Epistemology and Embodiment: Diagnosis and the Senses in Classical Ayurvedic Medicine

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Abstract

The sensory perceptive capacities of Ayurvedic physicians play a key role in diagnosis. Drawing upon both classical Ayurvedic treatises and field research, this article examines the ways that some contemporary Ayurvedic physicians in Kerala describe their sensory diagnostic abilities in relation to diagnostic techniques of the past and present. These physicians are in a sensory negotiation, first, with diagnostic theory and practice as explained in classical Ayurvedic medical treatises, and second, with contemporary diagnostic technologies that are understood to both extend and attenuate sensory perception. In the course of my historical textual research, I interviewed a number of Ayurvedic physicians who explained their own capacity for sensory perception as limited, in relation to the authoritative teaching of the treatises and the idealized sensory capacities of authoritative individuals (*āptas*). Their experiences of inhabiting a present, informed by the authority of Ayurveda's textually codified past, and in an evolving relationship with contemporary diagnostic technologies, instantiate a larger narrative that Ayurvedic medicine is in a state of crisis in India. This relationship to knowledge and the senses entails a sensory negotiation converging on the physician's body as a site for the making of truth claims, and for the contemporary practice and experience of Ayurvedic medicine.

Keywords

Ayurveda – diagnosis – epistemology – Indian medicine – senses – sensory negotiation

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Introduction

An epistemological framework for classical Ayurvedic medicine, found in the *Carakasamhitā*, includes four valid means of knowledge, or *pramāṇas*: authoritative teaching (*āptopadeśa*), sensory perception (*pratyakṣa*), inference (*anumāna*), and conjunctive reasoning (*yukti*).¹ According to this scheme, authoritative teaching is an epistemological foundation of the medical system and is closely linked to the authoritative status of classical Ayurvedic treatises themselves.² For Ayurvedic physicians as represented in the classical treatises, the experience of diagnosing illnesses also relies upon sensory perception combined with inference, and in certain passages, with *yukti*, as a form of conjunctive reasoning.³ The sensory perceptive capacities of Ayurvedic physicians, as mediators of the embodied experience of knowing, play a key role in Ayurvedic diagnosis. Drawing upon my study and translation of classical Ayurvedic treatises and nineteen months of research in India, based in Kerala, this article examines the ways that some contemporary Ayurvedic physicians practicing in Kerala describe their sensory diagnostic abilities in relation to diagnostic techniques of the past and present. These physicians are engaged in what I shall call a sensory negotiation, first, with diagnostic theory and practice as explained in classical Ayurvedic medical treatises, and second, with

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- 1 *Carakasamhitā, Sūtrasthāna* 11.17–25. For a detailed discussion of epistemological models offered in the *Carakasamhitā* see Preisendanz 2009.
- 2 This priority is according to the order given in *Carakasamhitā, Sūtrasthāna* 11.17–25 as well as sections of *Carakasamhitā, Vimānasthāna*, chap. 4. See also Ashokan 2015, 194.
- 3 In this context, *yukti* is a type of reasoning that takes into account multiple interacting causal factors, so I translate the term as “conjunctive reasoning.” For discussions of *yukti* in this passage see Dasgupta, Agarwal, and Jain 1969, 2:373, 375; Filliozat 1990; 1993, 106–109; Preisendanz 2009, 281, 300n104.

contemporary diagnostic technologies that are understood to both extend and attenuate sensory perception.⁴ In the course of my historical textual research, a number of Ayurvedic physicians explained their own capacity for sensory perception as limited, in relation to the authoritative teaching of the treatises and the idealized sensory capacities of authoritative individuals (*āptas*).⁵ Their experiences of inhabiting a present, informed by the authority of Ayurveda's textually codified past and in an evolving relationship with contemporary diagnostic technologies, instantiate a larger narrative I repeatedly encountered, namely that in India, Ayurveda is in a state of crisis.⁶ At the same time, physicians skillfully navigated the process of diagnosis with confidence in their day-to-day practice of Ayurvedic medicine.

Epistemological Crisis

Narratives of the crisis facing Ayurveda revolve around issues practitioners grapple with in the overlapping realms of epistemology and education. But these narratives exist in contrast with the passion physicians I spoke with invariably exhibited for the "science."⁷ In his address at the Third Global Ayurvedic Conference in Kozhikode, Kerala, India's Prime Minister Narendra Modi reaffirmed the Indian government's commitment to Ayurveda and suggested that it could play a central role in the World Health Organization's stated mission of combatting noncommunicable diseases worldwide. However, Modi (2016) also named one of the central challenges faced in the "propagation" of Ayurveda as "inadequate scientific scrutiny and concerns regarding standards and quality."

4 See Charles Leslie's (1992, 201) discussion of contemporary Ayurvedic diagnosis as a syncretic process based on tacit knowledge. For a discussion of modern Ayurvedic diagnosis centered on the physician's "body-as-technology," see Mukharji 2016a, 227–256.

5 Most often these authoritative individuals were imagined to reside in the past. In some cases, however, they were located in the present and understood to possess special sensory capacities due to a lifestyle and practices that expand their ability to perceive.

6 Langford's ethnographic study of Ayurveda, conducted in the 1990s, identifies a prevalent narrative of "decline" in the practice of the medical system. She explains this narrative as easily "assimilated" into the Indic temporal model that understands contemporary times as the *kaliyuga*, an era of "darkness" and "*adharmā*" ("unrighteousness") (Langford 2002, 16). One physician explained the crisis of Ayurveda to me in these temporal terms as well.

7 When practitioners referred to "the science" of Ayurveda, they were speaking of the intertwined textual bases and evolving practice of Ayurveda. For a historical treatment of this terminology, see Projit Mukharji's (2016b, 28–30) discussion of the choice of nineteenth-century "Ayurvedists" to label Ayurveda as "science" rather than as "medicine."

This issue was a central topic of discussion at conferences where members of the Ayurvedic community grappled with questions of research methodology and training. For example, one methodological problem discussed frequently was how to produce research maintaining the case-specific diagnostic and treatment methods of Ayurveda while demonstrating clinically significant and replicable results publishable in scientific journals.⁸ At the same time, in an implicit critique of this agenda, several physicians told me that “authentic” practitioners of Ayurveda are not present in the public eye trying to publish studies or market products. Rather, practitioners of *śuddha* (pure, authentic) Ayurveda are, for the most part, imagined to operate out of the limelight, far from universities and academic publications, running their own clinics, and often not sharing their teachings with anyone outside of their family lineage.⁹ Dr. P. Ram Manohar, a renowned teacher and leader in reforming Ayurvedic research and education, describes the problem of negotiating these epistemological and methodological problems in the context of Ayurvedic education as follows:

The entire Ayurvedic curriculum is designed in a manner that mimics the MBBS course with a view to achieve equal status with modern medicine.¹⁰ Even the topics of study are terms translated from English to Sanskrit to create subjects that did not exist in Ayurveda.... There is a need to have a thorough revision of the syllabus and the network of topics that will be effective to convey the thought process of Ayurveda to the student and not end up as a cheap caricature of western medicine.

MANOHAR 2014, 144

8 These debates have been going on for at least the last three decades. See Langford 2002, 140–187.

9 This distinction is congruent with Charles Leslie's (1976, 358–359) categories of Indian medicine from the 1970s, which include (1) classical Ayurveda as outlined in treatises; (2) “*traditional-culture medicine*” as the syncretic contemporary practice of Ayurveda; and (3) “*professionalized Ayurvedic medicine*” practiced by those participating in professional associations, conducting research, and teaching in universities, respectively. However, at present, I did not encounter such a sharp divide among practitioners as many of them seemed to inhabit and perform multiple roles as practitioners and teachers. For a discussion of the history and politics of *śuddha* Ayurveda in the context of twentieth-century revivalism of Indian medical systems see Leslie 1976, 356–367; see also Dominik Wujastyk (2008, 67–68) on the 1963 Vyas Report.

10 MBBS (Bachelor of Medicine, Bachelor of Surgery) is the credential earned by practitioners of allopathic medicine in India.

Manohar's position suggests addressing the crisis in Ayurvedic education through establishing a curriculum that presents classical Ayurveda on its own terms rather than attempting to mold Ayurveda into a form of "modern/western medicine." Significant steps taken in this direction in Kerala include the creation of residential educational workshops for students that teach the theory and practice of classical Ayurveda through direct engagement with the treatises and the establishment of a new private Ayurveda college modeled on the traditional *gurukula* training system where students live and study with their teachers for an extended period of years.¹¹

Adding to the sense of crisis, however, is the prevalent view held by Ayurvedic practitioners and students that most Ayurvedic medical students are enrolled in the Ayurvedic BAMS (Bachelor of Ayurveda, Medicine and Surgery) training program because they did not gain admission into the preferred allopathic MBBS program.¹² Dr. A, a physician in her late twenties, explained, "The worst part is if you don't get to study anything else—engineering or computer science—if you have the lowest mark, you go into Ayurveda. There are so many people who study Ayurveda but practice allopathy. In Kerala this is banned—in South India it is banned." Her first point was echoed repeatedly by faculty members teaching at Ayurveda colleges and MBBS students. However, a number of the physicians I met had chosen Ayurveda as a vocation either because they come from a family of Ayurvedic physicians or a teacher suggested that career path to them. Other physicians, while not having initially aimed for an MBBS as their first choice of degree, became passionate about the study and practice of Ayurveda, having studied with a particular teacher or attended an intensive residential training program as mentioned above.

11 One example of this was the week-long "Amṛtasūtram" program held at Amṛta Ayurveda College that I attended in August of 2016. The program, attended primarily by advanced BAMS and postgraduate students, taught the thirty chapters of the *Aṣṭāṅgahṛdayasaṃhitā*, *Sūtrasthāna* through the methods of study described in the text itself, *pāṭha* (recitation), *avabodha* (understanding), and *anuṣṭhāna* (practice), with the addition of *tadvidyācārya* ([exposition by an] expert-teacher), and *svādhyāya* (self-study). See *Aṣṭāṅgahṛdayasaṃhitā*, *Uttarasthāna* 40, 82. Ashtamgam Ayurveda Chikitsalayam & Vidyapeedham was opened in Kootanand, Kerala, in 2016.

12 In this article I use the terms "modern medicine" and "allopathic medicine" to describe what is often referred to as Western biomedicine, and what Dominik Wujastyk calls "modern establishment medicine," because these are the terms most widely used by the physicians I worked with. The prevalent use of the label "modern medicine" reveals a tension in the way that practitioners of Ayurveda perceive their relationship to this "traditional" form of medicine as they negotiate its practice and existence in the "modern" world. See Wujastyk 2011a.

As Dr. A. notes, in Kerala, it is illegal for Ayurvedic practitioners to practice allopathic medicine, whereas in Maharashtra, for example, many BAMS graduates practice a combination of allopathic medicine and Ayurveda.¹³ While an Ayurvedic physician in Kerala can order diagnostic laboratory tests such as blood sugar and cholesterol screening, or imaging, such as X-ray or MRI, they are not legally permitted to prescribe allopathic medicines or to perform allopathic procedures. Physicians did not report frequently ordering diagnostic tests, though laboratory tests were ordered—for example, the “urine routine examination” that enables assessment of kidney function and detection of diabetes.¹⁴ Dr. K., a physician in his mid-thirties, explained that this was not a diagnostic test, but rather, a “pre-clinical” test to assess the patient’s kidney function and make sure they are not experiencing renal failure, because if a patient’s kidneys are not functioning within a normal range then the Ayurvedic medicines will not work properly. He also orders pre-clinical urine tests to protect his own liability against claims of kidney damage caused by the possible heavy metal content of some Ayurvedic medicines, an issue that has received considerable media attention in the past decade (e.g., Khandpur et al. 2008; Rai et al. 2008). The two main physicians I worked with asked almost every patient if they had the results of recent blood sugar and cholesterol tests. If a patient brought diagnostic tests ordered by allopathic doctors to their Ayurvedic consultation, a common occurrence, the physician had to be able to read, understand, and converse with the patient about them. Establishing credibility in the eyes of patients and integrating different types of knowledge into diagnosis are twin challenges faced by Ayurvedic physicians practicing in a medical landscape dominated by “modern” medical epistemology.

Epistemology and Embodiment

The vitality and importance of the classical treatises to the practice and embodied experience of physicians was readily apparent in clinical practice. This is not to say that practices described in the classical treatises were precisely followed, but that physicians considered the classical treatises as a central basis of their practice and often referred to them in discussion.¹⁵ In Kerala, this was

13 For a study on the prevalence of allopathic medical practice among practitioners of traditional medicine in Ahmednagar district Maharashtra, see Sule and Kavadi 1993.

