed by a *stemma codicum* is considered useful mainly at the beginning of the process of editing, for it is precisely such a stemma that will make it possible for the editor(s) to choose readings in a genealogically informed manner. Nevertheless, it seems that the use of new technologies developed in other fields (i.e., evolutionary biology) besides helping textual scholars to achieve some of their traditional goals (editing), has also brought about the possibility of using stemmatology for purposes it was not initially meant for.

The grouping of manuscripts according to evolutionary characteristics (Howe *et al.*), detecting certain patterns of contamination (Windram *et al.* 2006) and even spotting some scribal practices such as “change of exemplar” (Phillips-Rodríguez *et al.* 2009), which can now be visualized in ways that were not possible in the past, may reveal important information about the text itself and the environments in which it was created and transmitted. Such

\* It is a serendipitous circumstance that I came to conclude this work in Vienna, a place that has surely meant much for Dominik. This is not the first time that I have this impression, as several times in the past, in terms of themes or views (digital humanities, building communities of work, the study and preservation of manuscripts), I have felt that he has been there before and that his work paved many roads. To him, with much appreciation. The writing of this work was made possible by the generous support of a scholarship (PASPA 2022) from DGAPA (Dirección General de Asuntos del Personal Académico) of the National Autonomous University of Mexico (UNAM).

1 In this paper I take a similar approach to stemmatics as Jürgen Hanneder: “If we speak of stemmatics we mean the method that was described by [Paul] Maas including its later modifications” (Hanneder 2009–2010: 7). An analogous perspective is offered by Paolo Chiesa: “The genealogical method is also called ‘Lachmann’s method,’ from the name of Karl Lachmann (1793–1851), a German classical scholar who was considered to be its creator or architect. In fact, this method was constructed over a rather long timespan (from the last decades of the eighteenth century to the early twentieth century) thanks to the contributions of many scholars, sometimes working in connection with one another, sometimes working autonomously” (2020: 74).

information will remain of first value to editors; however, it also calls for attention as an asset in itself, for it is a window to the way in which textual artifacts evolve, or, as William Robins has put it, “how texts perform their cultural work.”<sup>2</sup>

This paper is, in a sense, a return, a reflection on themes that have been pressing methodological issues for me when approaching the ancient literature from India. It is against this background that I will not sum up results that I came to conclude from previous works, but I will revisit some of the core questions that I have been pondering ever since I got interested in Sanskrit textual studies.

## 1. What is the standing of the critical edition of the *Mahābhārata* against the current state of research in stemmatology?

If we rephrase the question in the following fashion: “Has the text of the critical edition of the *Mahābhārata*, reconstituted by traditional means, become obsolete now that we can use sophisticated tools to study the relationships between manuscripts?” the quick answer is “Not at all.” Indeed, computer-aided stemmatics allow us some deeper insights into the text’s history than traditional methods do, mainly due to its capacity to put information into graphics. However, it must be clear that the traditional information and the methods are not made redundant by the new tools. Most facts that can be observed now at a glance, by means of diagrams, were perceived too by the editors through their continuous work with the manuscripts, for, as V. S. Sukthankar clearly affirmed: “The study of the manuscripts themselves must first teach us what their interrelationship is.”<sup>3</sup> However, much of the information that made itself available to the editors through their sustained interaction with the manuscripts and that informed their decisions is often not made explicit to the user of the edition, simply because the traditional layout of a printed critical edition does not allow for it. Only the prolegomena and the introductions are places to discuss such information, and then again, such discussion must be carried out succinctly, as too long an explanation or too many examples would defeat the very purpose of the edition. What new tools make possible is to grasp some of that insider knowledge in a more direct manner. In other words, the information revealed by means of computerized tools is not different in nature to that revealed by traditional methods, but often it can be finer-grained, more easily transmittable, and amenable to further analysis.

Because of that, at least in the foreseeable future, I do not see any chance for the critical edition of the *Mahābhārata* to be rendered obsolete by the new methods. Its lifespan does not get shortened by the use of computational tools. If at all, it gets lengthened, as the material it contains can now be mined (perhaps even supplemented) to respond to unexplored lines of enquiry. That opens room to novel approaches to text genealogy beyond the purpose of editing,

2 Robins 2006: 114.

3 Sukthankar 1933: LXXXII.

as several aspects of the transmission, migration, and adaptation of the text to different times and places can be potentially scrutinized.

## 2. What can we learn from this case study, and how can we use it to portray a bigger picture of textual evolution?

Thus, far from an appeal to re-editing using the new tools, my proposal would be on the perspective that the biological metaphor could lend to the work of the traditional stemmatologists and the results that can be achieved through that. At least, in view of the data provided by the Dyūtaparvan, I suggest that such a perspective could help us incorporate the previous efforts into a coherent view in which computerized tools are in no way against traditional stemmatology. On the contrary, they stand in a continuous line as efforts upon which further scholarship can be built.

Both, biological evolution and textual criticism – together with quite a few other disciplines that require for their study what Robert O’Hara (1996) calls “trees of history” – deal with the phenomenon of “descent with modification.” Thus, there is a chance that they can cross-pollinate with each other while working on their own challenges. For instance, it is worth noticing that the basic principle for cladistic analysis, the principle of *apomorphy*, which says that only shared innovations provide evidence of common ancestry, was first understood in stemmatics and historical linguistics.<sup>4</sup> O’Hara even suggested that “if there had been more cross-fertilization among these fields the cladistic revolution in systematics might well have taken place in the nineteenth century.”<sup>5</sup> However, it was only after the advent of molecular sequencing that evolutionary biologists started thinking on ways to organize their huge amounts of historical data.

Certainly, some of the tools evolutionary biologists are coming up with may be useful to textual scholars, but it is perhaps their way of dealing with the model which can be even more productive. Often, advancement in a discipline is propelled or hindered by the model it has as its core.<sup>6</sup> In other words, the narrative of what scholars are looking for shapes the kind of efforts that they invest. For a long time, textual scholarship has been driven by the quest of reconstructing a text that could best explain the state of all available witnesses. At the same time, it has been expected that such text, by being a possible ancestor, would have had a

4 Willi Hennig, the founder of phylogenetics, developed the term “apomorphic” through his early theoretical publications from 1947 to 1966 (Richter & Meier 1994). However, quite some decades earlier, in the area of textual criticism, several editors had already taken the approach of considering that only derived readings (“common errors”) were useful to map shared descent between witnesses (Trovato 2020: 110). For instance, according to Reeves, in 1872 with his edition of *Vie de Saint Alexis*, Gaston Paris was “the first scholar to have applied systematically the principle that only shared errors establish families of textual witnesses” (2011: 68).

5 O’Hara 1996: 81.

6 Nersessian 2022.



concrete existence in the past. Consequently, the realization that a genealogical reconstruction, though useful in evolutionary terms, cannot be taken as a factual reality seems to deter some scholars from using it in all its capacities and even make them question the usefulness of the whole critical undertaking. Wendy Doniger, for instance, has succinctly expressed this lack of historical dimension by considering the text of the critical edition of the *Mahābhārata* “nobody’s version,”<sup>7</sup> as opposed to the text witnessed by the individual manuscripts, which belongs to a particular time and place. However, can a critically reconstructed text be asked for a concrete existence? More importantly, would textual scholarship benefit from such demand? Perhaps evolutionary biology, by means of the human genome, can bear an example of the possibilities offered by an abstract model whose factual existence is not called for.

Thus, in the next sections, I will deal with what I believe has been achieved in *Mahābhārata* textual studies by means of the critical edition from a perspective akin to the biological sciences and will try to suggest in which direction further paths may be developed.

