



History of Science in South Asia

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia

Elements of the Buddhist Medical System

Federico Divino

University of Bergamo and University of Antwerp

MLA style citation form: Federico Divino. "Elements of the Buddhist Medical System." *History of Science in South Asia*, 11 (2023): 22–62. DOI: 10.18732/hssa97.

Online version available at: <http://hssa-journal.org>

HISTORY OF SCIENCE IN SOUTH ASIA

A journal for the history of all forms of scientific thought and action, ancient and modern, in all regions of South Asia, published online at <http://hssa-journal.org>

ISSN 2369-775X

Editorial Board:

- Dominik Wujastyk, University of Alberta, Edmonton, Canada
- Kim Plofker, Union College, Schenectady, United States
- Clemency Montelle, University of Canterbury, Christchurch, New Zealand
- Fabrizio Speziale, School of Advanced Studies in the Social Sciences (EHSS), Paris, France
- Michio Yano, Kyoto Sangyo University, Kyoto, Japan
- Gudrun Bühnemann, University of Wisconsin-Madison, USA
- Anuj Misra, University of Copenhagen, Denmark
- Aditya Kolachana, Indian Institute of Technology, Madras, India
- Dagmar Wujastyk, University of Alberta, Edmonton, Canada

Publisher:

History of Science in South Asia

Principal Contact:

Dominik Wujastyk, Editor, University of Alberta

Email: wujastyk@ualberta.ca

Mailing Address:

History of Science in South Asia,
Department of History, Classics and Religion,
2-81 HM Tory Building,
University of Alberta,
Edmonton, AB, T6G 2H4
Canada

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

Copyrights of all the articles rest with the respective authors and published under the provisions of [Creative Commons Attribution-ShareAlike 4.0](https://creativecommons.org/licenses/by-sa/4.0/) License.

The electronic versions were generated from sources marked up in [L^AT_EX](https://www.latex-project.org/) in a computer running GNU/LINUX operating system. PDF was typeset using [X_ƎT_EX](https://www.xetex.org/) from [T_EXLive](https://www.texlive.org/). The base font used for Latin script and oldstyle numerals was [T_EX Gyre Pagella](https://www.gust.com.pl/) developed by [gust](https://www.gust.com.pl/), the Polish T_EX Users Group.

Elements of the Buddhist Medical System

Federico Divino

University of Bergamo and University of Antwerp

INTRODUCTION

THE PURPOSE OF THIS WORK is to outline the ideas that underlay Buddhist medical thought. This will, requires us to reconstruct a true archeology of medical thought, going back in the works that tell us of an already systematized medical knowledge to identify the ideas that underlay it, the archetypes of Buddhist medical thought. This article is a study based on research focused on the medical system of Early Buddhism.

Previous publications on this research area have reflected on the claims of scholars, particularly Zysk, regarding the dual nature of traditional Indian medicine.¹ The so-called “empirical-rational” tradition, which Zysk considered to derive from the tradition of itinerant asceticism at the basis of movements such as Buddhism and Jainism, is also at the basis of Āyurveda. Based on these claims, I analyzed in a specific study the relationships between ascetic practice and the birth of medical conceptions in Buddhism.² In addition to these reflections, the study highlighted some elements of the medical system exposed in the Pāli Canon, highlighting its proto-Āyurvedic aspects and concluding that Zysk’s hypothesis on the common origin of the two systems may be founded. However, the analysis primarily focused on historical aspects, reflecting on the possibility that medical thought was at the basis of the Buddhist practice tout court, and that therefore the ascetic was a medicine-man, whose therapeutic intentions were interconnected with a theory of presence and transcendence.

The previous study did not sufficiently ponder on the textual and philological aspects that would allow to delineate the “system” at the basis of ancient Buddhist medicine. Whether such a system exists or not, and to what extent it is articulated at the time of the Pāli Canon will obviously be a matter of debate. The Pāli Canon presents only a few texts specifically dedicated to medical art, in

¹ Zysk 1982; 1991; 1993; 1995; 2021.

² Divino 2022; 2023b.



addition to numerous statements regarding the nature of health, disease, purity and impurity, which however appear sporadically in texts where the main theme is not necessarily medicine.

Attestations on the use of specific medical techniques are equally sporadic, as demonstrated by Salguero, and therefore those found in Buddhism are rather indirect evidence of a practice that may have been handed down in an ascetic environment but was not yet fully developed within a specific system.³ Nevertheless, it is still possible to draw comparisons between these ideas and those of Āyurveda or subsequent internal techniques within Theravāda Buddhism and other traditions that refer to the Pāli Canon and make use of magical and religious techniques.⁴ Examples include the Yogavacāra and the development of contemplative traditions. In light of these discoveries, documented in studies by Crosby (2020), Cousins (2022), Dennison (2023), Wujastyk (2009; 2012; 2022) and others, to what extent is it possible to trace clear antecedents to these techniques in the Pāli Canon?