14 The “urine routine examination” is also known as a routine urine test or urinalysis.

15 On the relationship between textual knowledge and a specific enema practice in contemporary Kerala, see Sankaranarayanan 2013.

particularly the case with the *Aṣṭāṅgaḥṛdayasaṃhitā*, a treatise written as an easily memorized physicians' manual that is the most widely used classical Ayurvedic text in the state.¹⁶ Classical treatises were ubiquitously present on bookshelves and desks, and physicians referred to them when speaking publicly and in informal conversations. Although I set out to study touch in classical Ayurveda of the first millennium,¹⁷ the issue of perceived sensory limitation in contemporary diagnosis emerged repeatedly in conversations and interviews about touch in classical Ayurvedic philosophy and practice, becoming a topic of research in and of itself. The field research portion of this study is based on attending over two hundred hours of patient consultations in three urban clinics in Kerala during the course of textual study sessions, informal interviews with nine Ayurvedic physicians and conversations with numerous Ayurvedic physicians, teachers, and students,¹⁸ visits to Ayurvedic clinics and hospitals,¹⁹ and attendance at two academic conferences and one week-long intensive residential training course on Ayurveda. The physicians whom I interviewed were all BAMS graduates; eight of them also had earned an advanced postgraduate MD degree (Ayurveda Vachaspati),²⁰ five of them came from families with a tradition of Ayurvedic practice, and out of this last group, two also received traditional training in a *gurukula* setting. All of the physicians practiced in or within fifteen miles of an urban area, and most worked in more than one location. They worked in a range of settings, including inpatient and outpatient faculties at large private Ayurvedic hospitals, and self-owned small and medium-sized home clinics. Two of the physicians had founded large Ayurvedic centers, and half were teaching, or had taught, at a public or private Ayurvedic college.²¹

16 Different texts are used by physicians on regional and local bases; for example, in Pune the *Carakasamhitā* was the primary reference text used at the clinics I visited.

17 This is the topic of my forthcoming dissertation at the University of California, Berkeley, "Translating Touch in Āyurveda."

18 Conversations and interviews were recorded through handwritten or typed notes; language that I transcribed verbatim appears here in quotation marks, with the exception of the occasional verbal form or prepositional phrase changed to ease the reader's understanding.

19 The places of practice I visited ranged from a consultation office in a family residence to outpatient clinics and inpatient hospitals.

20 Most physicians indicate this designation on their business cards and signs as "M.D. (Ayurveda)."

21 To maintain the anonymity of Ayurvedic physicians, identifying factors have been omitted and names have been shortened to a single letter. For this reason, I have not noted the caste, religion, or political affiliation of physicians although these are important axes of identity in contemporary Kerala.

Dr. B, an Ayurvedic physician in his late twenties who came from a family of Ayurvedic practitioners, explained his relationship to his father's practice and to the broader landscape of contemporary medical practice in Kerala today: "[Our] personal practice is the same—the major difference—I had a little more exposure to the modern world so ... not using modern diagnostic techniques, but little concepts I'll share with this modern world." Dr. B's emphasis is on the fact that, like his father, he does not appropriate "modern" diagnostic techniques, however, he does share aspects of Ayurveda with the "modern world." While physicians are frequently faced with laboratory test results and diagnostic imaging in the course of patient consultations, some find this problematic, not only in relationship to their ideals around the practice of Ayurveda, but also in their experience of their own bodies and diagnostic sensory capacities. As Dr. B. explained,

For each thing there is a domestic and a wild version, the buffalo, the elephant [the list included several more examples], but not the duck. Each and everything is domesticated and wild. There are not wild ducks, domesticated only. Is it not? The same thing happens to humans. You are using CT. You are using MRI. You are losing your power. The same thing is happening with antibiotics. You give antibiotics, your immune system won't get a chance to do the work and develop. The same is true of digestive enzymes, your enzymes won't be produced in your stomach.

After revealing his anxiety about losing his power of perception through domestication, Dr. B. continued to reveal a tension in his position. "We have MRI. We have CT scan. We know what is happening in the body. In Ayurveda we have [had] this system for 3,000 years, yes, with no upgrading. Because of egos humans are losing." Dr. B. is simultaneously concerned with losing his capacity to sense and also with the practice of Ayurvedic medicine in the present and what it might be losing by not "upgrading," in the sense of adapting Ayurveda in a manner that retains its unique capacities while evolving in its encounters with allopathic medicine. Explaining the use of these diagnostic techniques, Dr. B. revealed a further complication: "You get 20 percent commission for any procedure. For some things you need the help of modern diagnosis." Yet he distanced himself from this practice stating,

Only once in my life I wrote a CT scan—for a small child. That is the only case I have used some modern diagnosis. Most of the cases I can get. I can diagnose without seeing a diagnosis. You can guess about it. In Ayurveda they tell about using *yukti*. After learning about techniques, [learning]

about the body (he listed Ayurvedic components of the body) ... after a long time you can diagnose correctly.

It is in this space of reasoning, *yukti*, performed on the basis of authoritative knowledge, sensory perception, and one's own practical experience, that Dr. B. performs diagnosis and practices Ayurveda in the face of competing epistemologies.

The Ayurvedic physician's embodied experience of diagnosis necessarily entails a sensory negotiation between disparate epistemologies crystallized in the form of the authoritative knowledge of treatises and technologies. Sensory negotiation is enacted in the field of what Lorraine Daston and Peter Galison (2007, 40) call "epistemic virtues," internalized norms around effective means of knowledge and the forms of "disposition" that facilitate knowing. Illustrating the enmeshment of epistemology and embodiment, Daston and Galison's work on scientific objectivity shows that striving toward these norms results in the production of types of "scientific selves" (44), or in Foucauldian terms, forms of subjectivation through "technologies of the self" (233).²² They demonstrate that different epistemic virtues can exist at the same time, competing, coexisting, and modifying one another (Daston and Galison 2007, 44, 199), "[b]ut although they may sometimes collide, epistemic virtues do not annihilate one another like rival armies. Rather, they accumulate" (363). In contemporary Kerala the epistemic virtue of authoritative testimony as a means of valid knowledge—idealized in the figure of the authoritative individual (*āpta*) possessing a cultivated mind, free from faults—exists simultaneous to the epistemic virtues of "modern" scientific objectivity and trained judgment. Sensory negotiation takes place as the Ayurvedic physician navigates the terrain of this accumulation.

Valid Means of Knowledge, Diagnosis, and the Senses

Classical Ayurvedic diagnosis is based on the four valid means of knowledge, *pramāṇas*, which encompass both the methods of gathering information and the means of processing information. In this section of the paper, after providing a brief introduction to classical Ayurveda, I examine aspects of diagnosis

22 Although Michel Foucault's earlier work addressed technologies of power in relation to subjectivation (i.e., disciplinary power and biopower), his later work turned increasingly to "care of the self" and "technologies of the self" engaging with the relationship between the subject and truth. See, for example, Foucault et al. 2005.

as described in two classical Ayurvedic compendia with a focus on the sensory experience of the physician.²³ This is followed, in the next section, by a discussion of the ways that Ayurvedic physicians in Kerala describe their own diagnostic sensory capacities. I suggest that while there is not always direct reference to the epistemological framework set forth in the treatises, the ways that physicians describe their experience of sensory limitation and their anxieties about the use of “modern” diagnostic technologies reflect the critical relationship between the ideal of authoritative teaching—both described in, and represented by, the classical treatises—and the physicians’ own sensory perceptions.

Ayurveda is a system of medicine codified on the Indian subcontinent in a series of compendia roughly dating from the second century BCE through the seventh century CE.²⁴ It is one of seven healing systems recognized by India’s Ministry of Ayush along with Unani, Siddha, Sowa Rigpa (Tibetan Medicine), Homeopathy, Naturopathy, and Yoga (Ministry of Ayush 2002). I use the designation “classical Ayurveda” in this article to refer to the medical system set forth in the treatises selected as the *brhatṭrayī*, “great threesome,” of Ayurveda, and to contemporary practice of Ayurvedic medicine that recognizes itself as based upon these compendia: the *Carakasamhitā*, the *Suśrutasamhitā*, and either Vāgbhaṭa’s *Aṣṭāṅgahṛdayasamhitā* or *Aṣṭāṅgasamgraha*.²⁵ There are a number of other treatises from this time period as well as the subsequent centuries that are regarded as part of the classical corpus but they are not

23 All translations are mine. When the romanized Sanskrit of translated passages is rendered in the footnotes, I have removed romanized punctuation added by the editors of the published texts but left a single *daṇḍa* (staff mark) to indicate sentence endings and double *daṇḍa* to indicate section breaks.

24 Although there were various schools of medicine present in the first millenium, Dominik Wujastyk (1997, 2) explains, “Both the Caraka Samhitā and the Suśruta Samhitā emanate from a single tradition of medicine, that is, their general views and doctrines are in consonance, and the theoretical basis of medicine presented in the texts is identical.” Dagmar Wujastyk (2012) argues that there was a unified system of medical ethics outlined in the texts of that period. Here, I am calling Ayurveda “a system of medicine,” with recognition that there were differences in the early schools of general and surgical medicine, as attested in the *Carakasamhitā* and *Suśrutasamhitā*, respectively (a topic that is part of my current research), as well as of variations in Ayurveda as it evolved over time.

25 According to the current BAMS syllabus set by the Central Council of Indian Medicine (CCIM n.d.), the *Aṣṭāṅgahṛdayasamhitā* is the third of the *brhatṭrayī*. When one of my colleagues was undergoing BAMS training in the early 2000s, instead, the *Aṣṭāṅgasamgraha* was listed on the syllabus as the third member of the *brhatṭrayī*.

addressed here.²⁶ The *Carakasamhitā* is a voluminous general medical treatise covering aspects of Ayurvedic philosophy and practice with mixed prose and verse sections. The treatise is thought to be based on an earlier work called the *Agniveśatantra*, compiled, modified, and added to by Caraka sometime in the first two centuries CE. In the fourth or fifth century CE Dṛḍhabhala further redacted the treatise and added several sections,²⁷ and in the seventh or eighth century, commentator Jajjaṭa also made editorial contributions to the text (Zysk 2009, 98). The *Suśrutasamhitā* is a similarly long and varied treatise with a special focus on surgical techniques that I will not address in detail in this paper. The works attributed to Vāgbhaṭa are based upon the *Carakasamhitā* and *Suśrutasamhitā*, with the *Aṣṭāṅgahrdayasamhitā* composed in verse in the short and prescriptive style of a practitioner's manual. Each of these compendia is divided into sections called *sthānas*.

The study of these treatises in Sanskrit is part of the Ayurvedic curriculum set by the Central Council of Indian Medicine under the Ministry of Ayush in New Delhi. Students in Kerala generally study them aided by Malayalam transcriptions and translations of the treatises along with commentaries written in Malayalam,²⁸ and more recently, guided by English translations. As Anthony Cerulli (2009, 271) notes, most BAMS students do not have time to attain proficiency in Sanskrit due to lack of training at the primary and secondary school levels. The physicians I met had a range of literacies in Sanskrit. The few having a high level of proficiency had received Sanskrit instruction prior to their BAMS entrance and some had completed a three-year postgraduate MD (Ayurveda) with the specialization of Saṃhitā and Siddhānta,²⁹ entailing a close reading of the *Carakasamhitā* and other classical texts with commentaries for several hours per day. More commonly physicians were able to read, discuss, and recite specific verses from the classical treatises that they had memorized

26 Notable among these are the *Kaśyapasamhitā*, the *Bhelasamhitā*, and the *laghutrayī*, "little threesome," comprising the *Mādhavanidāna*, the *Śārṅgadharasamhitā*, and the *Bhāvaprakāśa*.

27 For a detailed survey of scholarship addressing Dṛḍhabhala's contribution to the *Carakasamhitā*, see Meulenbeld 1999, vol. 1A. See also n. 77 below.

28 For example, Thirumulpad 2014; Vaidyan 2015; and multi-volume editions of the *Carakasamhitā* and *Suśrutasamhitā* with translation and commentary by M. Narayanan Vaidyar. Vaidyar's editions of the *Carakasamhitā* were published in 1979 by the Dhanvanthari Printing Press in Kuttikkalam, Etakkad, and reprinted at Redstar Offset Printers in Calicut in 2009–2011.

29 The BAMS degree is a five and a half year program including a one-year clinical internship. The next level of training for Ayurvedic physicians is the MD (Ayurveda), a three-year postgraduate training in an Ayurvedic specialty.

during their BAMS training. Important for our purposes is that physicians regarded the classical texts as the ideal basis for their diagnostic practices. Here, I will briefly touch upon diagnosis as described in the *Carakasamhitā* and the *Aṣṭāṅgahrdayasamhitā*, as the former is considered the foundational treatise of Ayurveda and the latter is the most popular and widely used treatise in Kerala.