### 3. Another way of framing the question as a whole, or what the critical edition of the *Mahābhārata* means in bioinformatic terms:

#### 3.1. Sequencing: What collators did

In bioinformatics, the process of discovering the order in which nucleotides (the four building blocks of DNA, expressed by the letters A, G, C and T) are combined is called sequencing. However, the full length of a genome – even of smaller organisms, as “(t)here is a remarkable lack of correspondence between genome size and organism complexity” – is extremely long.<sup>8</sup> For this reason, the sequencing must be done bit by bit, using genomic discrete regions which are called “reads.” For the study of evolutionary biology, sequencing is extremely important because it determines the primary structure of what will become the representative genome for a certain species: the string of characters against which all other genomes of the same or similar species will be compared.

Sequencing *de novo*, as it is called when no reference sequence is available, is an extremely time-consuming task (even when computers are at work). Therefore, the sequencing of the human genome is considered “one of the most ambitious and important scientific endeavors in human history.”<sup>9</sup> A very large, well-organized, and highly collaborative international effort was made to sequence different parts of the genome, then assembling them together to form one single string of text and finally making it available to the whole scientific community. The project, which lasted from 1990 to 2003,

7 Ghosh 2022, New Books Network podcast: <https://newbooksnetwork.com/after-the-war>

8 Pray 2008: 96.

9 *Human Genome Project Fact Sheet*.

involved researchers from 20 separate universities and research centers across the United States, United Kingdom, France, Germany, Japan, and China. The groups in these countries became known as the International Human Genome Sequencing Consortium.<sup>10</sup>

This sounds not completely unlike the Bhandarkar Oriental Research Institute's project that was taken over by different scholars (and their teams) who gave themselves to the task of editing the different volumes of the *Mahābhārata*. In this, however, the project lasted forty-eight years to reach its end. This is not a long time if one considers that sequencing the *Mahābhārata* was done by hand, not using the powerful algorithms developed by biologists to help them compare and organize their material.

The collation is done by a permanent staff of specially trained Shastris (Northern as well as Southern) and University graduates. For the purposes of collation, each Mahābhārata stanza (according to the Bombay edition of Ganpat Krishnaji, Śaka 1799) is first written out, in bold characters, on the top line of a standard, horizontally and vertically ruled foolscap sheet. The variant readings are entered by the collator horizontally along a line allotted to the manuscripts collated, akṣara by akṣara, in the appropriate column, vertically below the corresponding portion of the original reading of the "Vulgate." On the right of each of these collation sheets, there is a column four inches wide reserved for remarks (regarding corrections, marginal additions etc.), and for "additional" stanzas found in the manuscripts collated, either immediately before or after the stanza in question. Very long "additions" are written out on separate "śodhapatras" and attached to the collation sheets. The collations are regularly checked by a batch of collators different from the one which did the collation in the first instance, before they are handed over to the editor for the constitution of the text.<sup>11</sup>

Unfortunately, none of those famous collation sheets has been located to bear testimony of how it looks to sequence by means of pencil and paper:<sup>12</sup> a feat that any modern evolutionary biologist would consider titanic. In fact, titanic it was, for as we are told by S. K. Belvalkar, Sukthankar's successor as the editor-in-chief, after the first *maṅgalācaraṇa śloka* was inscribed in the year 1919,

for the first 7 or 8 years thereafter, the entire staff of Graduates, Under-graduates and our multi-lingual Shastris did nothing but collation work day after day. And

10 *Human Genome Project Fact Sheet*.

11 Sukthankar 1933: IV–V.

12 In 2003, I visited the BORI to look at the material kept there from the making of the *Mahābhārata* Critical Edition, however no collation sheet was located at that time.

even that did not suffice: the Institute had to open at its own expense special collation centers, one at Santiniketan and the other at Tanjore, where manuscripts, written in the scripts of Bangal and South India could be more quickly assembled and collated.<sup>13</sup>

No wonder the task of comparing manuscripts reached high proportions as the formidable length of the text was witnessed by multiple copies in each of its sections:

[t]he *entire* Mahābhārata stands now collated from a *minimum* of ten manuscripts; many parvans have been completely collated from twenty manuscripts; some from thirty; a few from as many as forty; while the first two adhyāyas of the Ādi, which have special importance for the critical constitution of the text of the *entire* epic, were collated from no less than sixty manuscripts.<sup>14</sup>

**WANTED**

**20 Volunteers**  
to participate in the  
**Human Genome Project**  
a very large international scientific research effort.

The goal is to decode the human hereditary information (*human blueprint*) that determines all individual traits inherited from parents. The outcome of the project will have tremendous impact on future progress of medical science and lead to improved diagnosis and treatment of hereditary diseases.

Volunteers will receive information about the project from the Clinical Genetics Service at Roswell Park, and sign a consent form before participating.

*No personal information will be maintained or transferred.*

Volunteers will provide a one-time donation of a small blood specimen. A small monetary reimbursement will be provided to the participants for their time and effort.

Individuals must be at least 18 years of age.  
Persons who have undergone chemotherapy are not eligible.

**ROSWELL  
PARK**  
CANCER INSTITUTE

For more information please contact the  
Clinical Genetics Service  
845-5720 (9:00 am - 3:00 pm)  
March 24 - 26, 1997

Figure 12.1. A 1997 Buffalo, New York newspaper advertisement recruiting volunteers to provide blood samples and DNA for the Human Genome Project (HGP Fact Sheet).

The human genome project also gathered information of many individuals, though at the end only the data of a few was used:

13 Belvalkar 1954: 308.

14 Sukthankar 1933: IV.

The project researchers used a thoughtful process to recruit volunteers, acquire their informed consent, and collect their blood samples. Most of the human genome sequence generated by the Human Genome Project came from blood donors in Buffalo, New York; specifically, 93% from 11 donors, and 70% from one donor (HGP fact sheet).<sup>15</sup>

### 3.2. Assembling: What general editors did

If sequencing requires cutting text into small pieces, assembling means to put all those pieces together again in a meaningful manner. In bioinformatics, sequence assembly refers to aligning and merging fragments from a longer DNA sequence to reconstruct the original sequence. In simple terms, one sequences “reads” (relatively short strings of nucleotides) which then need to be put together (assembled) by merging them in such a way to obtain the full/almost full concatenation of characters that describes an organism

The sequence of a genome is useful only in as much as it is coherently assembled, just as we could

[i]magine cutting up many copies of a long poem into strips only a few words long, mixing them up and trying to put the poem back together based on the strips’ overlapping ends. Final assemblies can leave regions out, put in too many copies of a repeating sequence, assemble the pieces in the wrong order or put them in backward.<sup>16</sup>

Scientists may agree or disagree with the accuracy of any chosen “read,” but its importance comes from it being placed in the *right* order of the chain or, as a matter of fact, in any fixed order that would make it accessible time and again. The process of assembling (piecing together the whole string of characters) is, by far, the most time-consuming task of the whole procedure and it is considered “one of the central problems of bioinformatics.”<sup>17</sup>

In editing, this means setting up a version that is believed by the editor to be the best available choice according to his or her knowledge of the manuscript material. Not everyone may agree with each choice made by the editor(s), but what makes the assembling of a representative text so crucial is that it allows the sequence to be seen as a whole. This can make us reflect on the frequently voiced criticism about the text of the critical edition not bearing a historical reality. At the inception of the project, some scholars even suggested that there was no need to constitute a text, as that of the Vulgate or of any other historical manuscript would do, with the *variae lectiones* of other manuscripts supplied in the footnotes. However, the editors opted for an

15 *Human Genome Project Fact Sheet.*

16 Yandell 2012.

17 Henson *et al.* 2012: 901.

eclectic but cautious utilization of all manuscript classes. Since all categories of manuscripts have their strong points and weak points, each variant must be judged on its own merits.<sup>18</sup>

Thus, as plainly stated by Sukthankar, the constituted text offered by the critical edition is an inferred version that “cannot be accurately dated, nor labelled as pertaining to any particular place or personality.”<sup>19</sup>

In terms of the human genome, it is interesting to notice that

[t]he sequence of the human genome generated by the Human Genome Project was not from a single person. Rather, it reflects a patchwork from multiple people whose identities were intentionally made anonymous to protect their privacy.<sup>20</sup>

The term “patchwork” is the key concept here. The usefulness of the human genome does not come from belonging to any human in the flesh, but from representing a parameter against which other variants (of the same species) can be compared. Once the representative sequence is made, however “biased” or “idiosyncratic” that may be, it is then possible (and necessary) to diversify the material by means of resequencing. Indeed, the efforts of the Human Genome Diversity Project or others such as the Human Pangenome Project are directed to capture such human genetic diversity by comparing the DNA of specific populations to understand how different it is from the reference. Something important to keep in mind is that resequencing can only take place when a representative genome already exists, as only such parts that are different from the pre-existing reference need to be aligned and sequenced.