In addition to analyzing elements of Buddhist medical thought that can be considered precursors to the more structured Indian traditional medical system, we will also look at the *Bhesajjamañjūsā*, the first medical treatise written entirely in the Pāli language. Although it is a very late work, probably produced in the thirteenth century in Ceylon by a Theravada monk named Pañcaparivenādhpati who wrote during the rule of Parakkamabāhu II, it is still the first systematization of medical art within the Buddhist context. The treatise has numerous affinities with other medical treatises such as the *Aṣṭāṅgahṛdayasaṃhitā*, with which it shares about one-third of its contents. Our interest in the *Bhesajjamañjūsā* is therefore of a compendial nature: what prompted Pañcaparivenādhpati to select certain elements from previous Āyurvedic literature rather than others? Which were considered legitimately insertable within the Buddhist framework, in what ways, and why? We can surmise that Pañcaparivenādhpati had extensive knowledge of the Pāli Canon and thus sought to align his medical system with the most authoritative one testified to in the episodes of the Buddha's life.

The study of the medical tradition in ancient Buddhism has suffered quite a bit from the greater popularity among scholars of epistemologies such as Āyurvedic, which are considered well established because of the breadth of their sources. When we read the wording "Buddhist medicine" used, it usually, although not always, refers to the study of the much more diffused and popularized Tibetan medical tradition. Such usage, however, is characteristically metonymic: taking a part, the most representative one, for the whole. Although

³ Salguero 2015; 2022.

⁴ In furtherance of this objective, it is advantageous to reference both Mazars' seminal publication (Mazars 2008) and the

older scholarship of Mitra (1985). See also Salguero (2015) for a bibliographical outline.

Tibetan Buddhist medicine is to this day considered the perfect example of Buddhist medicine, it must be said that throughout the Pāli Canon examples of a Buddhist medical art abound, the only fault of which is that it has not been systematized. The scholar who has lent the most legitimacy to the study of ancient Buddhist medicine is Zysk, who affirmed the possibility of studying early Buddhist medicine in a 1995 article.⁵

In his article, Zysk cites several passages from the Canon, as well as some medical terms which are clarified when compared to already established Āyurvedic knowledge. He hypothesizes in his renowned study of ascetic medicine (Zysk 1991) that the common root of Buddhism and medicine lies in the knowledge of ancient ascetic healers, which would explain why the earliest references of Āyurvedic medical theories are found in the Pāli Canon (SN: 36.21) rather than in medical treatises.⁶

The first discourses pertaining to medicine or forms of therapy in the Pāli Canon are widely known and referenced in nearly all studies concerning early Buddhist medicine. Salguero's anthology encompasses the majority of pertinent suttas, particularly in the initial chapter crafted by Jones (2017). It is not my purpose to reiterate the contents of these suttas, as they have already been translated by the aforementioned authors. Rather, we shall attempt to outline the kind of system, if any, which can be identified from these texts, by way of a selection of their most significant verses.⁷

Recently, the discourses of the Pāli Canon are also being recognized for their medical value and are being studied from a clinical perspective,⁸ possibly also in light of the applications made of Buddhist practices (mindfulness and new contemplative practices as a striking example) in the contemporary world. But if it is possible to outline an archaic Buddhist medical system, however rudimentary, which is also suitable to better understand its evolution over time and its possible role in defining Indian traditional medicine, it is also appropriate to compare this system of thought to other contemporary ones to those of the Buddha. I think, for example, of the Hippocratic medicine, which has shown remarkable similarities with the Āyurvedic one, albeit with expectable differences too.⁹

In the first part of this study, I aim to outline the main elements that we can attribute to the medical conception of ancient Buddhism in an academically rigorous manner. To accomplish this, we will undertake a comparative analysis that spans the past, beginning with an introduction to the primary texts written in Pāli that systematically discuss medicine. In the concluding sections of this work, our comparative analysis will adopt a more diachronic approach. While

5 Zysk 1995.

6 Zysk 1995: 149.

7 Except where otherwise noted, all transla-

tions from Pāli are the author's.

8 Giustarini 2017.

9 Zysk 2021.

the primary aim of this study is not to compare different phases of Buddhist medicine, I contend that it is worthwhile to examine texts in which the ancient conception of medicine in Buddhist thought – which can only be gleaned from an analysis of the suttas of the Pāli Canon – is subsequently systematized within a more intricate methodology. Specifically, I refer to two texts that can be considered “treatises” on medicine: the *Bhesajjakkhandhaka* and the *Bhesajjamañjūsā*. The first, although not an actual treatise, is a section within the Canon that alludes to a historical period when Buddhism possessed a more organized internal structure and a robust monastic community. Despite being arguably more recent than most of the Nikāyas, it can offer us a compelling comparative perspective when juxtaposed with the *Bhesajjamañjūsā*, thus providing us with a broader historical framework spanning three macro-areas. Nevertheless, as I have noted, this paper does not primarily seek to engage in comparative analysis, but rather employs comparison where necessary to achieve the main objective, which is to ascertain the extent to which an early Buddhist medical tradition can be discerned. Salguero has already speculated that there was an early Buddhist tradition of medicine that was distinct from Āyurveda;¹⁰ however, his claims have not yet been subject to systematic investigation, which I hope to contribute to here.