Diagnosis in Classical Ayurveda

In classical Ayurveda, diagnosis is a process intertwined with treatment and oriented toward assessment of constellations of multiple properties, or *guṇas*,³⁰ represented through humors, *doṣas*, which cause disease when in a state of imbalance. The three *doṣas*, *vāta*, *pitta*, and *kapha* or *śleṣman*, often translated as “wind,” “bile,” and “phlegm,” respectively, are an important element in the conceptual basis for Ayurvedic diagnostics and therapeutics.³¹ In a state of equilibrium they are understood to be physiological constituents, whereas in a state of imbalance they are considered as pathological agents.³² In the classical treatises the *doṣas* are described based upon their *guṇas*, and the two

30 See Table 1 and Table 2. The twenty *guṇas* discussed here are a set of properties pertaining to the five elements included in a broader list of *guṇas* in *Carakasamhitā*, *Sūtrasthāna* 1.49: “[Along] with the [five] sense objects—‘heavy,’ etc., *buddhi*, those ending with *prayatna*, ‘para,’ etc.—are *guṇas*” (*sārthā gurvādayo buddhiḥ prayatnāntāḥ parādayaḥ guṇāḥ proktāḥ*). As Dasgupta notes, this list does not provide an enumeration or precise specification of its contents, but seems to be referring to extant lists of *guṇas* known by the treatise’s author. See Dasgupta, Agarwal, and Jain 1969, 1:281. Cakrapāṇidatta glosses the list as including five sense objects; twenty properties pertaining to the five elements—heavy, etc.; *buddhi*; a list of properties of Self (*ātman*) ending with effort (*prayatna*) (attributed to *Carakasamhitā*, *Śārīrasthāna* 3.10); and a list beginning with *para*, etc. (correlating to a set of properties essential to treatment in *Carakasamhitā*, *Sūtrasthāna* 26.31–35). It is the twenty properties pertaining to the five elements that concern us here, and I refer to this subset as the *guṇas*. See Table 1.

31 Here, I retain the Sanskrit terms for the *doṣas*, *vāta/vāyu*, *pitta*, and *śleṣman/kapha* because translating them simply as wind, bile, and phlegm obscures the complex concepts that these terms designate. For example, in the *Aṣṭāṅgasamgraha*, the *doṣas* are described through their elemental composition. *Sūtrasthāna* 20.2 explains that *vāyu* comprises wind (*vāyu*) and space (*ākāśa*), *pitta* is related to fire (*āgneya*), and *śleṣma* comprises water (*ambhas*) and earth (*prthivī*). Thanks to Pooja T. Amal for assisting me in locating this reference.

32 For a discussion of the early historical development of these concepts in relation to the *doṣas*, see Scharfe 1999.

main physicians I worked with were both emphatic that the central operating principle in Ayurvedic diagnosis is the *guṇas*.³³ Diagnosis based on the *guṇas* provides more nuance than simply assessing the *doṣas*, because while each *doṣa* is represented as comprising a specific set of *guṇas*, the latter may occur in different proportions or levels in specific situations. These two physicians described the common process of diagnosis as using an assessment of *doṣas*, tissues (*dhātus*), and waste products (*malas*) as primary diagnostic tools, but characterized the *guṇas* as the most accurate means of diagnosis. *Guṇa*-based diagnosis works through identification of the *guṇas* causing illness and then providing counteracting and balancing properties in the form of medicine and lifestyle prescriptions. Though in many cases diseases are given names, ascertaining the name of the illness is not the core aim of diagnosis. *Carakasamhitā Cikitsāsthāna* 30.292 states that whether or not a disease is named in the treatise it can be treated if the cause of disease is understood.³⁴ Similarly, the *Aṣṭāṅgahṛdayasamhitā, Sūtrasthāna* 12.64 exhorts physicians not to feel shame (*na jihṛyāt*) if they are not knowledgeable regarding the name of a disease, as there is no firm establishment of all diseases by name.³⁵ Most named diseases, for example, *jvara* (fever) or *kāsa* (cough), have a number of variations based on the *guṇas* as they aggregate in the *doṣas*, *vāta* or *vāyu*, *pitta*, and *śleṣman* or *kapha*, which then combine with one another to create variants of diseases.

Diagnosis in the *Aṣṭāṅgahṛdayasamhitā*: Properties (*guṇas*) and Perception

Although the *Carakasamhitā* is historically prior to the *Aṣṭāṅgahṛdayasamhitā*, I begin here with the *Aṣṭāṅgahṛdayasamhitā* and then move to the *Carakasamhitā* because this was how the material unfolded in the course

33 For descriptions of the *doṣas* based on the twenty *guṇas* see *Carakasamhitā, Sūtrasthāna* 1.59–61 and *Aṣṭāṅgahṛdayasamhitā, Sūtrasthāna* 1.11–12. *Suśrutasamhitā, Sūtrasthāna* 6–13 explains the properties of the *doṣas* in a section of the chapter on the treatment of wounds describing the abodes of the *doṣas*. This latter passage, however, is starkly different from the passages in *Carakasamhitā* and *Aṣṭāṅgahṛdayasamhitā*, as blood (*rakta*) is included as a *doṣa* and the description of *vāta* does not contain a list of its *guṇas*.

34 *doṣadūṣyanidānānāṃ viparītaṃ hitaṃ dhṛūvam / uktānuktān gadān sarvān samyagyuktaṃ niyacchati* // This passage is found in a section of the text that is attributed to Dṛḍhabala. See Meulenbeld 1999, 1A:130–141.

35 *vikāranāmākūśalo na jihṛyāt kadācana / na hi sarvavikārāṇāṃ nāmato 'sti dhṛuvā sthitiḥ* //

of my discussions with physicians. When speaking with physicians in Kerala about touch in classical Ayurveda, initially they almost invariably cited the diagnostic maxim of *trividhaparikṣā* (“threefold examination”),³⁶ *darśanasparśanapraśnaiḥ* (“by means of sight, touch, and questioning”), the beginning of *Aṣṭāṅgaḥṛdayasaṃhitā*, *Sūtrasthāna* 1.22. This text, comprising instructive and clear verses, is a basis for Ayurvedic training and practice in Kerala. Perhaps as a reflection of the pedagogy experienced by practitioners during their Ayurvedic training, the clear diagnostic system of the *Aṣṭāṅgaḥṛdayasaṃhitā* was usually explained first, followed by the *Carakasamhitā*, rendering the material more accessible. So I replicate that order here.

The *Aṣṭāṅgaḥṛdayasaṃhitā* is divided into six sections (*sthānas*), and the initial description of how a physician should examine a patient is found in the first chapter of the first section. This passage, *Aṣṭāṅgaḥṛdayasaṃhitā*, *Sūtrasthāna* 1.22, follows an exposition of the basic concepts of Ayurveda: the transmission of the teachings; an enumeration of the eight branches; a naming of the three *doṣas* with their respective primary locations (*sthānas*); times (*kālas*) (both season and time of day); relations to digestive fire (*agni*) and to the digestive tract (*koṣṭha*); an enumeration of the six tastes (*rasas*); a description of the types of substances and their *guṇas*; a discussion of the causes of disease and health; and definitions of physical and mental disease. Then the treatise turns to diagnosis:

One should examine the patient by means of seeing, touch, and questioning; and the disease, by primary cause (*nidāna*),³⁷ premonitory symptom

36 There are a number of different enumerations of examination (*parikṣā*) in classical Ayurvedic treatises, including two threefold examinations in the *Carakasamhitā*—one corresponding to that found in the *Aṣṭāṅgaḥṛdayasaṃhitā*, *Sūtrasthāna* 1.22 (*Cikitsasthāna* 22.25) and another corresponding to the first three *pramāṇas* (*Vimānasthāna* 4.3–7), a fourfold examination corresponding to all four *pramāṇas* (*Sūtrasthāna* 11.17), and a tenfold method of examination based on *pratyakṣa* and *anumāna* (*Vimānasthāna* 8.83–84). An eightfold examination method commonly cited by physicians in Kerala is found along with a sixfold scheme in the eighteenth-century pharmacological text, the *Yogarātnākara*. Meulenbeld 1999, 2A:262. For a charting of these systems see Ranade and Kuber 2010.

37 The term *nidāna* is understood in this verse as one aspect of diagnosis, the examination of primary cause, or etiology. *Nidāna* can also be used to denote the entire diagnostic process, as in the title of the third section of the *Aṣṭāṅgaḥṛdayasaṃhitā*, the *Nidānasthāna*.

(*prāgrūpa*), symptom (*lakṣaṇa*), suitability of food, medicine, and conduct (*upaśaya*),³⁸ and progression (*āpti*).³⁹

The physician is instructed to use three senses, sight, touch, and hearing, to examine the patient and then to assess the disease through the fivefold method outlined in the second half of the verse. Implicit in questioning patients is listening to their answers through the sense of hearing and then using inference to process the information. According to this system, diagnosis is often not a linear process or one-time event, rather, it unfolds and repeats as the physician uses the threefold examination repeatedly to assesses the effects of food, medicine, and lifestyle practices, and to observe the progression of disease in the patient, adjusting treatment accordingly.

In his *Sarvāṅgasundarā*, thirteenth-century commentator Aruṇadatta explains the physician's experience of diagnosis as centrally concerned with assessing the twenty *guṇas* and therefore reliant upon the senses.⁴⁰ As G. Ashokan notes in his discussion of sensory perception in the *Carakasamhitā*, "In cognizing an object all that is directly known by the senses is its qualities."⁴¹ The *guṇas* in the *Aṣṭāṅgahṛdayasamhitā* are a set of twenty properties, or qualities, explained as ten *guṇas* with their opposites, with the complete list of ten pairs constellating to manifest in the *doṣas* (See Tables 1 and 2).

38 As a method of Ayurvedic diagnosis, *upaśaya* (fr. *upa* √*śi*, "to be suitable or useful") is a technical term referring to the wholesomeness of food, medicine, and conduct in the treatment of a disease. It is often coupled with *anupaśaya*, referring to unwholesomeness in relation to a disease.

39 *darśanasparśanaprasṇanaiḥ parikṣeta ca rogiṇam / rogaṃ nidānaprāgrūpalakṣaṇopaśayāp tibhiḥ* // *Aṣṭāṅgahṛdayasamhitā Sūtrasthāna* 1.22. In the *Nidānasthāna* we find the term *samprāpti*, which is usually translated as "pathogenesis," so here *āpti* is understood as the progression of the disease through different pathways to various locations.

40 Meulenbeld 1999, 3:662–664.

41 Ashokan (2015, 203) is translating *guṇas* as "qualities."

TABLE 1 *The twenty properties (guṇas) listed in Aṣṭāṅgaḥṛdayasaṃhitā, Sūtrasthāna 1.18 organized as pairs of opposites^a*

heavy (<i>guru</i>)	light (<i>laghu</i>)
dull (<i>manda</i>)	sharp (<i>tīkṣṇa</i>)
cold (<i>hima</i>)	hot (<i>uṣṇa</i>)
unctuous (<i>snigdha</i>)	dry (<i>rūkṣa</i>)
smooth (<i>ślakṣṇa</i>)	rough (<i>khara</i>)
dense (<i>sāndra</i>)	fluid (<i>drava</i>)
soft (<i>mṛdu</i>)	hard (<i>kathina</i>)
stable (<i>sthira</i>)	mobile (<i>cala</i>)
subtle (<i>sūkṣma</i>)	gross (<i>sthūla</i>)
clear (<i>viśada</i>)	slimy (<i>picchila</i>)

a Across the classical Ayurvedic texts there is variance in the terms used to name the properties (*guṇas*), the order given, and the way that they comprise the *doṣas*. For example, *Carakasamhitā*, *Sūtrasthāna* 25.36 names *sāra* rather than *cala* and orders the pairs differently.

TABLE 2 *The doṣas in terms of the five elements (pañcamahābhūtas) from Aṣṭāṅgasamgraha, Sūtrasthāna 20.2 and properties (guṇas) from Aṣṭāṅgaḥṛdayasaṃhitā, Sūtrasthāna 1.11–12*

<i>doṣa</i>	elements (<i>pañcamahābhūtas</i>)	properties (<i>guṇas</i>)
<i>vāta</i> (<i>anila</i>)	air (<i>vāyu</i>) + space (<i>ākāśa</i>)	<i>rūkṣa</i> , <i>laghu</i> , <i>śīta</i> , <i>khara</i> , <i>sūkṣma</i> , <i>cala</i>
<i>pitta</i>	fire (<i>agni</i>)	<i>sneha</i> , <i>tīkṣṇa</i> , <i>uṣṇa</i> , <i>laghu</i> , <i>visra</i> , <i>sara</i> , <i>drava</i>
<i>kapha</i>	earth (<i>prthivī</i>) + water (<i>ambhas</i>)	<i>snigdha</i> , <i>śīta</i> , <i>guru</i> , <i>manda</i> , <i>ślakṣṇa</i> , <i>mṛtsna</i> , <i>sthira</i>

The *guṇas* are central to the assessment conducted by the physician and in terms of considering the proximate causes of disease (*nidāna*), as evident in Aruṇadatta's explanatory gloss of *Sūtrasthāna* 1.22 which draws heavily upon *Aṣṭāṅgasamgraha*, *Sūtrasthāna* 22.11.