Resequencing for comparison with the reference genome generally doesn’t involve any assembly, because this has already been done for the reference genome. Instead alignment is used. This means that the sections of DNA or “reads” produced after sequencing are compared to the reference genomes and placed alongside their most similar (ideally identical) counterpart. Once all the sections are aligned, it is then possible to look for differences between the individual sequence and the reference sequence.<sup>21</sup>

Thus, when challenging or questioning readings from the constituted text, we are, so to say, resequencing. A task to be done at much less expense, as we are focusing only on comparatively short parts of the text. Departing from the readings offered by the constituted text of the critical edition was something expected by the General Editors, who never claimed infallibility:

18 Sukthankar 1933: LXXXVI.

19 Sukthankar 1933: LXXXVI.

20 *Human Genome Project Fact Sheet*.

21 <http://tinyurl.com/yjtebec2> (last accessed June 16, 2023).

“For, who and what is to prevent him [the Critical Reader] from constructing his own text from this critical edition?”<sup>22</sup> They understood that once a constituted text was produced, the task of “resequencing” could be carried out whenever necessary with relative ease. That is the whole point of the critical apparatus.

Since all divergent readings of any importance will be given in the critical notes, printed at the foot of the page, this edition will, for the first time, render it possible for the reader to have before him the entire significant manuscript evidence for each individual passage. The value of this method for scientific investigation of the epic is obvious.<sup>23</sup>

On the one hand, the text above the line is the *Mahābhārata* genome, so to say, whose value – just as in the case of the human genome, being of a composite matter – does not come from being historical, but representative. On the other hand, the material below the line, which constitutes a veritable “thesaurus of the Mahābhārata tradition,” provides for some diversity.<sup>24</sup> Furthermore, besides the material already available in the critical apparatus, it is not discardable the possibility that other manuscript material could be aligned to the critical text, should that become available.

### 3.3. Annotating: What is there to do

The genome sequence of an organism is an information resource unlike any that biologists have previously had access to. But the value of the genome is only as good as its annotation. It is the annotation that bridges the gap from the sequence to the biology of the organism.<sup>25</sup>

In bioinformatics, annotating a genome means several specific things, such as giving clues about the structural or functional role of portions of the text in order to render it more useful for future research. Since now there is no need to sequence from scratch, it is possible to focus on specific regions. As expected, sustained attention on short amounts of the string often lead to deeper understanding, and thus scientists may feel the need to leave “a note” attached to that section for future readers.

In the human genome some of those annotations may appear along the string, as one of the characteristics of digital data is to be easily supplemented with meta-information. However, when we think of a printed critical edition, it is evident that such annotations will have to be supplied otherwise. As a matter of fact, the constituted text of the critical edition started to

22 Sukthankar 1933: LXXXIV.

23 Sukthankar 1933: IV.

24 Sukthankar 1933: IV.

25 Stein 2001: 493.

be annotated as soon as it was made available, whenever scholars felt the need to focus on particular readings or episodes and decided to write about them. Only those annotations do not coexist in the same universe as the printed edition and therefore they are not able to be read along the constituted text. If we want to know about them, it is necessary to consult them in other locations (papers, articles, books, etc.).

Certainly, it would be more efficient to have that information linked to the text, directly to the individual passages where scholars have found something worth pointing out. That, however, could only be accomplished by bringing on board the digital humanities. It is at this point that another mighty effort in terms of *Mahābhārata* scholarship comes to my mind: the electronic format of the constituted text, transcribed by Muneo Tokunaga and then revised and maintained by John Smith.<sup>26</sup> The existence of this electronic version has the potential to propel the usefulness of the printed critical text to new heights as it makes it possible to link it to new tools for its mining and enable alternative forms of display in which hypertext could be of much use. Certainly, much collective work will have to be done to build the interfaces. However, with so useful resources within our reach, we find ourselves in a truly privileged position. All those resources were constructed collaboratively through decades of work, and they also require a joint effort from present-day and future scholars to put them to good use. In that regard too, *Mahābhārata* textual scholars are in a similar standing as evolutionary biologists of today: as more of them come to rely on annotation, it will become more important for the scholarly community as a whole to contribute to this continuing process.<sup>27</sup>

#### 4. Conclusions

If we stick to the biological analogy, the constituted text of the critical edition of the *Mahābhārata* means for *Mahābhārata* studies what the sequencing of the human genome does for human genetics: it is a monumental amount of groundwork that enables the continuity of the project. Just as the first sequencing of the human genome in 2003 marked the starting point of genomic studies, the availability of the critical edition constitutes the footing for many future efforts. Perhaps rather than thinking of it as an edition, it would help to consider it as a bank of data in the making, the first step to what could become a genomic archive of the written *Mahābhārata*. The good electronic version of the text as constituted in the critical edition and the information on variants in the footnotes of the printed one are two further readily available resources from which much profit could be made. That is, if we allow ourselves to partake of some of the objectives that currently drive the research in genomics: understanding of variation, patterns of circulation, and interactions of the biological organism (in our case, cultural organism) with the environment.

26 <https://bombay.indology.info/mahabharata/statement.html> (Last accessed June 16, 2023).

27 Cf. Stein 2001: 501–502.

This speaks about the long-term usefulness to keep critically editing other Sanskrit texts, in spite of the difficulties and the costs (human and material) of the task. Critical editions are things to build upon and they can take research a long way, particularly if they are seen as open-ended projects, where further material, meta information and new views can be incorporated.

As mentioned earlier, the only change this paper proposes is in the outlook of the material we already have available. By doing so, it seeks to build a narrative in which the efforts of the past can be incorporated in a continuum where the textual history of the *Mahābhārata* may be not only documented but also pored over to understand aspects of it that go beyond the interest of solely editing.

Possibly because they were dealing with a similar kind of material, the efforts of the makers of the critical edition of the *Mahābhārata* bear resemblance to the efforts done in the biological sciences. Guided by knowledge and intuitiveness, they did the first sequencing and assembling and therefore provided future scholars with, if we may, a *Mahābhārata* genome. It is now for future research to work on resequencing and annotating, opening the way to enlarge the bank of data and providing diversity and nuance where it is needed.

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## Always Already Theorizing ... in the Field, Elsewhere, All at Once

*Anthony Cerulli*

### 1. Backstory

For the past twenty years, I have been doing fieldwork in south India. When I began my graduate studies in 1997, however, and started to imagine my life as an academic, I did not expect that ethnography would be part of the design. I had mostly philological plans. I thought I would spend time reading texts composed in classical languages, initially texts from pre-Islamic Iran and later (and still today) texts from premodern South Asia. In both the Iranian and Indian contexts, early on I took an interest in literature that presents problems and treatments for the body, matters that we might classify broadly as “medical” and “therapeutic.” In 2000, when I had to choose between India and Iran as the focus of my doctoral research, I chose India. Soon after my project clearly centered on medicine, my advisor, a remarkable Sanskritist with only minimal knowledge of medicine in premodern South Asia, encouraged me to study the work of a scholar who worked at the Wellcome Trust Centre for the History of Medicine in London. That scholar, she said, “knew everything there is to know about Sanskrit medical texts.” That scholar was Dominik Wujastyk.