The *Bhesajjakkhandhaka* (henceforth **BhK**), is found in the Khandhaka collection of the Theravāda *Vinayaṭīkā* (Khandhaka 6). This section, is categorized as a component of monastic regulations. As such, it should be perceived as a framework intended to guide members of the community in handling emergencies related to illness. However, we can identify several facets of **BhK** that offer insights into Buddhism’s traditional medical perspective developed beyond the Early Buddhist medical insights.

The *Bhesajjamañjūsā* (**BhM**), which was referenced earlier in the introduction, serves as a second source of information for our comparative purposes, allowing us to recognize which ancient elements have been retained in the selection made by the author of **BhM** to delineate a medicine that is considered “Buddhist.” Additionally, it helps us identify elements that have been altered or added, and the reasons for doing so. Naturally, **BhM** was written with a dual reference. One was undoubtedly related to the Āyurvedic treatises available in the thirteenth century, with the *Aṣṭāṅgahṛdayasaṅhitā* being the primary source. The other reference pertains to the author’s selection and personal reworking of the material, which must have been undertaken in constant dialogue with the Canonical literature. We shall see that various episodes relating to medicine are discussed in this literature. This dialogue must have undoubtedly led to mediations and contaminations, resulting in **BhM** being an original product in some respects, though it has been little studied to date.

¹⁰ Salguero 2022: 36–38.

The **BhK** provides regulations on permissible medicines and medical treatments. Prohibitions against certain types of meat consumption and cooking by monastics are included. This chapter also contains accounts of significant individuals who helped the early Buddhist community.¹¹ Additionally, the conversion of general Siha and the exceptional layman Menḍaka are featured, after whom the Menḍaka allowance is named. This allowance allows lay supporters to establish a fund with a steward who will provide necessary items to designated monastics in need. The chapter concludes with four general principles to guide monastics in determining what is permissible. It should be noted that the **BhK** model primarily employs narratives, unlike the **BhM** which follows a more formal treatise structure.

The **BhK** employs a classic sutta structure, revealing a series of episodes in which monks fall ill and receive treatments. The Buddha sometimes permits or prohibits certain treatments. What is interesting is that the Buddha often authorizes treatments that are not effective, necessitating the use of trial and error until the desired results are achieved. This process can be interpreted in several ways. For example, it contextualizes certain monastic rules established during a “historical” episode. However, it is also possible that these stories were invented to legitimize the use of certain treatments with the Buddha’s authority. It is unclear how much of these stories are historically accurate or influenced by other medical traditions forming during that era. Additionally, the **BhK** notes that when monks surround themselves with luxurious objects, the Buddha intervenes by forbidding objects that serve no useful purpose and authorizing only modest ones with a strictly medical function.

The **BhK** has already been taken as a model for previous studies that have attempted to draw a general picture of Buddhist medical practice, and even when its contents have been mentioned indirectly the **BhK** remains to this day the primary source for these studies. I am referring in particular to Salguero (2015; 2022) and Zysk (1991; 1995), who provides a first list of medicinal herbs included

¹¹ In this article, we shall refrain from emphasizing the historical dimensions or the key figures associated with the medical events described in Buddhist texts. Instead, our aim is to provide a comprehensive overview of the principles that underpinned the ancient Buddhist medical perspective. Consequently, we will not specifically address the figure of the Buddha’s personal physician, primarily because other scholars have already given due consideration to this subject. Buddhist literature mentions indeed a very gifted physician, Jīvaka, who was es-

teemed by the Buddha himself and is said to have served as his personal physician. We will not deal with his figure here, except for the remedies and medical art he used, which are described in the Canon. Certainly, this figure would show, at least in appearance, that the role of the physician, able to apply certain techniques already codified, was already clearly defined at the time of the Buddha. Zysk had already found that some of the methods used by Jīvaka were considerable as basic Ayurvedic treatments (Zysk 1982).

in the Buddhist tradition. The *BhK* is divided in internal sections which I will use as guidance paragraphs. For example, the section on five tonics (*Pañcabhesajjakathā*, *BhK* 1), or the section on the root of medicine (*Mūlādibhesajjakathā*, *BhK* 2), and so on.