Aruṇadatta: The patient (lit. diseased, *rogī*), is one who has a disease, one possessing illness (*vyādhita*). One (the physician) should examine the patient (*taṃ*) by means of sight (*darśana*), etc. *Darśanena* means “by sight,” [one should examine], with respect to those sick with cough, urinary disorder, etc., yellow and white color, form (*saṃsthāna*), measurement, accumulation, complexion (*chāya*), feces, urine, vomit, etc.⁴² *Sparśanena* means, “by touching of the body by the hand,” one who is sick with fever, a mass (*gulma*) or abscess (*vidradhi*), etc., and also, [he should examine] touch (*sparśa*) of coldness, heat, stiffness, throbbing, softness and roughness, etc. And *praśnena*, “by asking,” means he should examine via the articulation of the patient, the state of pain (*śūlya*), loss of appetite (*arocaka*), vomiting (*chardi*), heart palpitation (*hṛdardatva*), positive or negative attitude, soft or hard stools, dreams, intention (*abhiprāya*), constellations during the onset of disease and at birth (*janmāmayaapravṛttinakṣatra*),⁴³ aversion, inclination, happiness, and sorrow. He should examine the disease with those five, *nidāna*, etc.⁴⁴ *Nidāna*, *kāraṇa*, [and] *hetuḥ* are synonyms of cause. And this [cause] is twofold divided into proximate (*āsanna*) and distant (*viprakṛṣṭa*). Proximate cause is also twofold, close (*āsanna*) and very close (*atyāsanna*). Close [acts] by the usage of substances that are rough, light, cold, etc. But, that which is very close, causes disease immediately (*samanantaram eva*). In such a way, the *doṣas*, *vāta*, etc., are increased.⁴⁵

42 In this passage, yellow and white color (*varṇa*) refer specifically to the hue of bodily constituents and products, whereas complexion (*chāya*) is a designation including sets of five qualities attributed to each of the five elements. For example, complexion related to earth is firm (*sthira*), oily (*snigdha*), thick (*ghana*), smooth (*ślakṣṇa*), brown (*śyāma*), and white (*śveta*) (*Carakasamhitā*, *Indriyasthāna* 7.10–13 and *Aṣṭāṅgahṛdayasamhitā*, *Śārīrasthāna* 5.48). Thanks to Hanudha N. K. for explaining this distinction.

43 Aruṇadatta lists *nakṣatras* (constellations or asterisms) at the time of onset of the disease or at the time of birth as possible astrological causes of disease to be examined through questioning the patient. Much of his commentary on this section is derived from *Aṣṭāṅgasamgraha*, *Sūtrasthāna* 22.11. Due to the unclear meaning of *janmāmayaapravṛttinakṣatra*, which is not glossed in Indu's commentary, my interpretation of this phrase has followed the translation of *Aṣṭāṅgasamgraha*, *Sūtrasthāna* 22.11 offered by K.R. Shrikanthamurthy (1995, 1:405). In other editions this passage is listed as 22.23. See *Aṣṭāṅgasamgrahaḥ* 2012; Meulenbeld 1990, 1A:500.

44 This refers to the set of five diagnostic methods mentioned in *Aṣṭāṅgahṛdayasamhitā*, *Sūtrasthāna* 1.22, *nidāna*, *prāgrūpa*, *lakṣaṇa*, *upaśaya*, and *āpti*.

45 Note that whereas the “close” proximate cause acts on one or two properties (*guṇas*), the “very close” proximate cause acts on a constellation of properties (*guṇas*) in the form of a *doṣa*.

Here, Aruṇadatta emphasizes the importance of the physician's examination of the *guṇas*, such as “coldness, heat, stiffness, throbbing, softness, and roughness,” particularly in reference to touch (*sparsā*). Physicians also indirectly examine *guṇas* through questioning the patient, for example, when assessing the texture of the stool. In his explanation of the distinction between “close” and “very close” proximate causes of disease, Aruṇadatta also highlights the *guṇas*, explaining that in the case of a “close cause,” the disease is caused by one or two *guṇas* interacting via substances coming into contact with the patient. In the case of a “very close” cause, an entire constellation of *guṇas*, in the form of a *doṣa*, is increased.

In the *Aṣṭāṅgahrdayasaṃhitā*, *Nidānasthāna*, diagnosis is focused on the fivefold method given in the second half of *Sūtrasthāna* 1.22, translated above. The *Nidānasthāna* comprises sixteen chapters: an introduction outlining the fivefold method, followed by subsequent chapters explaining the diagnosis of one or more types of illness. The *doṣas* play a central role in the explanation of diagnosis given in this section of the *Aṣṭāṅgahrdayasaṃhitā* as each discussion of the symptoms of diseases (*lingas* or *rūpas*) describes the symptoms of diseases arising from *vāta*, *pitta*, *kapha*, and from all three together (*saṃnipāta*). In the case of fever (*jvara*), further variations are given in the form of combinations of two *doṣas*. For a number of illnesses, symptoms arising from other causes are also listed; for example in the discussion of hemorrhoids (*arśas*), the symptoms caused by vitiated blood (*rakta*) are detailed. Although the *Nidānasthānas* of both the *Aṣṭāṅgahrdayasaṃhitā* and *Carakasamhitā* are organized by type of disease, it is not enough to recognize and name the disease; the physician must understand the underlying causes of the disease in order to diagnose and formulate a treatment.

rogo 'syāstīti rogī vyādhitaḥ taṃ darśanādibhiḥ parīkṣeta / darśanena dṛṣṭyā
kāsamehādyaṛteṣu pītaśuklavarnasamsthānapramāṇopacayacchāyāvīṇmūtraccharditādi
kam / sparśanena hastakāyasparsēna jvaragulmavidradhyādyārtam tathā śitoṣṇastabdha
spandaślakṣṇakharasparśādikaṃ ca / prāśnena prechayā śūlārocakacchardihṛdardatvaṃ
succhandaduśchandatvaṃ mṛdukrūrakoṣṭhatāṃ svapnadarśanam abhiprāyaṃ janm
āmayapravṛttinakṣatradviṣṭeṣṭasukhaduḥkhāni ca ityāturamukhāt parīkṣeta / rogaṃ
nidānādibhiḥ pañcabhiḥ parīkṣeta / nidānaṃ kāraṇam hetur ityanarthāntaram / tac
cāsannaviprakṣṭabhedena dvidhā / āsannam api dvividham āsannātyāsannabhedena
/ āsannam rūkṣalaghuśītādidravīyopayogaḥ / atyāsannam tu yataḥ samanantaram eva
rogotpattīḥ / yathā vātādāyo doṣāḥ kruddhāḥ /

Diagnosis in the *Carakasamhitā*: Authoritative Testimony and the Physician's Sensory Perceptions

In the *Carakasamhitā*, a compendium that predates the *Aṣṭāṅgahṛdayasamhitā* by several centuries, instructions for diagnosis are dispersed in various sections of the treatise, particularly in the *Sūtrasthāna*, *Nidānasthāna*, and *Vimānasthāna*. Here, I focus on two passages that lay out the epistemological foundation for diagnosis in the text: *Carakasamhitā*, *Sūtrasthāna* 11.17–25 and *Vimānasthāna* 4.1–7. Both of these passages detail the relationship between authoritative teaching and sensory perception as *pramāṇas*, means of valid knowledge, and therefore as the basis for diagnosis. As Karin Preisendanz notes in her detailed analysis of eristics and epistemology in the *Carakasamhitā* in comparison with the *Nyāyasūtra*,⁴⁶ these sections articulate two epistemological models. The first model comprises authoritative teaching (*āptopadeśa*), sensory perception (*pratyakṣa*),⁴⁷ inference (*anumāna*), and conjunctive reasoning (*yukti*), and the second model comprises the first three of the *pramāṇas* listed above, excluding *yukti*.⁴⁸ While authoritative teaching, perception, and inference are considered distinct *pramāṇas* in other Indian philosophical systems, *yukti* is regarded as a separate form of reasoning only in Ayurveda (Dasgupta, Agarwal, and Jain 1969, 2:375; Filliozat 1990, 33; Preisendanz 2009, 281). We will examine these passages, paying close attention to the representation of the physician's senses in relation to authoritative teaching, and in

46 Akṣapāda's *Nyāyasūtra* is the foundational work of *Nyāyāśāstra*, a classical philosophical school of logic. See Preisendanz 2009, 262.

47 Sensory perception as a *pramāṇa* in the *Carakasamhitā* is based upon the five sense cognitions (*pañcendriyabuddhis*): sight-cognition (*cakṣurbuddhi*), hearing-cognition (*śrotrabuddhi*), smell-cognition (*ghrāṇabuddhi*), taste-cognition (*rasanabuddhi*) and touch-cognition (*sparsānabuddhi*). These five sense cognitions are explained in *Sūtrasthāna* chapter eight, as a conglomeration of the five sense faculties (*pañcendriya*), their five material bases (*pañcendriyadravya*), the five sense organs (*pañcendriyādhiṣṭhāna*), and the five sense objects (*pañcendriyārtha*), motivated by the mind (*sattva*) in conjunction with the Self (*ātman*) (*Carakasamhitā*, *Sūtrasthāna* 8.7–12). In this interaction producing sensory perception, mind, the “cause of the senses” (*pratyayabhūtam indriyāṇām*), is the key motivator of the sense faculties. Cakrapāṇidatta glosses *pratyayabhūtam* as *kāraṇabhūtam*, in reference to the mind, literally “being the cause of the senses” (*Carakasamhitā*, *Sūtrasthāna* 8.7).

48 Preisendanz's (2009, 287–288) detailed analysis ultimately reveals three epistemological models in the *Carakasamhitā*: the two discussed here, and a third, derived from *Vimānasthāna* 8.27 and 8.33 resembling *Nyāyasūtra* 1.1.3.

consultation with the eleventh-century medical writer Cakrapāṇidatta's commentary, the *Āyurvedadīpikā*.

The description of the *pramāṇas* given in *Carakasamhitā*, *Sūtrasthāna* 11.17–11.25 foregrounds a discussion of the authoritative individual, and is found in the context of an explanation of how one can know the existence of the world-beyond (*paraloka*) in relation to the three desires motivating a human life: “desire for life” (*prāṇaiṣaṇā*), “desire for wealth” (*ghanaiṣaṇā*), and “desire for the other-world” (*paralokaiṣaṇā*).⁴⁹

Carakasamhitā, *Sūtrasthāna* 11.17–11.25:

11.17 Everything is twofold, indeed, existent (*sat*) and nonexistent (*asat*).⁵⁰ Its fourfold examination (*parīkṣā*) is [known as] authoritative teaching, sensory perception, inference, and reasoning.⁵¹

11.18–19 First, the authoritative ones (*āpta*): Those who are completely free from passion (*rajas*) and inertia (*tamas*) by means of the strength of spiritual endeavor (*tapas*) and knowledge (*jñāna*), who always possess clear unimpeded knowledge of the past, present, and future; those learned (*śiṣṭa*), enlightened (*vibuddha*) authorities; their speech is, without a doubt, true. Those who are completely free from passion (*nīrajastama*), how could they speak the untruth?⁵²

11.20 The cognition (*buddhi*) which is manifest in the present [and] arises due to the conjunction of Self (*ātman*),⁵³ sense faculties (*indriya*),

49 *Carakasamhitā* *Sūtrasthāna* 11.3. As Pierre-Sylvain Filliozat notes, Cakrapāṇidatta assimilates this triad to the *trivarga*, the set of three of the *puruṣārthas* (human-goals)—*dharma* (righteous conduct), *artha* (wealth), and *kāma* (pleasure). See Filliozat 1993, 96–97; 2006, 1971–1972. For a detailed discussion of the meaning of *paraloka* and *paralokaiṣaṇā* in this context, see Preisendanz 2009, 280, 298nn79, 82, 83, and 84.

50 Here I follow Preisendanz's (2009, 280) translation of *sat* and *asat* as “existent” and “inexistent.”

51 *dvīvidham eva khalu sarvaṃ sac cāsac ca tasya caturvidhā parīkṣā āptopadeśaḥ pratyakṣam anumānaṃ yuktiś ceti //*

52 *āptās tāvat // rajastamobhyāṃ nirmuktās tapojñānabalena ye / yeśāṃ trikālam amalāṃ jñānam avyāhataṃ sadā // āptāḥ śiṣṭā vibuddhāste teśāṃ vākyam asaṃśayam/ satyaṃ vaksyanti te kasmād asatyaṃ nīrajastamāḥ //*

53 Antonella Comba (1987, 48–49) shows that the term *buddhi* can be understood in different passages of the *Carakasamhitā* through the lens of Sāṃkhya philosophy, as a faculty of intellect, or through the lens of Vaiśeṣika philosophy, as “knowledge” or ‘cognition’ which is understood as a quality or property (*guṇa*) of the *ātman* [Self], and is one of the signs from which its existence can be inferred.” In this passage I translate *buddhi* in the Vaiśeṣika sense, as it is a cognition that corresponds to both inference and reasoning in *Sūtrasthāna* 11.22 and 11.25, respectively. Cf. Filliozat 1967, 1967m10.

mind (*manas*), and sense objects (*artha*), is known as sensory perception (*pratyakṣa*).⁵⁴

11.21–22 [Inference] is preceded by perception, it is threefold, and relates to the past; present, and future. Hidden fire is inferred from smoke; sexual intercourse is inferred because of seeing pregnancy (*garbha*)—in this way, wise men ascertain the past; they ascertain future fruit from a seed, having seen here that from a seed a fruit of the same kind arises.⁵⁵

11.23–24 From the conjunction of water, ploughing, seed, and season, grain arises. In this way, the fetus arises from the conjunction of the six elements (*dhātu*), [this is] conjunctive reasoning (*yukti*). Fire arises from the conjunction of the fire-kindler (*mathya*), kindling wood (*manthana*), and the person churning (*manthāna*). The application of conjunctive reasoning (*yukti*), in relation to the excellence of the “four pillars,”⁵⁶ destroys disease.