I had already known several of Dominik’s publications, which were (and still are) *sine qua non* for anyone working on Sanskrit medical literature and premodern Indian medical history. But I had never met him. So, in early September 2001 while I happened to be in London, and the 9/11 bombings in New York City delayed my return to the US, I tried to arrange a meeting with Dominik at the Wellcome Center. The meeting never came to pass, despite my best efforts, and we corresponded on email for a while. A year later, at my advisor’s urging, I invited Dominik to join my dissertation committee. He accepted! From that time on, he had a profound impact not only on my dissertation, but on the future trajectory of my research and thinking about medicine in general and especially in South Asia, translation, and a host of other aspects of the scholarly life.

In 2003, I had an opportunity to go to India for a short pre-dissertation research visit. When I shared my somewhat unstructured plan with Dominik, asking him for advice about what to do and where to go, he suggested I go to Tamil Nadu to meet a well-known scholar of Ayurveda, whom I’ll call “Dr. Mishra.” Dr. Mishra was an ayurvedic physician, a former ayurvedic college professor, and an expert on the medical literature’s “big trio” (*bṛhatrayī*) of

Sanskrit texts. Dominik said that if I wanted to visit him, he would ask Dr. Mishra to read selections of the *Carakasamhitā* with me. He also recommended that I consider learning Malayalam, since there was ample literature in the language that could be useful to the research I wanted to do. An ambitious and eager grad student, I weighed both of Dominik's suggestions seriously. Since Malayalam wasn't offered at my university at the time, I purchased a grammar and began learning what I could on my own. My Malayalam learning didn't start in earnest, with a proper teacher at Kerala University, until a year later. But I set off for Tamil Nadu that fall, with no credentials to speak of apart from Dominik's backing, to read the *Carakasamhitā* with Dr. Mishra. That stint of intensive learning in 2003 made a lasting impact on my understanding of Indian medical literature, history, and practice. When our studies ended, Dr. Mishra introduced me to some people who brought me to the neighboring state of Kerala, which has been at the heart of my research ever since (which Dominik effectively portended by urging me to learn Malayalam).

In Kerala, I formed several personal and professional connections, and I have written about many of them in detail over the past decade, most recently in a monograph called *The Practice of Texts: Education and Healing in South India*.<sup>1</sup> In the book's introduction, I explain how alongside the philological work of my dissertation, inspired by Dominik's advice to go to south India, a parallel ethnographic project developed. The two projects initially existed side-by-side without much crossover. But over time they became entangled, and they remain that way today. I have Dominik to thank for this "imbroglio."

The fieldwork I did between 2003 and 2017 in central Kerala among physicians (*vaidyas*) who teach and use the *Aṣṭāṅgahr̥daya* deeply influenced my present understanding of Ayurveda and its history. It also shaped my conception of philology in the south Indian medical context. I observed physician-teachers there cultivating a disciplinary tradition of reading and interpreting texts they culled from the *Carakasamhitā* that's as complex and developed as philology is understood and practiced in Europe and North America. Yet it's also different, with an independent history. It is a starting point for a study of philology in its many forms, a comparand in its own right, against which I was able to make sense of forms of philology I learned in North America and those from Europe I have studied since, types of reading, interpretation, and historical linguistics inspired by Jacob Grimm and Friedrich Nietzsche, advanced by Ferdinand de Saussure, J. R. R. Tolkien, and W. B. Lockwood, and theorized in recent times by scholars like Roman Jakobson, Sheldon Pollock, James Turner, Whitney Cox, and others. In the south Indian medical context, I came to see philology as a discipline of reading and interpreting healing knowledge derived from classical texts with the practical aim of somatic understanding and transformation. Years of observing how and learning why south Indian *vaidyas* "practice texts" has occupied my scholarship for a long time, and I am grateful to Dominik for his gentle orchestration of my research – even though, I realize,

1 Cerulli 2022a. See also Cerulli 2020: 455–457.

he surely had no such plans for, and couldn't have anticipated, what my views on Ayurveda, philology, and textual studies would end up looking like today.

As a teacher, I have also combined my philological and ethnographic interests in the classroom, and indeed the reflections in this chapter were prompted by interactions with students in a seminar I have taught at the University of Wisconsin-Madison the past seven years called, "Ethnography in Asia." Discussions in this course have helped me make sense of my own fieldwork experiences *in* and preparations *before* going into the field. Since I originally arrived in the field unaware I was about to commence a sustained program of ethnographic research, I was improvising from the very start. Years later, as a professor, my students and I routinely explore improvisation as a cornerstone of participant-observation, something even the most seasoned ethnographers do in the field all the time. In 2003 and for many years later, I labored to imagine a workplan that would allow my philological program to speak to the social, educational, and political matters in the lives of the south Indians who used and taught the texts that drew me to South Asian history, medicine, and culture in the first place. Since Dominik's direction of my philological research early on set up my work as an ethnographer and teacher of ethnography, I am pleased to offer the following reflections on fieldwork and theory as thanks to Dominik and as illustration of the scope of his influence.

## 2. Questions about theory

In her how-to book on ethnographic writing, *From Notes to Narrative: Writing Ethnographies That Everyone Can Read*, Kristen Ghodsee offers the following admonition: "Our fieldwork and our specific case studies render our work original, but this work fails to be scholarly if it lacks dialogue with larger theoretical concerns."<sup>2</sup> I agree with Ghodsee's assertion, and overall I find her book very useful. Especially pertinent here is the chapter concerning the relationship of theory and fieldwork, chapter 5, "Integrate Your Theory," where she addresses *how* ethnographers blend field data and larger theoretical concerns. Many ethnographic manuals do not do this in direct ways, alas, for I have come to learn that many students are keen for precisely this kind of practical knowledge and experiential reflection from ethnographers.<sup>3</sup>

As I worked on my own ethnographic projects, the scholarly process of imbricating theory within stories from the field happened all the time as I wrote day-to-day, largely by trying one technique or another until something worked. In the classroom, however, many of my grad students – especially those anticipating sustained and perhaps first ever periods of fieldwork, the results of which will account for substantial portions of data in their dissertations – routinely ask for details and insights about this process. In ethnographies that manage to blend

2 Ghodsee 2016: 51.

3 Ghodsee's *From Notes to Narrative* is a clear outlier. Kirin Narayan also offers useful guidance on this matter, though less exhaustively and not as pointedly as Ghodsee does, in the first chapter of *Alive in the Writing: Crafting Ethnography in the Company of Chekhov* (2012).

fieldwork and contributions to larger theoretical concerns into “ethnographies that everyone can read,” as Ghodsee put it, how did the authors weave theory into their narratives from the field and how obvious is this process? Where does theory begin and where does it end (if it ever ends)? Details about ethnographic field-data are detected easily enough: ethnographers often explicitly tell their readers they spent X-amount of time observing and participating in such-and-such a community and location. The stories and anecdotes recounted from participant-observation reveal the extent to which authors have understood and integrated into the communities and locations they worked in and, for readers, an author’s aptitude for creative storytelling usually becomes apparent fairly quickly. Fieldwork, as Ghodsee notes, enables ethnographers to make novel contributions to their fields. But how do ethnographers engage in the so-called scholarly task of telling readers (or viewers or listeners, depending on the media) about their theoretical commitments and aspirations, about the theories they espouse and defend and the larger theoretical concerns to which their work is supposed to contribute? Like many things, it depends.