At the time of my research, the edition of the *Bhesajjamañjūsā* published by the Pali Text Society comprised two volumes edited by Jinadasa Liyanaratne. The first volume (Liyanaratne 1996) includes an introduction to the text (pp. 1–37) and the edition of the first eighteen chapters. The second volume (Liyanaratne 2009) contains the remaining chapters up to the sixtieth. Only the first volume has been translated, and this translation, also published by the Pali Text Society (Liyanaratne 2002), served as my reference for passages from *Bhesajjamañjūsā* 1–18. Therefore, I will cite Liyanaratne’s translation directly, without indicating the specific page in Liyanaratne 2002, as the chapter and paragraph divisions of the *Bhesajjamañjūsā* editions are consistent between the original edition (Liyanaratne 1996) and the translation (2002). As for *Bhesajjamañjūsā* 19–60, I relied on the original edition (Liyanaratne 2009) as my source. The abbreviation *BhM* refers to the above sources as described.

The *BhM* presents a straightforward concept of medicine based on the balance of humors. The increase or decrease of certain humors corresponds to the increase or decrease of related qualities (*BhM* 1.69–70). Conversely, a state of balanced humors ensures bodily health (*BhM* 1.90).

1 THE FIRST BUDDHIST MEDICAL SYSTEM

THE OLDEST SECTION of the Pāli Canon where medical matters are mentioned is the *Sutta Nipāta* (henceforth *Sn*).¹² The Buddhism of the *Sn* seems to outline an idea of health and disease that unfolds from two specific axes: that of *roga* and that of *dukkha*. Both of these forms of illness, discomfort or unhealthiness, have their opposites: *aroga*, health, and *sukha*, joy. Buddhism shows numerous terms to indicate diseases, and often their use in the Pāli Canon implies that some of them are not simple synonyms, but rather technical specifics. However, *roga* and *dukkha* monopolize the discourse on discomfort in a way that leads us to think that all the other terms indicating the condition of non-health fall into one of these macro-categories.¹³ In *Sn* 4.4 illness is mentioned only to address the

¹² I have dedicated a separate study to discuss the antiquity of this section, concluding that *Sn* 4–5 share a remarkable antiquity (Divino 2023a). However, I will consider also *Sn* 1–3 in this first part of the study, since these books are part of the same col-

lection in the Khuddaka Nikāya, and also because it cannot be excluded that even *Sn* 1–3, especially the parts in poetry, retain elements of considerable antiquity.

¹³ See Divino 2022.

Mundane dimension (<i>lokiya</i>)		Ultramundane dimension (<i>lokuttara</i>)
<i>dukkha</i>	<i>roga</i>	<i>sukha</i>
	<i>asuddha</i>	<i>parisuddhi</i>
Existential suffering	Purity and health binomials	Condition in <i>nibbāna</i>

Table 1: Mundate and ultramundane

state of ultimate purity, which corresponds to that of ultimate wellness (*suddham paramam arogam*).¹⁴

In Pāli Buddhism, the concept of transcendence from dualism is prevalent, particularly in the medical field, where it is viewed as a worldly and ultramundane phenomenon. Purity and impurity are recognized as real phenomena, much like health and disease. However, they are considered as possibilities that are subject to opinions (*ditṭhi*) and are confined to worldliness (*lokiya*). There exists a state of absolute, non-dual purity, which does not include antinomian and worldly concepts such as “healthy” and “sick” but pertains only to ultra-mundane purity (*paramam suddham*). It is essential to bear in mind that the Buddha affirms that the work of doctors, which focuses on the healthy and the sick, is not inherently wrong and has its usefulness (AN 10.108). However, it is limited to worldliness. Aspiring to the ultra-mundane, the ascetic can attain definitive purity and a state of total absence of disease, which is beyond the reach of doctors and their worldly medicines.¹⁵

¹⁴ Purity is a well-known issue of medical and religious anthropology. In the context of the body perception and anthropological preservation of its integrity, the binomial pure/impure plays a fundamental role. The binomial concept of purity and impurity is often associated with an anthropological approach to managing health matters, which includes maintaining bodily integrity, preventing illnesses, and preserving sacredness (Rapport 2008). This connection between purity and the religious dimension is expected, as it is often intertwined. Even in Buddhism, this combination is linked to the theme of purity, which should not be surprising. As previously demonstrated (Divino 2023b), Buddhism assimilates the anthropological theme of purity and adapts it to its own doctrine. Buddhism places

a strong emphasis on medical issues and extends medicine to meditative practices, viewing it as the most exceptional form of therapy. This belief leads the Buddha to attain a state of supreme purity (*parisuddhi*), allowing him to overcome all forms of dualism, including the division between purity and impurity (Dhammajoti 2021).