11.25 Conjunctive reasoning (*yukti*) is that cognition (*buddhi*) which recognizes existence arisen from the conjunction of many causes. It is to be understood as referring to the three [modes of] time. In which manner, “three aims of life” (*trivarga*) are accomplished by it.⁵⁷

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- 54 *ātmendriyamanorthānāṃ sannikarṣāt pravartate / vyaktā tadātvē yā buddhiḥ pratyakṣaṃ sā nirucyate //*
- 55 *pratyakṣapūrvaṃ trividhaṃ trikālaṃ cānumīyate / vahnir nigūḍho dhūmena maithunaṃ garbhadarśanāt // evaṃ vyavasyanty atītaṃ bijāt phalaṃ anāgatam / dṛṣṭvā bijāt phalaṃ jātam ihaiva sadṛśaṃ budhāḥ //*
- 56 *Carakasamhitā, Sūtrasthāna*, chap. 9, describes the “four pillars” (*catuspāda*) of Ayurveda as the physician, medicine, attendant, and patient. *jalakarṣaṇabijartusaṃyogāt sasyasaṃbhavaḥ / yuktiḥ śaddhātusaṃyogād garbhāṇāṃ saṃbhavas tathā // mathyamanthana(ka)manthānasaṃyogād agnisamḥbhavaḥ / yuktīyuktā catuspādasaṃpad vyādhinibarhaṇī //* Gaṅgādhara’s succinct reading clarifies the passage. He explains, “*mathya*’ is the wood-piece situated below which has the purpose of churning, called the ‘*araṇi*,’ ‘*manthana*’ is the wood-piece situated above, with which the *araṇi*, is rubbed, ‘*manthāna*’ is the person churning (lit. the ‘churner’).” *mathyamanthanamanthānasaṃyogād agnisamḥbhavaḥ / mathyaṃ manthanārtham adhaḥsthakāṣṭham araṇir nāma manthanam ūrdhvasthakāṣṭham yena ghrīyati manthānaḥ kartā eṣaṃ saṃyogān manthanakriyayāvaśyaṃ agnisamḥbhava iti bhaviṣyanti yuktiḥ /* See Gaṅgādhara’s *Jalpakaḥpatāru*, 1:541. For a thorough discussion of the four pillars of treatment as they are explained across a range of Ayurvedic texts, see Wujastyk 2012, 26–67.
- 57 Gaṅgādhara explains *trivarga* in this passage as the set of three of the *puruṣārthas* (human-goals)—*dharma* (righteous conduct), *artha* (wealth), and *kāma* (pleasure). Gaṅgādhara’s *Jalpakaḥpatāru*, 1:541. *buddhiḥ paśyati yā bhāvān bahukāraṇayogajān / yuktis trikālā sā jñeyā trivargāḥ sādhyate yayā / eṣā parikṣā nāstyanyā yayā sarvaṃ parikṣyate / parikṣyaṃ sad asac caivaṃ tayā cāsti punarbhavaḥ //*

In explaining the *pramāṇas*, this passage foregrounds the importance of authoritative teaching by describing the qualities of the authoritative person (*āpta*) at the outset. The authoritative person, who is capable of authoritative teaching (*āptopadeśa*) or authoritative speech (*āptavacana*), must achieve a state free from the *doṣas* of the mind, passion (*rajas*) and inertia (*tamas*).⁵⁸ This is accomplished through the practice of *tapas*, which can be translated as austerities, “penance” (Meulenbeld 1999, 1A:59), or “spiritual endeavor” (Ashokan 2015, 194) in order to achieve an idealized state of knowledge pertaining to the past, present, and future. Next, the passage describes sensory perception as a form of cognition (*buddhi*) that takes place in the present moment, involving the Self (*ātman*), sense organs (*indriyas*), mind (*manas*), and sense objects (*arthas*). The *āpta* is one whose mind is free from *doṣas*, and the teaching of an *āpta* is infallible in contrast to the sensory perception of a non-*āpta*. For the practitioner engaging with the text of the *Carakasamhitā*, the source of authoritative teaching is not only the *guru*, or teacher, but also the treatise itself, presumably reflecting the *āpta* status of its authors. The sensory perceptual capacities of practitioners are understood as built upon their relationship to authoritative teaching, and without its basis, the physician cannot perceive clearly and thereby cannot infer or reason accurately. Whereas the *āpta* is believed to perceive the past, present, and future, the physician must combine sensory observation with inference and/or reasoning, in order to understand the unfolding of a disease and to diagnose. G. Ashokan (2015, 194) contrasts the primacy of authoritative teaching in Ayurveda with other philosophical systems, explaining that “in Ayurveda scriptural knowledge is an essential prerequisite for a physician. It is only after attaining competency in scriptural testimony that a physician becomes proficient in making use of the other sources of knowledge for diagnosis.” Although the knowledge attained by an authoritative individual through the practice of *tapas* may come to them through insight or revelation, their presumed clarity of mind also suggests that they have special sensory perceptive capacities, serving as an ideal toward which the physician should strive.

The relationship between authoritative teaching and the sensory perceptual capacity of the physician is further explored in a passage explaining the mechanisms of diagnosis, *Carakasamhitā*, *Vimānasthāna*, chapter 4. *Vimāna* means “evaluation”⁵⁹ and the chapters of the *Carakasamhitā*, *Vimānasthāna* explain,

58 In *Carakasamhitā Sūtrasthāna* 1.57, *rajas* and *tamas* are explained as the two *doṣas* of the mind, along with the three *doṣas* of the body.

59 In a paper given at the International Congress on Traditional Asian Medicines, August 9, 2017, Dominik Wujastyk argued that in the *Carakasamhitā*, the term *vimāna* is to be

in succession, the *viśeṣas* (specific characteristics, distinctions, or properties) of the six flavors, stomach capacity, epidemics, and in the fourth chapter, diseases (there are eight chapters total). This section of the compendium also emphasizes the fundamental place held by authoritative teaching, defining its characteristics and relationship to the other *pramāṇas*. Cakrapāṇidatta emphasizes this in his commentary on *Vimānasthāna* 4.5, explaining that just as a person with no training cannot see the differences and specificities of types of jewels, neither can the physician assess a disease through sensory perception and inference without a foundation of authoritative teaching.⁶⁰ Here, I include only the discussion of authoritative teaching and sensory perception, along with an excerpt from Cakrapāṇidatta's clarifying discussion of the way that these *pramāṇas* function for a physician.

Carakasamhitā, Vimānasthāna 4.1–4.7:

4.1–2 Now we will explain the evaluation (*vimāna*) that is to be understood as the threefold knowledge of the distinguishing properties of diseases, said venerable Ātreya.⁶¹

4.3 Indeed there is threefold knowledge of the distinguishing properties of diseases, namely, authoritative teaching, perception, and inference.⁶²

4.4 In that context, authoritative teaching is called “the speech of an authority” (*āptavacana*), because, indeed, authoritative people possess knowledge without doubt (*vitarka*), without [reliance on] memory (*smṛti*),⁶³ or without incompleteness (*vibhāga*),⁶⁴ and without attachment or hatred. Their speech is a valid means of knowledge (*pramāṇa*)

understood as deriving from a verbal root $\sqrt{mā}$, meaning “ascertain.” Wujastyk's convincing argument, based on both Cakrapāṇidatta's commentary and a paper by Thomas Burrow (1980), goes against the conventional translation of *vimāna* as “measurement” derived from the verbal root $\sqrt{mā}$ meaning “measure.”

60 *anupadeśavāṃs tān upalabhamāno 'pi hetvādiviśeṣān aśikṣitaratnaparikṣo yathā ratnānāṃ viśeṣam paśyann api nāvadhārayati ratnaviśeṣam tathā nāvadhārayati vyādhiviśeṣam iti bhāvaḥ /*

61 *athātas trividharogaviśeṣavijñānīyaṃ vimānaṃ vyākhyasyāmaḥ // iti ha smāha bhagavān ātreyaḥ //*

62 *trividhaṃ khalu rogaviśeṣavijñānaṃ bhavati tad yathā āptopadeśaḥ pratyakṣam anumānaṃ ceti //*

63 According to Cakrapāṇidatta, *smṛtijñāna* means knowledge that is learned from others, through commonly held beliefs or teachings, rather than through firsthand experience (*anubhava*). He cites the examples of “knowledge arisen from traditional teachings and knowledge of calculation” (*smṛtiśāstraṃ jñānam gaṇitajñānam ca*).

64 *vibhāga* is glossed by Cakrapāṇidatta as *ekadeśaḥ*, “part of the whole.”

because they possess such qualities. On the other hand, an invalid means of knowledge (*apramāṇa*) is the speech of an intoxicated person (*matta*), a mentally unstable person (*unmatta*), a fool (*mūrkhā*), an impassioned person (*rakta*), and a person of mixed character (*duṣṭāduṣṭa*). And indeed, sensory perception (*pratyakṣa*) is accomplished by the Self with the sense faculties and mind. Indeed, inference (*anumāna*) is speculation (*tarka*) based on conjunctive reasoning (*yukti*).⁶⁵

4-5 Having first examined the disease, fully, by this threefold valid means of knowledge (*jñānasamudāya*),⁶⁶ everything he determines later [will be] faultless. Indeed, knowledge of that which is to be understood completely is not produced through partial knowledge. In reference to this threefold collection of *pramāṇas*, there is prior knowledge because of authoritative teaching. Then, examination (*parīkṣā*) takes place through perception (*pratyakṣa*) and inference (*anumāna*). Indeed, what that has not been previously taught can be known by being examined though perception and inference? Because of this, the twofold examination [undertaken by] those possessing knowledge is perception and inference, or threefold with [authoritative] teaching.⁶⁷

Cakrapāṇidatta: ... First, authoritative teaching makes one understand the disease, and then the disease explained by the *āpta* is determined through perception and inference by means of examining the symptoms, etc., as mentioned. When there is a disease that is not taught through the doctrine, like a non-physician (*avaidya*), one (the physician) [is not able to] diagnose that disease through perception and inference. Thus it is said ... “or threefold” (*trividhā vā*) means at the time of examination of

65 *tatrāptopadeśo nāmāptavacanam / āptā hy avitarkasmṛtīvibhāgavidō niṣprītyu-patāpadarśināś ca / teṣāṃ evaṅguṇayogād yad vacanam tat pramāṇam / apramāṇam punar mattonmattamūrkhakṛtāduṣṭavacanam iti pratyakṣam tu khalu tad yat svayamin-driyair manasā copalabhyate / anumānam khalu tarko yuktyapekṣaḥ //* Cakrapāṇidatta's gloss suggests that *svayam indriyaiḥ* is to be understood as *ātmanā indriyaiḥ*, “by the sense faculties with the Self.” *svayam indriyair manasā cety anena yad ātmanendriyaiś cakṣurādibhir avyavadhānena grhyate rūpādi tat pratyakṣam iti*. In this passage, *yukti* is understood as a component of *anumāna* rather than as a separate *pramāṇa*.

66 Cakrapāṇidatta glosses *jñānasamudāyaḥ* as *pramāṇasaṁghātaḥ*, “collection of valid means of knowledge.” So, here, I translate *jñāna* as *pramāṇa*.