At the risk of stating the obvious, we might begin to make sense of “the puzzle of theory” by posing an earnest yet seldomly asked question: Aren’t we always already theorizing? I’d say, yes, we are. Whenever we are engaged in formal or informal observation (academic or otherwise) of a community of people, flora, ecologies, or urban-suburban-rural settings, don’t we see things, sense and cognize them, applying our instincts, worldviews, inclinations, and opinions to everything we take in? I think we do. We always already theorize . . . to make sense of the worlds we inhabit and to learn new things. We theorize, full stop, without ever having to invoke Bhabha, Gadamer, Spivak, or the ideas of other scholars in the process. That said, within most academic spaces, such as classrooms and scholarly publications, conventions abound that demand more than unvarnished expressions of one’s thoughts. There are disciplinary, administrative, and often self-imposed expectations in these spaces that require overt deliberation on how our thinking (and writing) about our observations fits within, contributes to, builds upon, and maybe extends the frames of thinking assembled before (and sometimes alongside) us by the Bhabha-s, Gadamer-s, Spivak-s, and other trailblazing “theorists” who help us critically assess how we perceive the worlds we inhabit and create. We give credit to those people who shaped our thinking, and in the process we establish ourselves within disciplines, schools of thought, and perhaps institutions.

Practical matters in the production of our knowledge through writing, such as the length of a study, restrict the extent to which we can elaborate a backstory and the theoretical building blocks that informed our thinking about fieldwork, the data we collect, and how we choose to recount it. A preface or introduction to an ethnographic monograph is a normal place for this type of information, for example, since it provides ample space to show an historical trajectory of our thinking and its intended future projection, whereas articles and chapters have less space for this kind of reflection. For consumers of ethnography, this kind of information might or might not be important. For me, it is helpful. I appreciate knowing the extent

to which the authors I read have deliberately chosen to engage certain problems and questions (Ghodsee's "larger theoretical concerns"), and why, as part of the presentation of their data.

Scholarship in the human sciences is not short on "how to" publications, where experts expound ways to do any number of things: write successful grants, devise research topics, revise dissertations into books, and so on. If we take Bronislaw Malinowski's opening chapter in *Argonauts of the Western Pacific* (1922) as a kind of initial pronouncement on what ethnographic research entails, for at least a century there have been books, parts of books, and articles pontificating on the so-called craft of ethnography, predominantly by anthropologists and sociologists. Although I cannot claim to be close to 100% *au fait* with all the best of these manuals in recent decades, many of them (save the asterisked books in the following list – also see note 3 above) – such as, Laplante, Gandsman & Scobie (2020), Boeri & Shukla (2019), Ghodsee \*(2016), Narayan \*(2012), Boellstorff, Nardi, Pearce & Taylor (2012), Borneman & Hammoudi (2009), Goodall (2000), van Maanen (1988), Clifford & Marcus (1986), and Mauss (1967) – do not offer hands-on pointers for ethnographers to substantively leverage, rely on, and create theory in view of their field-data in the production of an ethnography.

This becomes increasingly clear to me nearly every time I teach "Ethnography in Asia." Although my students are very skilled at identifying theoretical insights and contributions to scholarship in the texts we read, many, especially those on the cusp of entering the field and amid dissertating, crave concrete descriptions about the craft of writing about one's fieldwork, about the ways authors integrate theory and field data in their books, chapters, and articles. They want to know if theory predetermines the shape of the final products they are reading. They want to know if ethnographers set out to answer a specific question (or set of questions), and then decided on field sites and exercises to address that question (or set of questions). They want to know if theory organically emerges in the field, in the process of participant-observation, as a result of "being there" (à la Borneman & Hammoudi 2009) in a certain location, among a specific community, or while tracking the interactions and activities of flora and fauna lifeworlds. They want to know if theory organically develops when ethnographers piece together fieldnotes back home and write vignettes of the characters, places, and events they observed.

Perhaps, even likely, it's a mixture of all these possibilities. Every ethnographer surely has a unique approach to these questions, or multiple approaches, and I want to explore some of the ones I have encountered on my own and with my students. At the end of this chapter, I broach the question of integrating theory and fieldwork about healing practices in India, exploring distinctive cross-cultural elements in the production of ethnography.

### 3. The relationship of theory and ethnographic writing

For some ethnographers, theory inexorably informs the questions they bring to the field. That's the case for John Borneman. But for him, theory should not "infiltrate his fieldnotes"

because, he fears, “theoretical argumentation [can] stifle the potential insights made possible by sustained observation.”<sup>4</sup> He describes his approach like this:

Theory always determines what I might write down [and] therefore preselects the data. But the theory of ethnography I hold to admonishes me to be open to encounters with the unexpected and, to experience as much as possible, to allow myself to be subject to other people’s desires and wishes as much as possible. *But I go to the field with questions of larger social significance.* What is the sacred? What is the political? What does it mean to be such and such a person at this time in such and such a place?<sup>5</sup>

Like Borneman, Julie Hemment recognizes the power of avoiding heavy theories upfront so that ethnographic data can direct the course of her ethnography. Nevertheless, she adds that at the end of the day it is the theory that has shaped the collection of her data.<sup>6</sup>

Envisioning a dialectic relationship between theory and data, Amy Borovoy says that in her work “[theory and data] shape each other in a fluid way. One starts with theoretical ideas or questions that come from theoretical readings, historical data, or other ethnographies. Then one’s ethnographic findings shape those questions.”<sup>7</sup> Addressing the practical side of ethnographic writing that contributes to “larger theoretical concerns,” Kristen Ghodsee acknowledges that her approach has shifted over time: from, early on, a fiery attempt to foreground theoretical interventions in her writing to, in recent projects, interweaving theory and field data so that the theory is not ham-fistedly imposed on readers. For her, when theory is entwined in good stories, the final product is “readable ethnography.” The challenge is to slip “the history and theory in amongst the thick description,” rather than section off portions of writing devoted exclusively to theoretical discussions that might be popular at a given time or merely to illustrate the pedigree of one’s thinking.<sup>8</sup>

These are just a few approaches ethnographers claim to use to integrate theory and data. Many of us learn tactics and methods from our teachers, by reading the work of others and, most importantly, through our own trials and errors. I was not formally trained as an anthropologist or sociologist, two fieldwork-heavy disciplines. I was trained as an historian and a philologist – who also happens to do fieldwork. When I began doing fieldwork in 2003, I learned about the ethnographic process by doing it, by observing and interviewing traditional physician-teachers of Ayurveda at a Kerala family compound called “Mookkamangalam.”<sup>9</sup> My first decade in the field, 2003–2013, occurred alongside the completion of my dissertation and,

4 Ghodsee 2016: 57.

5 Ghodsee 2016: 52, emphasis mine.

6 Ghodsee 2016: 53.

7 Ghodsee 2016: 52.

8 Ghodsee 2016: 54.

9 This is a pseudonym. See Cerulli 2022a, 2022b, and 2018.

later, the revision of my dissertation into a book. During that time and up to 2020, I continued to observe, interview, film, and photograph the same core group of people at Mookkamangalam and other places in Kerala. Around this core, at each visit I met ever-changing cohorts of people on the scene: mostly students and patients. The Covid-19 pandemic interrupted my ability to do fieldwork in Kerala, and I was only able to return after a three-year hiatus in January 2023. I continue to keep in contact with some of the students who came for Sanskrit training and apprenticeship as they move into careers within and outside the business of “traditional Ayurveda,” a phrase at Mookkamangalam that usually means *āyurveda* (“knowledge for long life”) as it appears in the “big trio.” During my first decade of fieldwork, I did not publish much about what I observed and learned in the field.