¹⁵ Debates and discussions are also seen as unproductive and harmful (Snp 4.8). Anyone who seeks only debate to assert his superiority is certainly not pure, despite the potential claim “this alone is purity” (*idheva suddhī iti vādayanti*), for real purity “is not spoken in terms of opinion” (*na ditṭhiyā na sutiyā na nāmena*, Snp 4.9). The same discourse is reiterated in Snp 5.8 (*ditṭhasutenāpi vadanti suddhiṃ*).

After examining the implications of *Sn*p 4.4, it becomes evident that the notions of purity and impurity are relegated to a mundane level, one which the ideal brahmin does not utilize to elevate himself above others. However, it is worth noting that the belief that the body becomes ill due to misbehavior is still present in other areas. This includes behaviors that are frequently mentioned in medical treatises, such as nutrition and exposure to environments that cause imbalances in bodily humors. Additionally, psychological factors such as false opinions, attachment, aversion, and ignorance can also contribute to physical ailments. Because of this “extended” conception of medicine, we cannot expect to find a strictly biology-oriented system. Nevertheless, it is a well-known fact that the conception of what is defined as “healthy” and what is defined as “ill” varies depending on the cultural idea of the body, illness and healing.¹⁶

2 ILLNESS BETWEEN SUFFERING AND DISEASE

EARLY BUDDHISM shows a peculiar conception on what is a “disease” in general. The discourse in *SN* 46.14 elucidates the condition of Mahākassapa, who was gravely ill and suffering (expressed in the formula *ābādhiko dukkhito bāḥagilāno*). This sutta postulates that illness is merely a manifestation of ignorance. The Buddha instructed Mahākassapa to develop the seven awakening factors (mindfulness, investigation of principles, energy, rapture, tranquility, immersion, and equanimity) to attain *abhiññā*, or “superior knowledge,” which would result in the eradication of his affliction (*satisambojjhaṅgo kho, kassapa, mayā sammadakkhāto bhāvito bahulīkato abhiññāya sambodhāya nibbānāya saṃvattati*). The same formula is reiterated in other discourses, with the subject of the prescription varying: Moggallāna (*SN* 46.15) and Cunda (*SN* 46.16). Then, *SN* 47.9 mentions the Buddha’s illness, referred to as *gilānā* “unwell, sick.” Here, it is noted that the Buddha recuperated and was visited by Ānanda, who was deeply concerned about his mentor’s well-being. Ānanda attests to feeling disoriented and drugged, unable to recall the Buddha’s teachings when his teacher was ill (*api ca me, bhante, madhurakajāto viya kāyo, disāpi me na pakkhāyanti, dhammāpi maṃ nappaṭibhanti bhagavato gelaññena*). This is perhaps one of the most remarkable instances of empathetic somatization in antiquity, demonstrating how anxiety and concern for others could also cause physical impairment. Nonetheless, the

¹⁶ Medical anthropology has identified in the modern Western conception the possibility of distinguishing between illness, disease, and sickness, as a subjective, clinical and social dimension respectively (Hofmann 2002). However, this model is not perfectly applicable to medical systems

born in different cultural environments, as is the case with Buddhism. Therefore, we should not ignore cultural factors and acknowledge that they also act on an organizational level, putting health and illness, with different degrees of severity or nature, into real medical systems.

Buddha did not console Ānanda, who expected him to resume his role as a guide. Rather, the Buddha disclosed that he never intended to be a leader, especially in his old age, weariness, and his teachings' widespread dissemination. The Buddha advised Ananda to refer to himself, rather than a spiritual leader (*tasmātihānanda, attadīpā viharatha attasaraṇā anaññasaraṇā, dhammadīpā dhammasaraṇā anaññasaraṇā*). This text employs the pretext of illness to elucidate the Buddha's teachings' true nature while also revealing that he was not immune to ailments and obstacles from which he had to recover.

Beyond these general considerations, it is evident that Buddhism embodies a complex and multifaceted conception of illness and suffering, albeit not as varied as the terms used to describe it. Generally, however, we can discern an axis that distinguishes existential discomfort, which falls within the realm of *dukkha* and related terms such as *ābādha*, the latter being the most commonly associated term with *dukkha* and a conception linked instead to a more purely clinical understanding of illness. This understanding is defined as a medical condition and encompasses dysfunctions of the body and physiology more broadly. The most commonly used terms in this context are "disease (*roga*)" and "illness (*byādhi*)", which may indicate both physical illnesses and mental or cognitive illnesses.¹⁷

The term *dukkha* is the only one explicitly associated with a state of deep dissatisfaction beyond physical pain or sickness; a kind of suffering that is not merely bodily nor mental.¹⁸ This term does not refer to any particular medical condition, although a particular disease may exacerbate the state of *dukkha*. However, the state of *dukkha* is a general condition that is constantly present in the life of everyone except a Buddha. It is a term that refers to an existential discomfort that is due to the condition of humanity itself: accidents of life such as illness, injustice, grief over the loss of a beloved object can intensify it, but it never disappears in normal conditions, and it is always present as a risk of which the human unconscious seems to be perfectly aware. Therefore, no one ever ceases to experience the state of *dukkha* unless he attains perfect enlightenment. Thus, if we can associate *dukkha* with some kind of melancholy or clinical condition, we should bear in mind that this discomfort cannot be interpreted strictly as a medical condition, even if it includes pathological conditions too.