67 *trividhena khalv anena jñānasamudāyena pūrvaṃ parīkṣya rogaṃ sarvathā sarvam athottarakālam adhyavasānam adoṣaṃ bhavati na hi jñānāvayavena kṛtsne jñeye jñānam utpadyate / trividhe tv asmin jñānasamudāye pūrvaṃ āptopadeśāj jñānam tataḥ pratyakṣānumānābhyāṃ parīkṣopapadyate / kiṃ hy anupadiṣṭam pūrvaṃ yat tat pratyakṣānumānābhyāṃ parīkṣamāṇo vidyāt / tasmād dvividhā parīkṣā jñānavatāṃ pratyakṣam anumānam ca trividhā vā sahopadeśena //*

the disease, indeed, authoritative teaching is also used in reference to understanding weakness of the duodenum (*grahaṇīmārdava*)⁶⁸ or dreams, [and also] knowledge of a difficult-to-assess location [of disease], etc. In this manner, “authoritative teaching” in the form of the speech of the sick person is also applied to the examination of softness or hardness of stools, etc. This is shown.⁶⁹

4.6 In reference to this, wise ones explain each and every disease [based upon] the type of aggravation (*prakopaṇa*), origin (*yonī*), cause (*utthāna*), nature (*ātman*), site (*adhiṣṭhāna*), suffering (*vedana*), symptom (*saṁsthāna*), sound–touch–appearance–taste–smell (*śabdasparśarūparasagandha*), complication (*upadrava*), association with increase, stasis, and decrease (*vrddhisthānakṣayasamanvita*), outcome (*udarka*), naming (*nāmāna*), application (*yoga*); in reference to that (particular disease), it is known through [authoritative] teaching (*upadeśa*), “for the purposes of cure, this is prescription or this is prohibition.”⁷⁰

4.7 But, indeed, the one desiring to know the essence of the disease directly, should examine all of the sense objects in relation to the body of the patient, with all of [their] senses, except with the knowledge of taste

68 *Grahaṇī* refers to a location in the digestive tract that is between the umbilicus (*nābhi*) and stomach (*amaśaya*) and also to the malabsorption of food in this location due to weak digestive fire (*agni*). At issue here is the physician's ability to differentiate between different types of bowel disorders: *grahaṇī*, characterized by frequent loose stools containing undigested or partly digested food; *atisāra*, characterized by loose stools with excess fluid; and *arśas*, piles, characterized by frequency of stools. Here, Cakrapāṇidatta is arguing for authoritative teaching as the foundation of differential diagnosis, a process by which the physician uses comparison and elimination to determine the nature of the disease. Thanks to M. K. Madan Kumar for clarifying this point. See *Carakasamhitā, Cikitsāsthāna* 15.56–57.

69 *prathamāptopadeśo vyādhiṃ bodhayati tataś cāptopadiṣṭaṃ vyādhiṃ pratyakṣānumānābhyāṃ yathoktaliṅgādiparīkṣyā niścinoti āgamānupadiṣṭe ca vyādhau avaidya iva na pratyakṣeṇānumānena ca vyādhiṃ upalabhata ityāha ... trividhā vety anena vyādhiparīkṣāsamaye hy āptopadeśo'pi vyāpriyate grahaṇīmārdavasva pñadarśanādipratipattau tathā duradhigamasthānasamśrayādipratipattau tathā koṣṭhamṛdudaruṇatvādiparīkṣāyāṃ cāturavacanarūpāptopadeśo 'pi vyāpriyata iti darśayati / I am reading prathamam āptopadeśo rather than prathamāptopadeśo as this makes more sense in the context of the commentary.*

70 *tatredam upadiśanti buddhimantaḥ / rogam ekaikam evaṃprakopaṇam evaṃyonim evamutthānam evamātmānam evamadhiṣṭhānam evaṃvedanam evaṃsaṁsthānam evaṃśabdasparśarūparasagandham evamupadravam evaṃvrddhisthānakṣayasamanvitaṃ evamudarkam evaṃnāmānam evaṃyogam vidyāt tasmīn iyaṃ pratikārthā pravṛttir athavā nivṛttir ity upadeśāj jñāyate //*

(*rasa*). In this manner, one should examine through hearing: gurgling of the bowels (*antrakūjana*), cracking of the joints (*sandhisphuṭana*) and finger joints (*aṅgulīparvan*), and characteristics of the voice (*svaraviśeṣa*). If there are other sounds emanating from somewhere in the body one should also examine [them] through hearing. One should examine through sight: color (*varṇa*), appearance (*saṁsthāna*), measurement (*pramāṇa*), complexion, natural or changed state of the body, [and] those things related to vision that are unmentioned. And indeed one should also understand, through inference, taste inside of the body of the patient, related to the [taste] sense faculty (*indriya*). Indeed, one does not obtain the understanding of this through sensory perception. Therefore, one should only understand the taste in the mouth of the patient by questioning the patient. Thereby [one should understand] the bad taste of [the patient's] body by a louse moving away [from it], the sweetness of the body, through flies moving toward [it]. Regarding doubts about [the nature of] *pitta* in the blood [one should understand] what is called “healthy blood” (*dhārīlohitā*) or “bile-blood” (*lohitapitta*).⁷¹ Due to consumption by a dog or crow “healthy blood” is to be inferred; from their not consuming [it], “bile-blood” is to be inferred. Thus, [the physician] should also infer other flavors that are related to the body of the patient. But indeed, one should examine by smell the natural or changed state of odors related to the patient's whole body. And one should examine by hand the natural or altered state of touch (*sparsa*) [of the patient]. Examination through perception, inference, and authoritative teaching is thus explained.⁷²

71 Cakrapāṇidatta explains *dhārīlohitam* as *jīvaśoṇitam*, in the sense of vital or healthy blood and *lohitapittam* as *pittadustaṁ*, blood “corrupted by *pitta*” in the sense of *raktapittam*, “bile-blood.”

72 *pratyakṣatas tu khalu rogaṭattvaṁ bubhutsuḥ sarvair indriyaiḥ sarvān indriyārthān āturaśarīragatān parīkṣeta anyatra rasajñānāt tad yathā antrakūjanam sandhisphuṭanam aṅgulīparvaṇām ca svaraviśeṣāṁś ca ye cānye 'pi kecic charīropagatāḥ śabdāḥ syu[s] tāñ chrotreṇa parīkṣeta varṇasaṁsthānapramāṇacchāyāḥ śarīraprakṛtīvīkārau cakṣurvaīśayikāni yāni cānyānyanuktāni tāni cakṣuṣā parīkṣeta rasaṁ tu khalv āturaśarīragatam indriyavaīśayikam apy anumānād avagacchet na hy asya pratyakṣeṇa grahaṇam upapadyate tasmād āturaparipraśnenaivāturamukharasaṁ vidyāt yūkāpa-sarpaṇena tv asya śarīravairasyaṁ makṣikopasarpaṇena śarīramādhuryaṁ lohītapittasaṁdehe tu kiṁ dhārīlohitam lohitapittam veti śvakākabhakṣaṇād dhārīlohitam abhakṣaṇāl lohitapittam ity anumātavyam evam anyān apy āturaśarīragatān rasān anumīmīta gandhāṁś tu khalu sarvaśarīragatān āturaśya prakṛtīvaikārikān ghrāṇena*

This passage begins by explaining in detail the qualities of authoritative teaching (4.4) and proceeds to establish authoritative teaching as the basis for sensory perception and inference (4.5) in the physician's diagnostic process. First, one must have prior knowledge of the disease and, only then, observe the patient. Through the use of sight, smell, touch, and hearing—in this case, hearing the sounds emanating from the body of the patient rather than their words—the physician's body is deeply implicated in the process of diagnosis. Sense perception enables the physician to identify and differentiate the sense objects reflected in the disease. Karin Preisendanz notes that at the end of *Vimānasthāna* 4.5 there appears to be a shift toward prioritization of sensory perception that is also reflected in the order presented at the end of *Vimānasthāna* 4.7. She argues that this may reflect a relationship with *Nyāya* philosophy, which recognizes sensory perception as the basis for valid knowledge (Preisendanz 2009, 286–288). Her detailed analysis is based upon over fifty manuscripts collected as part of a project compiling a critical edition of the *Carakasamhitā Vimānasthāna* and reflects an understanding of the layers in the text and variant attestations of the treatise. Here, the mention of a “twofold examination” consisting of sensory perception and inference, or “threefold” with authoritative teaching listed third, presents a reordering of the importance of the *pramāṇas* with authoritative teaching as an adjunct to sensory perception and inference. However, it is notable that these enumerations are immediately preceded by a question prioritizing authoritative teaching: “Indeed, what that has not been previously taught can be known by being examined though perception and inference?” The passage also specifies that the twofold examination is to be employed by “those possessing knowledge,” which I interpret as referring to those who have already received authoritative testimony, indicating that the implicit basis of authoritative teaching remains present. Those who are not already possessing knowledge should count authoritative teaching among the set of three.⁷³ Cakrapāṇidatta's commentary

parīkṣeta sparśaṃ ca pāṇinā prakṛtīvīkṛtīyuktam / iti pratyakṣato anumānād upadeśataś ca parīkṣaṇam uktam //

- 73 There are other passages in the *Carakasamhitā* that do not foreground authoritative testimony. For example, *Vimānasthāna*, chap. 8, examined in detail by Preisendanz via the critical edition of this chapter (not yet published). In the *Indriyasthāna*, a section of the treatise dealing with signs of impending death, there are two categories of signs, those residing in the patient (*puruṣasaṃśraya*) and those not dependent upon the patient (*puruṣam anāśrita*). In order to examine the first category, which includes the patient's complexion and sounds emanating from the body, sensory perception is the most important *pramāṇa*. In reference to the second category, including omens, authoritative teaching and reasoning are most important. Also, a different set of

on *Vimānasthāna* 4.5 also strongly emphasizes the primacy of authoritative teaching in the diagnostic process, but he also states that the patient's description of certain symptoms that cannot be directly observed by the physician qualify as a form of authoritative teaching. Although this may challenge the description of *āpta* found in chapter 11 of *Sūtrasthāna*, it is consistent with the importance of questioning the patient in the threefold model for applied diagnosis found in *Carakasamhitā*, *Cikitsāsthāna* 25.22,⁷⁴ a passage that, much like *Aṣṭāṅgahrdayasamhitā*, *Sūtrasthāna* 1.22, prescribes sight, questioning, and touch for diagnosis, and was likely the source for the latter.

These passages may evidence a reduction, over the course of time, in the number of senses that the physician was expected to use in the course of diagnosis from four to three.⁷⁵ Chapter 4 of *Carakasamhitā*, *Vimānasthāna* instructs the physician to use all of his senses with the exception of taste (*rasa*) because for something to be tasted, it must enter the taster's body. Rather, the patient's taste is inferred through the behavior of insects based on their taste faculties. In the *Carakasamhitā*, *Cikitsāsthāna* 25.22 and the *Aṣṭāṅgahrdayasamhitā*, *Sūtrasthāna* 1.22 we find only the senses of seeing, touch, and hearing prescribed as diagnostic tools, leaving aside both taste and smell. *Carakasamhitā*, *Cikitsāsthāna* 25.22 is found in a section of the *Carakasamhitā* that may have been written by Dṛḍhabala in the fourth or fifth century, rendering it a later addition to the treatise,⁷⁶ and the *Aṣṭāṅgahrdayasamhitā* was written in the seventh century. The removal of smell from the list in the later passages perhaps

four valid means of knowledge is presented in *Suśrutasaṃhitā*, *Sūtrasthāna* 1.16: sensory perception (*pratyakṣa*), authoritative teaching (*āgama*), inference (*anumāna*), and analogy (*upamāna*). As Preisendanz (2009, 289) notes, the editor provides an alternate reading placing authoritative teaching first, however, the commentator Ḍalhaṇa gives priority to sensory examination in his gloss of the passage.

- 74 "Examination is said to be (lit. remembered) threefold, by means of seeing, questioning, and touch; [examination] of age, coloration, body, and sense faculties [is to be made] by means of seeing, the wise ones should examine pain, habit, and strength of digestive fire through questioning, softness and coldness with their opposites should be examined by means of touch." *darśanaprasnaṣaṃsparśaiḥ parikṣā trividhā smṛtā / vayo-varṇa-śarīrāṇām indriyāṇāṃ ca darśanāt // hetvartisātmayāgnibalaṃ parikṣyaṃ vacanād buddhaiḥ / sparśān mārḍavaśaitye ca parikṣye saviparyaye //* In this passage, touch is listed last, in contrast to the similar, and chronologically later passage, in the *Aṣṭāṅgahrdayasamhitā*, *Sūtrasthāna* 1.22 where the order is seeing, touch, and questioning.
- 75 Thanks to Dominik Wujastyk for encouraging me to pursue the issue of chronology further in my forthcoming dissertation.
- 76 According to Meulenbeld's (1999, 1A:131) careful discussion of the matter, out of the seventeen chapters attributed to Dṛḍhabala, the seventeenth is either the twenty-third or the twenty-fifth chapter of the *Carakasamhitā*. The colophon of the twenty-fifth chapter states

reflects an increasing sensitivity to the boundaries of the physician's body in the course of diagnostic practice. It is worth noting that according to the surgical school of medicine, not addressed here, in *Suśrutasamhitā*, *Sūtrasthāna* 10.5, a sixfold method of diagnosis via the five sense organs (*śrotases*) and questioning (*praśna*) is given, in explicit contrast to the threefold method. This complicates a chronological hypothesis because the *Suśrutasamhitā* predates Vāgbhaṭa's compendia and it supports the possibility that surgical physicians may have had distinct social status and a different relationship to the senses in diagnosis.⁷⁷

Diagnosis as Sensory Negotiation

Authoritative teaching is a foundation of classical Ayurvedic epistemology according to the *Carakasamhitā*, and by extension, of diagnosis. Successful processing and assimilation of sensory perception through inference and reasoning rests upon this foundation of authority in the form of treatise and *guru*. As physicians negotiate between Ayurvedic epistemologies and contemporary medical epistemologies, a sensory negotiation takes place that impacts their embodied experience of diagnosis and treatment. This negotiation is not only between the authoritative teaching of texts and teachers juxtaposed, in the course of practice, with diagnostic imaging and laboratory tests, but also involves physicians' aspirations toward an idealized sensory state. In conversations and interviews two main themes arose that, I suggest, relate to this experience: first, the issue of how contemporary diagnostic technologies and "modern" lifestyles impact physicians' sensory diagnostic capacities, particularly with relation to the mind, and second, the relationship between the *āpta* and the contemporary physician. A comment from Dr. K. illuminates these intertwined concerns in terms of diagnosis:

We are not even 10 percent using our sense organs in diagnosis today. We are giving our diagnoses to machines. We used to touch to diagnose

that it is attributed to Dṛḍhabala, whereas commentators Jajjāṭa and Cakrapāṇidatta both assign him authorship of the twenty-third chapter.