Publications based on my fieldwork in south India started to appear in 2015, in rather small installments.<sup>10</sup> The full presentation of my research in Kerala and other locations in south India appeared in a book I published in 2022, *The Practice of Texts: Education and Healing in South India*. That book is about the people I met and places I went in south India, especially in Kerala and at Mookkamangalam. Admittedly, I integrated theory and data in a somewhat spasmodic manner while writing *The Practice of Texts*. On one hand, a couple chapters were steered by theoretical interventions I wanted to make: stories from the field both revalidate and challenge well-known theories about gift-giving and definitions of ritual. On the other hand, at least two chapters emerged during extensive and sustained periods of time observing educational and clinical activities at Mookkamangalam. In the process of piecing together my notes, translating conversations, and describing the various places and people I encountered, the stories I told in the book also inspired several critical considerations of larger theoretical questions in multiple fields, including medical anthropology, religious studies, medical humanities, and more (recalling Ghodsee’s remark about the scholarly utility of ethnography). Daily visits by patients and lengthy training sessions of students, for example, evoke questions about doctor-patient etiquette, pedagogical techniques, and disciplines of reading. They also offer insights into forms of political resistance and acquiescence in the history of medical (ayurvedic) education during the Raj and for at least a quarter century post-Independence. Instead of foregrounding a specific theoretical query that shapes how fieldnotes appear, I discovered that relating stories first – re-reading interviews and conversations, re-visiting observations, and re-viewing photographs – in some ways echoes historical work in archives and the philological work involved in making sense of texts. Put another way, reading the field-as-text, today I have come to understand my experience in the field as an always already hermeneutic enterprise where theory informs and is formed at the same time.

In their highly original book, *Improvising Theory: Process and Temporality in Ethnographic Fieldwork*, Allaine Cerwonka and Liisa Malkki describe ethnography as a combination of interpretive and improvisatory work, and both aspects relate to the ways ethnographers incorporate theory into their final products. They describe ethnography as a hermeneutic approach that

10 The first was Cerulli 2015.



asks researchers to read “social practices through theoretical concepts.”<sup>11</sup> And since theory is not a thing that can be applied here and there with a one-size-fits-all approach to interpretive work, they encourage us to see it as a process that emerges and develops over time, in the field and later, when organizing and reprinting notes and transcribing and translating interviews and conversations. Practices observed *in situ* as well as the ethnographer’s positionality when reading notes after the fact (sometimes years later) require a careful and flexible hermeneutic engagement. Flexibility and openness to the unexpected – rather than dogged adherence to preset theoretical ideas – makes the ability and willingness to improvise essential both to the process and production of ethnography.

Cerwonka and Malkki’s view of ethnography as “improvising theory” intimates that field researchers must cultivate something like an *ethnographic sensibility*: that is, in treating theory as a field-based process critical to the production of ethnography, these scholars propose a methodology that hangs on sensitive awareness and ready responsivity that comes from experience and very little from books and lectures about techniques and strategies. An aptitude for spur-of-the-moment invention in the often irregular, always dynamic, and frequently unpredictable field of research is essential. A regular and sustained openness and adaptability to this uncertain methodological space, Cerwonka and Malkki suggest, fosters an indispensable sensibility in ethnographers that allows for improvisation in the field.

#### 4. Improvisation and an ethnographic sensibility

It takes time to cultivate an ethnographic sensibility. Sustained experiences in the field, revisiting places and people, enduring trials, errors, and successes reveal the multi-sensorial and collective nature of an ethnographer’s participant-observation. Ongoing scrutiny of one’s “accomplishments” in the field divulges the impacts we have on the spaces we occupy when we observe others and events and how, at the Merleau-Pontian “preobjective” level, we affect and are affected by the people, places, and things we study simply by being present.<sup>12</sup> Our pre-cognitive, bodily, multi-sensory engagements with the world form what Merleau-Ponty called the “thickness of the preobjective present” (*l’épaisseur du présent préobjectif*), pre-dating by almost three decades the idea of ethnographic writing as “thick description” that Clifford Geertz made famous (borrowing Gilbert Ryle’s phrase).<sup>13</sup> The thickness of an ethnographic description for Geertz conveys more than just a series of events observed in the field. It delivers context-dependent meaning capable of delivering the history and symbolic meaning

11 Cerwonka & Malkki 2007: 16.

12 Merleau-Ponty 1945. Merleau-Ponty referred to a person’s “preobjective” experience of the world in several ways, especially in his magnum opus, *Phénoménologie de la perception* (1945), including un étalon préobjectif (“a preobjective standard”), ce domaine préobjectif (“this preobjective domain”), de la vue préobjective (“preobjective view”), la localité préobjective du sujet (“the preobjective locality of the subject”), etc. (see, e.g., p. 19, 94–95, 279, 309, 494).

13 Merleau-Ponty 1945: 495; Geertz 1973.

that underlines and motivates people's actions, language, and social constructions. The thickness of lived experience for Merleau-Ponty is different, but nevertheless germane to Geertz's influential postulation and any reflection on fieldwork. It underscores the mutual sensorial, pre-cognitive, and ongoing engagement of the perceived object (*l'objet perçu*) and the perceiving subject (*le sujet percevant*). Movement through the world and perception of all that is in it transpire via lived or experienced bodies in tandem with each other. By dint of one's physical presence, Merleau-Ponty suggested, even if we are conditioned by and operating alongside the mental exercises of labeling and analyzing our experiences, we take part in ongoing "vital communication with the world that makes it present to us" and simultaneously us present to it.<sup>14</sup>

This is an indispensable realization for the fieldworker. Just as the pre-cognitive experiences that are always already occurring inform an ethnographer's sensibility and the people, places, and things being studied, the hermeneutic side of fieldwork accentuates the need for fieldworkers not only to be open but also responsive to their sensorial entanglements, possess a keen attentiveness to them, and be willing to be affected (emotionally, intellectually, physically) by the people, places, and things they study. This back-and-forth is what John Borneman was acknowledging when, in the quote cited earlier, he said he tries to "allow [him]self to be subject to people's desires and wishes as much as possible" in the field. The next step, then, is to reflect and present those mutually formed experiences in written, filmic, photographic, artistic, audio, etc. formats.

To illustrate these two important features of what I am calling an ethnographic sensibility – mindfulness of one's presence in the field and the interpretation and incorporation of the impact of one's field-based presence in the production of ethnography – I sometimes share with my students an anecdote from my fieldwork at Mookkamangalam. Recounting this episode in the classroom can be helpful to show how a decade of visiting and re-visiting the same people and location helped me develop "rapport" and "exposure" with a specific community. The import and particular nature of the story illustrate how the interpersonal bonds I had cultivated over ten years laid bare the co-determinacy and fluidity in the relationship of perceived object (*objet perçu*) and perceiving subject (*sujet percevant*). It speaks to the need to improvise when conducting fieldwork and, crucially for my students, it also suggests that ethnographers are always already theorizing before, in, and after occupying space in the field.

I mentioned this experience in a long endnote in *The Practice of Texts*. Otherwise, I have not written about it. In brief, a planned stretch of fieldwork at Mookkamangalam in 2013 to document a cohort of students studying the *Aṣṭāṅgabṛdaya* was cut short by the unexpected death of the father of the teacher and my main interlocutor, Biju. A colleague and friend, Unnikrishnan, informed me that Biju's dad had suddenly passed away shortly after I left Mookkamangalam earlier that evening. When I arrived at Biju's house early the next morning,

14 "Le sentir est cette communication vitale avec le monde qui nous le rend présent" (Merleau-Ponty 1945: 64f).

only about seven or eight hours after I received the news, the funeral pyre for Biju's father, not more than twenty yards from the house, was still smoldering. I suspected I would not stick around for the entire day. But Biju wanted to talk. So, we sat for a while in the room he usually teaches in, talking about his dad and how he and his mother were feeling, and what the next several days would entail for him and his family. I stayed at their house to offer my condolences and help them however I could. But ultimately my presence seemed more distracting than helpful, as the number of visitors increased throughout the day and the family's obligations grew more time-consuming.<sup>15</sup> I offered a short commentary on the experience in the following endnote:

This moment was unusual for me. On the whole, I did not experience many interruptions in the field between 2003–2017 that cut short my plans. I had setbacks, of course, like not getting access to archives, being stood up for interviews or work meetings, and missing trains, as many people do. But after spending time with the same family and community during many intense periods of research, the line separating my identity as a researcher and/or friend to Biju and his family (and a few of his students) became a little blurred by 2013. It was perhaps becoming more of a hyphenated relationship, and I sometimes felt like a researcher-friend to them at the same time. The death of Biju's father was sudden and unexpected. While it naturally affected my plans for that trip to Kerala, the interruption was unimportant; there were other places I could work, and that's not what made the moment atypical and challenging. While I didn't know Biju's father exceedingly well – as you've seen, apart from this vignette, he does not appear in the book – I knew the man well enough. We saw each other age over ten years, and we both knew about personal things that transpired in each other's families. I knew Biju much better, and his mother [Priyankara] quite well, by then. Their profoundly felt loss of a father and a husband struck me emotionally in ways I hadn't experienced in the field before, and I wasn't entirely prepared for it. Unnikrishnan and I talked a lot about what this death meant for Biju and his family, for him (as a student of both Biju and Priyankara), and for me.<sup>16</sup>

In less than twenty-four hours, I found myself assessing what “the field” was (becoming) for me. I had been visiting Mookkamangalam across a decade at that point. I felt I knew the people there fairly well, and they knew me and aspects of my life in the U.S. But the sad passing of Biju's father, someone who had basically nothing to do with my fieldwork, occasioned me to see ethnography in a more expansive way than I had before. I suddenly had an acute awareness of the thickness of the present that existed between Biju, his family, and

15 Cerulli 2022: 167.

16 Cerulli 2022: 199–200, n. 12.

me and of the inevitable investment of my whole self in the field. Participant-observation was clearly far more than an academic exercise. I was thinking with Biju about his father. I was seeing with Biju the neighbors and family members as they arrived at the house to pay their respects. I was experiencing his grief as the embers of his father's funeral pyre slowly lost their glow. I had to improvise, yes. That's one way to put it. This unique moment in my fieldwork also underscores three aspects of the sensibility that ethnographers refine in the course of doing research.

First, *ethnography is a critical theoretical process*. Ethnographers theorize. This is true even when we begin with intent to theorize, focusing on a question that we feel lends something of significance to larger theoretical concerns. It is likewise true that we bring theory with us to the field, consciously or not, which we revise later as surprises arise from our data.

Second, *ethnography is a personal process*. Fieldwork is an intensely human negotiation occurring between personalities. Our fieldwork thus must be handled situation-by-situation, person-by-person, and moment-by-moment. When we write ethnographically, crafting thick descriptions perhaps, we wrestle less with grand agendas, and instead face "the challenge of working with care and fidelity, of writing through intercessors and other worlds, of wrestling with excess and the otherwise," as Anand Pandian and Stuart McLean wrote.<sup>17</sup>

Many temporalities come together in this process. There is the field and written work, of course. But the work is also part of an ethnographer's life. She typically has obligations apart from those to a community under study. "Life happens in the course of the work, as it should," Malkki wrote to Cerwonka (then Malkki's grad student), who was struggling to manage all the responsibilities that were arising in the field.<sup>18</sup> What's more, as I recounted in my experience at Mookkamangalam in 2013, lives of an ethnographer's interlocutors are there, too, which add further relationships and entanglements. Cerwonka and Malkki summed up the complexity of the everyday in the ethnographic process nicely:

Ethnography as a process demands a critical awareness of the invisible social fact that multiple, different temporalities might be at play simultaneously. The process is inextricably embedded in relationally structured social lives, quotidian routines, events that become Events, the panic of deadlines, the elongated time of boredom, the cyclical time of the return of the expected, the spiral of time of returns to the recognizable or the remembered, and so on.<sup>19</sup>

This is all to say that fieldwork is neither straightforward nor predictable research. It's a matter of living and being in the world that is thick, sensorially rich, and oftentimes emotional.

Third, *ethnography is an improvisational practice that takes time, and it is full of trials and errors*. Despite all the how-to manuals out there, ethnography does not have a correct format

17 Pandian & McLean 2017: 6.

18 Cerwonka & Malkki 2007: 186.

19 Cerwonka & Malkki 2007: 177.

or a fixed series of steps to follow. Ethnographers are, at the end of the day, mostly self-taught. They learn principally by doing and reflecting on their experiences.<sup>20</sup> Ethnographic knowledge is sometimes spontaneous, acquired in specific contexts, forcing ethnographers to adjust their tacking back and forth between part and whole, between data and theory, accordingly. In this way, participant-observation resembles improvisation in jazz, as Malkki alluringly suggested (a comparison that, incidentally, I hope resonates with Dominik, who is an accomplished bass player).<sup>21</sup> If you are playing in a live band and responding to your bandmates in real-time (or observing, listening to, and interviewing people in the field), what do you do if you make a mistake, encounter an obstacle, or forget an important reference? Can you stop and go back for a re-do? Check a manual and then recalibrate? No. You make do and press on.

## 5. Conclusion: Medical anthropology, healing ethnographies, and India

As a formal institutional unit of higher education in the United States, medical anthropology emerged in the context of the Cold War during the 1950s–70s. Before that, various kinds of anthropological research contributed to what we today call medical anthropology. The nineteenth century saw anthropological writing promoting colonial knowledge systems that presented racialized anatomical and behavioral catalogues of colonized subjects: this was an embryonic form of medical anthropology that often legitimated an invasive colonial gaze via routinized surveillance. In the early-twentieth century, anthropology under the direction of Franz Boas (1858–1942) and his protégés, especially Ruth Benedict, Margaret Mead, and Zora Neale Hurston, promoted a new idea about culture that sharply diverged from anthropology’s medical interventions in the previous century. As Lawrence Cohen put it, the Boasian school

was organized around an *anti-medicine*: not a catalogue or atlas of native perversions, revealed under the medical gaze, but an incorporation of the full variety of native temperament within the ever-expanding temperamental capacity of the American.<sup>22</sup>

The fieldwork journeys of the anthropologist were no longer designed to impose “‘medical’ license to engage that which [was] hidden”; rather they became theoretical explorations “in which culture (there) offered a powerful critique of science (here)” and social norms at home.<sup>23</sup>

Medical anthropology went through further changes post-World War II. A shift occurred from cultural norms and temperaments to structure (and structural violence), in which the

20 Cerwonka & Malkki call ethnography an autodidactic process (2007: 182).

21 Cerwonka & Malkki 2007: 185.

22 Cohen 2012: 73.

23 Cohen 2012: 73–74.

anthropologist-cum-physician eschewed a Margaret Mead-style view of the culturalistic arbitrariness of norms and adopted a view that culture itself influences discernible psychopathologies. Notably, area studies developed alongside medical anthropology in this phase as a field for delivering civilizational explanations when cultures themselves were seen as pathological.<sup>24</sup> Cultures were routinely understood through a Janus-faced lens: they were potential assets to modernization when they were perceived as rationalized locations of great traditions or potential barriers to modernization when they were viewed as the pathogenic (or irrational) environments of little traditions (in the Indian context, think of the now classic categories of so-called Sanskritic vis-à-vis regional or vernacular traditions).

In the last quarter of the twentieth century, a second generation of medical anthropologists challenged the earlier focus on modernization and, apropos the study of healing in South Asia, scholars like Joseph Alter, Lawrence Cohen, Jean Langford, Mark Nichter, Gananath Obeyesekere, Margaret Trawick, and others problematized the subdiscipline's failure to investigate "traditional" medicines as fully modern. They ushered in a focus on localized medical and healing knowledge as a challenge to clinical universals (à la Mead & Co.) and the domination of professional medicine. They also emphasized historicism and the need to study the body and illness as contingent on areas of study previously not part of medical anthropological analysis, including science and technology studies, gender studies, and postcolonial critique.