The lengthy compound term *sokaparidevadukkhadomanassupāyāsā* often appears in association with the concept of *dukkha* in Buddhist literature. This term is composed of *soka* (grief), *parideva* (lamentation), *dukkha* (sorrow), *domanassa* (dejection), and *upāyāsā* (disturbance). While acknowledging the potential danger of using the concept of "depression" in a Buddhist context, I find it more accurate than a mild expression about pain or suffering, which would not convey the combined power of all these terms.

¹⁷ See Nandisena Bhikkhu 2012; Sumanacara 2012.

¹⁸ Ratnam and Rao 2003; Trungpa 2009; Teasdale and Chaskalson 2011.

Various technical terms associated with the sensation of discomfort or unease, which can be traced back to *dukkha*, can be found. For instance, DN 10.60 depicts venerable Girimānanda as being “extremely sick” (*bāḷhagilāno*, derived from *bāḷha* meaning “intense” and *gilāna* meaning “unwell” or “unease”) or simply “ill” and “oppressed” (*ābādhiko*). Both of these terms refer to a general state of uneasiness or discomfort related to existential discomfort and thus associated with suffering. The condition of Girimānanda appears to be more of an existential nature than a strictly clinical one: *āyasmā girimānando ābādhiko hoti dukkhito bāḷhagilāno*. The combination of *ābādhiko dukkhito bāḷhagilāno* underscores the centrality of *dukkha* as the leading term of the triad.¹⁹ Therefore, the concept conveyed in this sutta is that of an existential discomfort. Consequently, the therapy employed is of the sapiential kind rather than the pharmacological one.

*sace kho tvam ānanda girimānadassa bhikkhuno dasa saññā bhāseyyāsi
 ṭhānaṃ kho panetaṃ vijjati yaṃ girimānadassa bhikkhuno dasa saññā
 sutvā so ābādho ṭhānaso paṭippassambheyya*

Ānanda, if you were to recite to the mendicant Girimānanda these ten conceptions, it’s possible that after hearing them his illness will immediately collapse down.

As evident from this passage, there are authentic conceptual signs (*saññā*) that can help overcome *dukkha* and its associated conditions. As the sutta will explain, these signs coincide with fundamental teachings of Buddhism: the sign of impermanence, the sign of not-self, the sign of foulness, the sign of inadequacy, the sign of abandoning, the sign of detachment, the sign of cessation, the sign of dissatisfaction for the “entire world,” the sign of impermanence of the entirety of cognitive constructions, and the mindfulness of breathing (*aniccasaññā, anattasaññā, asubhasaññā, ādīnavasaññā, pahānasaññā, virāgasaññā, nirodhasaññā, sabbaloke anabhiratasaññā, sabbasaṅkhāresu anicchāsaññā, ānāpānassati*). The only medicine which is not a *saññā* seems to be also the practical yogic exercise of breathing (*ānāpānassati*). In any case, this therapy is successful, and the protagonist of the sutta heals completely.

¹⁹ Based on its usage, we are confident that the term *ābādha* signifies discomfort that is not linked to “dysfunction” (*roga*), which is reserved for physical impairments such as visual (*cakkhurogo*), tongue (*jivhārogo*), or more generally bodily (*kāyaro*) impairments, including the head (*sīsaro*). Additionally, if we incorporate cognition as a mechanism, the dysfunction of cognitive

mechanisms (*cetasiko rogo*) discussed previously would fit aptly within the concept of disease as dysfunction (*roga*). Moreover, the use of *ābādha* does not signify a disease suffered by an individual (like the term *byādhi*). Although other Pāli words, such as *ātāṅka, akalla, amaya, gada, gelaññā*, and *ruja* (related to *roga*), are less frequently used, they are still employed to refer to disease.

There are also other passages in which we can find minor terms related to the concepts of disease in various ways. These passages aid in our comprehension of the conceptions underlying the technical usage of these words. The terms *ābādha* and *byādhi* are the most likely candidates to be nuances of mundane forms of suffering and sickness. However, these terms seem to appear quite often in relation to *dukkha* or *roga*, albeit in different shades. While *ābādha* appears more often in relation to *dukkha* to signify the worldly affliction that relates to existential suffering, the other term, *byādhi*, seems to apply to pains directly related to medical conditions, even if these too seem to be referable to the idea of *dukkha*.