77 Also, see Meulenbeld 1999, 1B:323n108. The issues of purity, touch, social stratification, and the physical boundaries of physicians in different schools of early Ayurveda in relation to Ayurvedic epistemologies, diagnosis, and treatment will be discussed in my forthcoming dissertation. For discussions of the purity and social status of physicians, see Filliozat 1964; Chattopadhyaya 1977, 255; Zysk 2000, 22; Olivelle 2017.

a fracture. Now we order a light study—X-ray. This is the shift between *vaidyas* and doctors. Why he is a *vaidya* and he is a doctor. The skill of a *vaidya* is the skill of how he is using his sense organs for diagnosis.

Here, we encounter the distinction between doctor and *vaidya*, usually a term indicating more respect and connection to tradition than “doctor” or “physician.” This is a reversal of the hierarchy expressed in the 1946 pre-independence Bhore report which states that Ayurvedic practitioners must use the term “Vaidya,” as a less prestigious designation than “Doctor,” the latter reserved for “a registered medical practitioner in modern scientific medicine” (Wujastyk 2008, 48). In this quote from Dr. K., however, a *vaidya* is an authoritative physician, an *āpta* with idealized sensory diagnostic capacities. The implication in Dr. K’s statement is not only that physicians today underutilize their senses due to the availability of technologies to look inside of the body, but also that this practice attenuates their skill. *Vaidyas* are aspirational and authoritative figures capable of skillfully engaging their senses in diagnosis. Doctors, however, use their senses in diagnosis through building on authoritative teachings, not only of the treatise and *guru*, but also on the authority generated by “modern” medical technologies.

These issues are foregrounded in two conversations I had that turned to the topic of pulse examination, *nāḍīparīkṣā*. This technique became integrated into Ayurveda in the fourteenth century and is widely used today, regarded by many as the most powerful diagnostic tool available within the system.⁷⁸ Sitting in his consultation room, Dr. R., a physician in his mid-thirties, explained why he uses allopathic diagnostic methods rather than pulse diagnosis:

If you are going to use your body as an instrument, as a tool, then you would need to live a life free from all other distractions and be fully focused. You have to be a *siddha*. Those things that we don’t usually think of as vices, like TV and movies, they would be a distraction for someone trying to train themselves to read the pulse.

He spoke of one person he knew, now deceased, who read the pulse “very well,” emphasizing that “it was his *only* focus.” This physician did not watch television, go to movies, or give attention to anything “outside of his practice.” Dr. R. made it clear that pulse diagnosis was only possible for a different type of physician than himself, who has attained the status of a *siddha*, one who has attained

78 See Bruns 2010, 67–70; Zysk 2013, 184. Many physicians regarded *nāḍīparīkṣā* as present in the early classical Ayurvedic treatises.

supranormal skills through practice or prayer. Dr. S., a physician in her forties who practices in her home and is retired from teaching at an Ayurvedic college, self-identified as a third-generation *vaidya*. She shared a similar description of her uncle, explaining, “He only uses pulse and refuses the information from diagnostic tests.” Dr. S. contrasted this with Ayurvedic physicians who use MRI and other diagnostic technologies, stating that they were “like allopaths.” Citing “*darśana*, *sparśana*, and *praśna*” from the *Aṣṭāṅgahṛdayasaṃhitā*, she detailed her diagnostic process in relation to that of her uncle:

You look for symptoms and abnormalities. After that you touch, for example in the case of *vidradhi*, abscess, *vṛddhi*, growth, *gulma*, any protuberance, and use these to determine whether the ailment is *vāta*, *pitta*, or *kapha jā* (arisen). Pulse comes after *praśna*, it is the most important diagnostic tool in Ayurveda. My uncle can tell everything, and I can tell things like blood pressure, whether a woman is on her period ... and a few others, only. It is divine. Pulse diagnosis is handled by different people differently. It is learned through experience. You can do an extra three years at Ayurveda College or study with a *guru* to really practice it ... something accessible only to a person free from sensory and mental distractions.

Like Dr. R.’s view of his friend who was apt at pulse diagnosis, Dr. S. considered her uncle to be free from “sensory and mental distractions,” performing a “divine” level of diagnosis, similar to the authoritative individual (*āpta*) free from passion (*rajas*) and inertia (*tamas*) in the classical treatises. She views this form of authority as external to herself, and while this does not impede her practice of diagnosis, it limits the data that she can collect through her felt sense of pulse diagnosis.

Dr. D., a physician in her early thirties working at a small clinic, shared her personal story of being diagnosed with a serious illness and subsequently meeting her *guru*. Here I cite her at length speaking about his diagnostic capacities with a focus on seeing, *darśana*:

Nowadays *darśana* is when the person is sitting nearby or coming ... but we don’t know how the *ācāryas* (teachers) might have written about *darśana*. I told you about that one day the patient was coming from the house.⁷⁹ I don’t know if in any text it is written, CT, MRI, as *darśana*. I’m not against this. Nowadays everyone is following this. We don’t want the patient to think “This doctor doesn’t know anything.” Two generations

79 Here, she is referring to a story about her *guru* announcing the arrival of a specific patient through his own powers of insight before he had ever met or heard about the person.

earlier they were much [more] dedicated for this profession. Through their meditation or dedication they would know that someone was coming. They would be preparing the medicines before the patient is coming.... Especially for snakebite ... they would know the direction of the patient coming, preparing the antidote before the patient comes. The environment would show signs ... he says one person is coming and he will tell about them. Then in one-and-a-half hours they come.... He is a mind reading expert—he is a great doctor ... he would not use MRI, nothing.... I have personally met two *gurus*, *vaidyas*. These kinds of *gurus* we won't find in Government Ayurveda College, [not in] clinics, [they are] not the typical caste [doctors] but [they become doctors] out of their own wish. They are not greedy for money—only charge for medicine. Taking the rejected cases, the challenges. He has the courage. By sitting with him I too get courage.

In this discussion, Dr. D. does not object to understanding MRI or CT scanning as possible means to expand the physician's capacity for diagnostic vision (*darśana*). However, it is clear that from her perspective, her *guru* relies not only on his five senses, but also on his mind, conditioned through “dedication” and “meditation,” and an idealized intuitive sense that comes through practice and moral character.

The physicians I met who experienced a *gurukula* style of Ayurvedic education system studied with their *guru* before, during, and after BAMS training.⁸⁰ The most senior practitioner I interviewed, Dr. N., a physician in his sixties who runs his own Ayurvedic hospital and outpatient treatment center, identified as a *vaidya*. At the same time, he spoke of “old *vaidyas*,” temporally removed from the present and possessing an even more idealized sensory capacity than himself. While Dr. N. experiences his senses as highly attuned, he was instructed by his *guru* to practice pulse examination for over two decades before using it as a basis for diagnosis. All of the physicians who mentioned pulse diagnosis noted that it is a perceptual skill refined through personal practice and requiring additional training from a *guru* beyond the BAMS curriculum. Dr. N. explained seeing, touching, and questioning in terms that reflect yoga philosophy, emphasizing the importance of meditation as a mechanism to expand the mind's perceptive capacity. The following are excerpts from one phase of a lengthy exposition:

80 For a study of the teacher-student relationship and Ayurvedic training in the classical texts, see Preisendanz 2007.

When we touch something, that gives the real feeling of life itself irrespective of the part we touch. Even if I touch your aura I can diagnose.... The next level is sounds. I can hear. My sounds and your sound can talk. This is not only *praśna*.... In terms of *darśana*, it relates to *agni* (digestive fire).... I'm touching epidermis. It is not deep. I can touch to *majja* (marrow),⁸¹ I can touch anywhere ... that level of touch can be developed, mainly through *dhyāna* (meditation).... If you have very good *agni* then *darśana* is different. You open the third eye and see. Close eyes and see. I can see what is happening in my home from here.... A *vaidya* could hear the carotid artery sound. You can hear it with a stethoscope making a sound and know that the person will get facial paralysis.... All [modern technologies] have actually killed the efficacy of our sense-organs. Old *vaidyas* can hear all sounds. How many sounds are coming from our body? Each and every cells are producing sounds. If we could hear them with internal ears.... What do you touch with? First of all the body, not only the hands, why not with the shoulder.... My mind can go into other systems easily, it can pierce into a system. This technique, allopathy is using in a minute quantity. Why do we go to an experienced doctor (*vaidya*)? He can see many things without an MRI or lab tests.... Usually people come with tests. Usually I don't send anyone [for lab tests], but we have to be in a system (i.e., coexisting and interacting with allopathy) gracefully and intellectually, we must be able to communicate.

Dr. N.'s discussion here touches on a number of the factors to be examined (*parikṣyabhāvas*) by the physician in relation to the *doṣas*, as explained in the *Aṣṭāṅgahṛdayasaṃhitā*, *Sūtrasthāna* 12.67–68, such as tissues (*dhātus*) and waste products (*malas*) vitiated by the *doṣas* (termed *dūṣyas*), place (location of the patient) (*deśa*), season and time of day (*kāla*), digestive force (*anala*), nature or constitution (*prakṛti*), age (*vayas*), quality of the mind (*sat-tva*), habit (*sātmya*), diet (*āhara*), and stage of the disease (*avasthā*). However, Dr. N.'s exposition foregrounds the importance of the trained sensory capacity of the physician, taking a number of these factors into account in relation to the physician rather than the patient, such as digestive fire (*anala/agni*), nature, habits, and especially, the quality of mind of the physician, potentially refined through meditation, describing these factors in relation to an idealized

81 Key to an Ayurvedic understanding of the body is the system of seven tissues (*dhātus*) as successive by-products of metabolism: *rasa* (chyle), *rakta* (blood), *maṃsa* (flesh), *medas* (fat), *asthi* (bone), *majjan* (marrow), and *śukra* (reproductive tissue).

authoritative individual (*āpta*). He articulates the crux of the sensory negotiation taking place, the need to “be in a system gracefully and intellectually” with allopathic medicine and with the idealized *vaidya* simultaneously.

Conclusion

Dr. N.’s mention of meditation for the cultivation of touch as a form of sensory and extrasensory perception provides a bridge between the physician and the *āpta* through the promise of transformation offered by practice. This is a promise extended within the *Carakasmhitā* itself in a series of verses, Śārīrasthāna 1.137–155, translated and studied in detail by Dominik Wujastyk (2011b). Wujastyk shows that these verses offer an eightfold yogic path with Buddhist elements predating the well-known Yoga Sūtras of Patañjali. His translation of verse 142 reads, “Liberation comes from the absence of passion (*rajas*) and lethargy (*tamas*), due to the disappearance of potent karma. The disjunction from all conjunctions is called non-rebirth” (Wujastyk 2011b, 40). From *Sūtrasthāna* 11.19 we know that the *āpta* is an individual with a mind free from passion and inertia/lethargy achieved through *tapas*, and Wujastyk’s translation suggests *tapas* should not be understood in the sense of “austerities” or “penances,” but rather as meditation, providing a mechanism for an individual to practice toward this idealized state.

Joseph Alter also argues that Ayurveda operates through an ontological framework in which there is a model of an unreachable “metaphysical fitness,” a mode of “radical self improvement,” toward a state of superhuman perfection (Alter et al. 1999, S44). The way that the contemporary Ayurvedic physicians I spoke with explained authoritative teaching in relation to the training and utilization of their own senses reflects this notion of striving toward an idealized state. But it also crystallizes that unreachable state as the foundation for all knowledge and medical practice. At stake in Ayurvedic physicians’ choice of diagnostic techniques is their understanding of the nature of authoritative teaching in relation to their own sensory perceptive capacities. Whether a physician bases their diagnostic process on the epistemic virtues of classical treatises or a human *guru*, on that of diagnostic imaging and laboratory tests, or on some combination of these means of knowledge, reflects their own embodied epistemological position. This relationship to knowledge and the senses entails what I am calling a sensory negotiation, converging on the physician’s body as a site for the making of truth claims, and for the practice and experience of Ayurvedic medicine. Perhaps in this space which entails both rooting

and innovation—orientation toward the past and present—we can conceive of Ayurveda in India today not as in a state of crisis, but in a state of innovative evolution.