Influenced as I am by recent developments in medical anthropology at the end of the twentieth century and the first two decades of the twenty-first, due to my interests and training my work looks quite hybrid, mixing fieldwork, photo-ethnography, history, and critical textual studies. At the same time, the "literary anthropology" movement in North America in the twenty-first century has opened up creative vistas in ethnography that I have begun to explore in art projects, which also include creative and critical writing.<sup>25</sup> For me, the idea is to blur the classically imagined boundaries separating the knower and the known, to wade attentively in Merleau-Ponty's thickness of the preobjective present, and to complicate the idea that ethnographic output at once represents yet somehow also stands apart from what it represents. The goal for me aligns with Pandian and Stuart's assertion that "what is conveyed [in ethnography] is the chance for something more profound and unsettling to happen through the play of image, voice, character, and scene, a transgression of the limits of individual identity and the fixity of the reality at hand."<sup>26</sup> This requires a deferral of the ethnographer's all-too-precious

24 Cohen 2012: 75.

25 The "Manuscriptistan Project" is a good example of the photo-ethnographic artwork I have been doing since 2015 (though it unofficially started about a decade earlier), publishing my photographs in art magazines, exhibiting the work in galleries, and writing in academic journals about the project's attempt to bring aesthetic awareness to scholarly methods and productions (e.g., Cerulli 2020).

26 Pandian & Stuart 2017: 3–4.

(and invariably specious) critical distance, to let down the scholarly guard, and *to represent (write, photograph, film, draw) with others*, intent to capture experiences, with attention to the messiness and creativity of juggling multiple positions at once, as most people do in their everyday lives.

There are good examples of the blending of theory and data in ethnographies of healing in India, and I'd like to consider one now by way of a conclusion. In the past, I have used Ron Barrett's book on pollution and illness in north India, *Aghor Medicine: Pollution, Death, and Healing in Northern India* (2008), in my "Ethnography in Asia" seminar. I like how Barrett handles the multilayered perceptions of healing (not "medicine" per se) in Varanasi. Using the Hindi categories, *dawā* ("medicine") and *duwā* ("blessing"), he illustrates the multiplicity of what he refers to as Indian "masala medicine." On occasion, the strong and energizing charisma of an Aghori healer, rather than a strict medical modality, is credited for therapeutic success in cases of skin disorders like vitiligo, leukoderma, and leprosy (all classed under the Hindustani category of *kuṣṭh*). Barrett juxtaposes the western epidemiological view that *Mycobacterium leprae* (the Gram-positive bacterium that causes leprosy, aka Hansen's Disease) is non-communicable with the widely-held view among people in Varanasi that leprosy is highly infectious, frequently leading to the social stigmatization of *kuṣṭh* sufferers.

Drawing on his prior training as a biomedical nurse, Barrett twists his professional knowledge about illness, contagion, and sanitation together with cultural and religious views of disease and purity espoused by people in Varanasi. Because his study is focused on the Kina Ram Aghori tradition, he telescopes the perceived transgressive practices of the Aghori and their period of revival and modernization between the 1960s and 80s to supplement a medical anthropological account of disease with a culturally-relative explanatory model that draws on the philosophical and religious beliefs of Aghori healers.

Although biomedical models of etiology do not explicitly blame the patient, neither do they explain why one person and not another is afflicted with leprosy – a central feature of explanatory models in most medical systems ... Aghor medicine provides this kind of explanation using the metaphysics of traditional healing, but without the blame that comes from traditional notions of pollution and purity.<sup>27</sup>

For the Aghori, discrimination (and stigmatization) constitutes the ultimate etiology of illness. Discrimination, Barrett argues, stems from fear of human morbidity and mortality, two entwined dreads that are ultimately managed through the Aghori's oft-perceived antinomian practices (consuming cremation ash, for example). In a final theoretical synopsis, Barrett argues for a mixture of theory drawn from medical anthropology, cognitive anthropology, social psychology, and culturally-specific anthropological models to account for the confidence in the effectiveness of Aghor healing among Varanasi's locals:

27 Barrett 2008: 102.

Anxieties about human mortality motivate cultural models of discrimination against human morbidity. This discrimination can be seen as an illness in and of itself. By confronting human mortality, Aghor *sādbhanā* is the ultimate form of Aghor medicine – a therapy for the illness of discrimination.<sup>28</sup>

Describing links between social humiliation experienced by *kuṣṭh* patients and research in social psychology, Barrett unearths associations between medical anthropological accounts of stigma and deviance to show how these can be localized to ethnographic data about *kuṣṭh* conditions and their treatment by Aghori healers.

While I like to use Barrett's book with students to help them see how one ethnographer attempts to blend medical anthropological theory and ethnographic data from north India, part of the pedagogical utility of the book comes from what it suggests about using theories of healing cross-culturally. Barrett's previous training as a nurse at times might be read as eliciting ostensibly incompatible theorizations and thus underscoring potential problems of merging biomedical and indigenous Indian accounts of illness into a study that can be useful. For example, when he explains Kamleshwar Baba's treatment for children with diarrhea-related dehydration, the spiritual appears reducible to the biomedical:

[H]e gave family members the *vibhuti* ash with a generous dose of advice: 'Do not force feed the child while s/he is sick ... Make sure to give him/her water that is boiled ... Keep the household clean.' In this manner, *kund* and *dhuni* were vehicles for preventive medicine as well as for the blessings of Aghor.<sup>29</sup>

Ponder that exchange in view of a later discussion of social stigma, where Barrett argues that

as with many other discredited medical conditions, the physical and social stigmata of HD [Hansen's Disease] are too interconnected to disentangle in a useful way. Thus, leprosy is best approached as an illness of discrimination inclusive of its physical condition.<sup>30</sup>

In discussions about this book with students, often questions were raised about possible theoretical inconsistencies in the ways Barrett fused biomedical and Aghori-ayurvedic explanations of what he observed at the Kina Ram clinic. We might disagree with his analyses. But rather than suggest theoretical inconsistency due to his biomedically inflected take on Aghori Ayurveda, I think his study highlights the complexity of any ethnographer's positionality,

28 Barrett 2008: 161.

29 Barrett 2008: 67.

30 Barrett 2008: 105.



which thus informs one's ethnographic sensibility, when interpreting and responding to observations in the field.<sup>31</sup> Indeed, in medical anthropology and ethnographies of healing, it can be particularly challenging to integrate human experience with various and sometimes conflicting ideas about health and wellbeing. Especially in the Indian context, ethnographers studying healing traditions often find it useful to draw on a range of methods and theories to understand specific healing practices, their efficacies, and their entanglements in social, religious, and political discourses.

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31 That Barrett was also a disciple of the Kina Ram Aghori at the time he conducted his fieldwork is an entirely other – no less important or fascinating – question.

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*History* (together with E. Freschi (Wiesbaden 2017)), and *Text Genealogy, Textual Criticism and Editorial Technique* (together with J. Hanneder (Vienna 2010) = *Wiener Zeitschrift für die Kunde Südasiens* 52–53 (2009–2010)).

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This edited volume brings together thirteen studies on South Asian intellectual and cultural history from the beginning of the common era to the present day. The multi-disciplinarity and vitality of the academic fields of Indology and South Asian Studies are on full display from chapter to chapter, as leading scholars ask new questions and propose new methods to explore critical topics in their respective fields, including the relationship of the Gāndhāri and Sanskrit languages, bird divination in Indian and cross-cultural contexts, the world view and ethics of early Ayurveda, line drawings in alchemical Sanskrit manuscripts, cannabis in traditional alchemy (Rasaśāstra), deontic logic and terminological problems in Mīmāṃsā and Dharmaśāstra, the identification of an obscure Yoga work referenced in the commentarial literature of the *Mahābhārata*, psychological transformation and spiritual liberation in Pātañjala Yoga and Buddhism, Sanskrit editorial techniques

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ISBN 978-3-86977-265-3



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