For instance, in MN 39, *ābādha* is linked to *dukkha* and *bāḷhagilāno* in a standard formula: “suppose a person was sick, suffering, and gravely ill. They’d lose their appetite and get physically weak.” Then, in DN 3.36, we find another example (*purisaṃvā ābādhikaṃ dukkhitaṃ bāḷhagilānaṃ*). However, in DN 6.63, we encounter this formula: “*jāti’pi dukkhā, jarā’pi dukkhā, byādhi’pi dukkho,*” which means “birth is suffering, ageing is suffering, sickness is suffering.”

There are also passages where the concept of illness is treated separately, such as in DN 5.57, where the Buddha himself employs this very term to elucidate the possibility that he himself may somehow fall ill:

It is not just me who is liable to become ill, being not exempt from illness. For all sentient beings, as long as they come and go, pass away and are reborn, become ill according to their nature”.²⁰

This sutta appears to emphasize the compassionate vision of the Buddha and how ascetic practice envisions a reality that also leads to the acceptance of the meaning of illness, before allowing it to be overcome:

For other people, illness is natural, like old age and death; although this is how their nature is, ordinary people feel disgusted; but if I were to be disgusted with beings with such a nature, it would not be appropriate for me, for my life is just the same”.²¹

In many respects, *byādhi* appears to be a pathological condition encompassing both physical and psychological illnesses.

The concepts of *dukkha*, *ābādha*, *roga*, and *byādhi* have been the subject of various studies by different scholars. One particularly interesting perspective was presented by Sumanacara (2012: 125), who drew a distinction between *dukkha*

²⁰ *na kho ahaññeveko byādhidhammo byādhiṃ anatīto, atha kho yāvataṃ sattānaṃ āgati gati cuti upapatti sabbe sattā byādhidhammā byādhiṃ anatīta/*

²¹ *byādhidhammā jarādhammā, atho*

maraṇadhammino; yathā dhammā tathā sattā; jigucchanti puthujjanā; ahañce taṃ jiguccheyyaṃ, evaṃ dhammesu pañisu; na metaṃ patirūpassa, mama evaṃ vihāriṇo/

and its related terms. According to Sumanacara, *dukkha* “has a wider philosophical meaning including un-satisfactoriness, unhappiness, distress, discomfort, dissatisfaction, sorrow, affliction, anxiety, anguish, and so on,” thus, it cannot be reduced to the sole “suffering.” Additionally (p. 126), Sumanacara identifies four aspects in which *dukkha* can be recognized:²²

1. the dimension of mundane life, which includes birth, decay, disease (referred to as *byādhi*), and death;
2. affliction (*domanassa*) and despair (*upāyāsa*), along with a broader range of malaise, which includes sorrow (*soka*), lamentation (*parideva*), and others;
3. the connection with undesired feelings or the sense of disgust, dislike (*appiyehi sampayogo*), or separation from the beloved (*labhati tampi*); and finally,
4. all five aggregates are identified as *dukkha*.

It is important to note that there exists a clear technical distinction between the profound and generalized suffering described by *dukkha* and the medical conditions recognized by physicians, referred to as *roga*. The latter term specifically indicates a technical view of a disease that can afflict a specific part or function of the body, such as the eye, ear, nose, the entire body, or cognition, among others.²³ The Buddhist Canon provides a long and detailed list of different diseases (*rogas*) that a physician may encounter, which are specifically related to humor imbalances and other conditions, such as climate, careless behavior, violence, or inappropriate actions.²⁴ As such, the distinction between *roga* and *dukkha* is not one of body/mind type. Even cognitive diseases, called *cetasika roga*, i.e. “cognitive disease,” fall within the medical sphere. The dimension of *roga* itself can be further distinguished into *kāyika* (bodily) and *cetasika* (cognitive). However, it must be noted that the Buddhist conception of cognitive disease is not necessarily equivalent to the modern biomedical concept of mental illness.²⁵

Nonetheless, apart from the general distinction between existential discomfort (*dukkha*) and the medical condition (*roga*), there are still passages that implicitly say that what can grant complete liberation from *dukkha* (i.e., “knowledge”) works analogously for *roga*, although the opposite (medicines and medical therapies) is not sufficient.

In *Snp* 3.6, the condition of *roga* is identified with the proliferation of name-and-form (*papañcanāmarūpa*). Once the ascetic has studied this process “inside and outside,” he also discovers the root of disease (*rogamūla*). This condition implies the releasement from all disease (*sabbarogamūlabandhanā pamutto*). This person is called rightfully a “learned one” (*anuvidita*). *Snp* 3.6 is focused mainly

²² Sumanacara 2012: 126.

²³ Sumanacara 2012: 129.

²⁴ Sumanacara 2012: 129–130.