References

English Sources

- Alter, Joseph S., F. Bray, A. Guha, P.C. Joshi, and C. Leslie. 1999. "Heaps of Health, Metaphysical Fitness: Ayurveda and the Ontology of Good Health in Medical Anthropology [and Comments and Reply]." *Current Anthropology* 40: S43–S66.
- Ashokan, G. 2015. *Philosophy of Carakasamhitā*. New Delhi: New Bharatiya Book Corporation.
- Bruns, Prudence. 2010. *Nāḍīvijñāna: The Crest Jewel of Āyurveda, A translation of six central texts and an examination of the sources, influence and development of Indian Pulse-diagnosis*. Germany: VDM Verlag Dr. Müller.
- Burrow, Thomas. 1980. "Sanskrit mā- 'to ascertain.'" *Transactions of the Philological Society* 78 (1): 134–140.
- CCIM. N.D. "Central Council of Indian Medicine New Delhi Syllabus of Ayurvedacharya (BAMS) Course 1st Professional." <http://www.ccimindia.org/downloads/UG%20Syllabus%20Ayu.%20Committee%20of%20final.pdf> (accessed May 28, 2016).
- Cerulli, Anthony. 2009. "Āyurveda." In *Brill's Encyclopedia of Hinduism*, vol. 2, *Texts, Rituals, Arts, and Concepts*, edited by K.A. Jacobsen, H. Basu, A. Malinar, and V. Narayanan, 267–280. Leiden: Brill.
- Chattopadhyaya, Debiprasad. 1977. *Science and Society in Ancient India*. Calcutta: Research India Publications.
- Comba, Antonella. 1987. "Carakasamhitā Śārīrasthāna I and Vaiśeṣika Philosophy." In *Studies on Indian Medical History*, Groningen Oriental Studies 2, edited by Gerrit Jan Meulenbeld and Dominik Wujastyk, 39–55. Groningen: Forsten.
- Dasgupta, Surendranath, R.R. Agarwal, and S.K. Jain. 1969. *History of Indian Philosophy*. 1st ed. Allahabad: Kitab Mahal.
- Daston, Lorraine, and Peter Galison. 2007. *Objectivity*. New York: Zone Books.
- Filliozat, Jean. 1964. *The Classical Doctrine of Indian Medicine, Its Origins and Its Greek Parallels*. 1st English ed. Delhi: Munshiram Manoharlal.
- Filliozat, Pierre-Sylvain. 1990. "Yukti, le Quatrième pramāṇa des Médecins (Carakasamhitā, Sūtrasthāna XI, 25)." *Journal of the European Ayurvedic Society* 1: 33–46.
- Filliozat, Pierre-Sylvain. 1993. "Caraka's Proof of Rebirth." *Journal of the European Ayurvedic Society* 3: 94–111.
- Filliozat, Pierre-Sylvain. 2006. "La Logique du Médecin selon la Carakasamhitā." *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 150 (4): 1961–1975.

- Foucault, Michel, Frédéric Gros, François Ewald, and Alessandro Fontana. 2005. *The Hermeneutics of the Subject: Lectures at the Collège De France, 1981–1982*. 1st ed. New York: Palgrave-Macmillan.
- Khandpur, Sujay, Amit K. Malhotra, Vidhyut Bhatia, Subandhu Gupta, Vinod K. Sharma, Rakesh Mishra, and Narendra K. Arora. 2008. "Chronic Arsenic Toxicity from Āyurvedic Medicines." *International Journal of Dermatology* 47 (6): 618–621.
- Langford, Jean. 2002. *Fluent Bodies: Āyurvedic Remedies for Postcolonial Imbalance*. Durham, NC: Duke University Press.
- Leslie, Charles. 1976. "The Ambiguities of Medical Revivalism in Modern India." In *Asian Medical Systems: A Comparative Study*, edited by Charles Leslie, 356–367. Berkeley: University of California Press.
- Leslie, Charles. 1992. "Interpretations of Illness: Syncretism in Modern Āyurveda." In *Paths to Asian Medical Knowledge*, edited by Charles Leslie and Allan Young, 177–208. Berkeley: University of California Press.
- Manohar, P. Ram. 2014. "Āyurvedic Education: Where to Go from Here?" *Ancient Science of Life* 33 (3): 143–145.
- Meulenbeld, Gerrit Jan. 1999. *A History of Indian Medical Literature*. 5 vols. in 3. Groningen Oriental Studies 15. Groningen: E. Forsten.
- Ministry of Ayush. 2002. "National Policy on Indian Systems of Medicine & Homoeopathy-2002." http://ayush.gov.in/sites/default/files/7870046089-Ayush%20%20n%20policy%20ISM%20and%20H%20Homeopathy_o.pdf (accessed May 28, 2016).
- Modi, Narendra. 2016. "Text of PM's speech at Vision Conclave at Global Ayurveda Festival." http://www.pmindia.gov.in/en/news_updates/text-of-pms-speech-at-vision-conclave-at-global-ayurveda-festival-kozhikode/ (last modified February 2, 2016).
- Mukharji, Projit Bihari. 2016a. "Baidya-as-Technology: From Diagnosis to Pharmacy in a Bottle." In idem, *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences*, 227–256. Chicago: University of Chicago Press.
- Mukharji, Projit Bihari. 2016b. *Doctoring Traditions: Āyurveda, Small Technologies, and Braided Sciences*. Chicago: University of Chicago Press.
- Olivelle, Patrick. 2017. "The Medical Profession in Ancient India: Its Social, Religious, and Legal Status." *eJournal of Indian Medicine* 9: 1–21.
- Preisendanz, Karin. 2007. "The Initiation of the Medical Student in Early Classical Ayurveda: Caraka's Treatment in Context." In *Pramāṇakīrtiḥ: Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday*, edited by Birgit Kellner et al., Wiener Studien zur Tibetologie und Buddhismuskunde 70, 629–668. Vienna: Arbeitskreis für tibetische und buddhistische Studien, Universität Wien.
- Preisendanz, Karin. 2009. "Logic, Debate and Epistemology in Ancient Indian Medicine and Philosophy—an Investigation." *Indian Journal of History of Science* 44: 261–312.
- Rai, Vartika, Poonam Kakkar, Jyotsna Singh, Chetna Misra, Santosh Kumar, and Shanta Mehrotra. 2008. "Toxic Metals and Organochlorine Pesticides Residue in

- Single Herbal Drugs Used in Important Āyurvedic Formulation—‘Dashmoola.’” *Environmental Monitoring and Assessment* 143 (2008): 273–277.
- Ranade, Subhash, and Sachin Kuber. 2010. “Classification of Clinical Examination.” In *Āyurvedic Clinical Diagnosis with Modern Perspective*, 11–48. Delhi: Chaukhamba Sanskrit Pratisthan.
- Sankaranarayana, Manoj. 2013. “Texts and Physicians in Keralan Ayurveda: The Case of the Rescue Clyster.” In *Medical Texts & Manuscripts in Indian Cultural History*, edited by Dominik Wujastyk, Anthony Michael Cerulli, and Karin Preisendanz, 195–219. New Delhi: Manohar.
- Scharfe, Hartmut. 1999. “The Doctrine of the Three Humors in Traditional Indian Medicine and the Alleged Antiquity of Tamil Siddha Medicine.” *Journal of the American Oriental Society* 119 (4): 602–629.
- Sule, Manjiri, and Sirish Kavadi. 1993. “The Reality of Ayurveda Medical Practice with Some Perceptions from the Field.” *Foundation for Research in Community Health Newsletter* 7 (5): 8–10.
- Wujastyk, Dagmar. 2012. *Well-Mannered Medicine: Medical Ethics and Etiquette in Classical Āyurveda*. Oxford: Oxford University Press, 2012.
- Wujastyk, Dominik. 1997. “Medicine in India.” In *Oriental Medicine: An Illustrated Guide to the Asian Arts of Healing*, edited by Jan van Alphen and Anthony Aris, 19–37. London: Serendia Publications.
- Wujastyk, Dominik. 2008. “The Evolution of Indian Government Policy on Ayurveda in the Twentieth Century.” In *Modern and Global Ayurveda: Pluralism and Paradigms*, edited by Dagmar Wujastyk and Frederick M. Smith, 43–76. Albany: SUNY Press.
- Wujastyk, Dominik. 2011a. “Medical Error and Medical Truth: The Placebo Effect and Room for Choice in Ayurveda.” *Health, Culture and Society* 1 (1): 221–231.
- Wujastyk, Dominik. 2011b. “The Path to Liberation through Yogic Mindfulness in Early Āyurveda.” In *Yoga in Practice*, edited by David Gordon White, Princeton Readings in Religion, 31–42. Princeton, NJ: Princeton University Press.
- Wujastyk, Dominik. 2017. “What is ‘vimāna’ in the Compendium of Caraka?” Paper given at the International Congress on Traditional Asian Medicines, Kiel, Germany. August 9.
- Zysk, Kenneth G. 2000. *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery*. New York: Oxford University Press.
- Zysk, Kenneth G. 2009. “Sanskrit Commentaries on the *Carakasaṃhitā* with Special Reference to Jajjaṭa’s *Nirantarapadavyākhyā*.” *eJIM-eJournal of Indian Medicine* 2 (3): 83–99.
- Zysk, Kenneth G. 2013. “An Indologist Looks at Siddha Medicine in Tamilnadu.” In *Medical Texts and Manuscripts in Indian Cultural History*, edited by Dominik Wujastyk, Anthony Michael Cerulli, and Karin Preisendanz, 181–194. Delhi: Manohar.

Malayalam Sources

- Thirumulpad, K. Raghavan. 2014. *Ashtangasangraha Malayalam Commentary, Prakasika Vyakhya Moolasiddhantham*. 2nd ed. Chalakudy: Prakashika.
- Vaidyan, P.M. Govindan. 2015. *Ashtāṅgahrudayam Sūtrasthānam*. Kodalungallur: Devi Book Stall.
- Vaidyar, M. Narayanan Vaidyar. 2010. *Charaka Samhitha Nidanasthanam & Vimanasthanam*. Calicut: Redstar Offset Printers.
- Vaidyar, M. Narayanan Vaidyar. 2011. *Charaka Samhitha Sareerasthanam & Indriyasthanam*. Calicut: Redstar Offset Printers.

Sanskrit Sources

- Aṣṭāṅga Saṃgraha of Vāgbhaṭa: Text, English Translation, Notes, Indexes [Sic] Etc.* 1995. Translated by K.R. Shrikanthamurthy. 3 vols. Jaikrishnadas Ayurveda Series. Varanasi: Chaukhambha Orientalia.
- Aṣṭāṅgahrdaya with the Commentaries 'Sarvāṅgasundarā' of Aruṇadatta and 'Āyurvedarasāyana' of Hemādri*. 2012. Edited by K.R.S. Navare. Annotated by Aṇṇā Moreśwar Kuṇṭe and Kṛṣṇa Rāmchandra Śāstri. Kashi Sanskrit Series. Varanasi: Chaukhamba Sanskrit Sansthan.
- Aṣṭāṅgasamgrahaḥ of Vāhaṭa or Vṛddha Vāgbhata with the Śaśilekhā Sanskrit Commentary by Indu*. 2012. Edited by Dr. Shivaprasad Sharma. Banaras Ayurveda Series. Varanasi: Chowkhamba Sanskrit Series Office.
- Caraka-Saṃhitā by the Great Sage Bhagavata Agniveśa Thoroughly Revised by Maharṣi Caraka and Dṛḍhabala with 'Āyurvedadīpika' Commentaries of Śrīmat Cakrapāṇidatta and 'Jalpakaḥpataṛu' Explanatory Notes and Annotations of Mahamahopādhyāya Śrī Gaṅgādhara Kaviratna Kavirāja*. 2011. Edited and revised by Kaviraja Shree Narendranath Sengupta and Kaviraja Shree Balachandra Sengupta. 5 vols. New Delhi: Rashtriya Sanskrit Sansthan. Reprint of the 1985 edition.
- Carakasamhitā, Śrīcakrapāṇidattaviracitā Ayurvedadīpikāvyaḥkhyayā Saṃvalitā*. 2009. Edited by Vaidya Jadavaji Trikamji Ācārya. 5th ed. Varanasi: Chaukhamba Orientalia. Reprint of the 1941 Bombay edition.
- The Sushrutasaṃhitā of Sushruta with the Nibandhasaṅgraha Commentary of Shree Ḍalhaṇācārya*. 1931. Edited by Vaidya Jādvaji Trikamji Ācārya. 2nd ed. Bombay: Nirṇayasāgar Press.