²⁵ See Nandisena Bhikkhu 2012.

on the deceptiveness of life, and how a trained ascetic can overcome these deceptive elements, obtaining enlightenment. The rightful ascetic is praised for having gone to the end (*antagūsi*), thus having overcome every suffering (*pāragū dukkhassa*). Because of mentioning both *roga* and *dukkha* as superable through similar means, it is difficult to determine clearly what is the position on *roga* here.

The distinction between psychical and physical illnesses is introduced again at the outset of the *BhM*. These ailments are classified within the sphere of *ābādhā*, which is considered to be twofold (*dvidhābādhā*).²⁶ However, this classification is also believed to be applicable to two different levels of medicine. Mental illness (*mano*), for instance, is considered to be a matter of “religious” concern, implying that the path to *dhamma* and contemplative practice are deemed more than sufficient for addressing this issue. Nonetheless, a distinction between diseases of the mind or cognition and medical conditions or diseases of the body predates the *BhM*.

3 ANATOMY AND BODY

THE BODY occupies a central role in the teachings of Buddhism, reflecting the preoccupation with the elimination of suffering and the attainment of enlightenment. The Buddha’s emphasis on the importance of maintaining good health and the absence of illness is evident in his own acknowledgment of the risk of falling ill, as well as in the meticulous analysis of the body found in various anatomical suttas. The Buddha’s surgical gaze dissects the manifold parts of the body, revealing a deep and detailed anatomical knowledge. However, despite the apparent focus on the body, the Buddha emphasizes its impermanence and the ephemerality of all things. This deconstruction of one’s identity through meditation parallels the dissection of the body, both of which are exercises in confronting the transience of life. The Buddha’s anti-Brahmanic position is also evident in his rejection of the Brahmanic authority and rituals, as seen in his use of the putrefied body to illustrate the proliferation of diseases resulting from the killing of animals (see also the *Maraṇasati* meditation). This part of the paper aims to explore the conception of the body in Buddhism, examining its anatomical knowledge, its relationship with illness and healing, and its significance in the quest for enlightenment.

Tracing a general idea of the body in Buddhism can be accomplished by examining the discourses in which it is mentioned. In this section, we will focus on a selection of the most important ones. The so-called “anatomical suttas” are numerous and can be traced back to *Snp* 1.11, which describes the various functions and potentialities of the body. Here, it is stated that the body is “held together”

²⁶ *BhM* 1.18

by bones and sinews, which conceal its internal organs beneath flesh and skin, thus obscuring its true nature. This preoccupation with the dismemberment of the body is found elsewhere, and in each dissection, the various components of the body are listed with anatomical precision. This also occurs in DN 3.36, 4.157, 5.78, 9.34, 10.60, and 10.108. There is a clear idea of the body in its spatial determination, and to underscore its impermanent nature, it is also compared to a building.

*seyyathāpi āvuso kaṭṭhañca paṭicca valliñca paṭicca tiṇañca paṭicca mat-
tikañca paṭicca ākāso parivārīto agāraṇteva saṅkhaṃ gacchati; evameva
kho āvuso aṭṭhiñca paṭicca nhāruñca paṭicca maṃsañca paṭicca cammañca
paṭicca ākāso parivārīto rūpanteva saṅkhaṃ gacchati...*

When a space is enclosed by sticks, creepers, grass, and mud it becomes known as a “building.” In the same way, when a space is enclosed by bones, sinews, flesh, and skin it becomes known as a “form”.²⁷

The *Satipaṭṭhānasutta* (MN 10 and DN 22) is not only a text that contains basic elements for mindfulness practice, but it also presents written notions that could be considered a part of the anatomical knowledge of Buddhist medical thought. It is uncertain whether the anatomical descriptions found in this text have a purely representative function or if they instead constitute a concrete testimony of a sapiential framework concerning the anatomy of the human body.

As is widely acknowledged, the primary focus of the text under examination is contemplation, and it exhorts the practitioner to concentrate on various elements, including one’s own breath (*satova assasati, satova passasati*), one’s body (*kāye kāyānupassī viharati*), and one’s very presence, whether standing or sitting (*hito vā ‘ṭhitomhī’ti pajānāti, nisinno vā 1nisinnomhī’ti pajānāti...*). The overall framework posits a state of “presence” through exercises in concentration. This technique can be considered a foundational skill for more advanced forms of meditation. Specifically, mindfulness seeks to acknowledge the existence of a dual, superimposed reality pertaining to particular aspects of human psychosomatics, such as the body, cognition, sensation, and dharma, which can be understood as the norm. Each of these aspects possesses its own internal image, metaphorically construed as “inside” the primary one, as exemplified by the well-known refrain on the “x in x” model, such as “cognition within cognition” (*citte cittānupassī viharati*) for each of these four elements. This reflects a profound psychological analysis in the text, but our focus now is on the anatomical dimension and the conception of the body on an organic level.

²⁷ MN 28.

The juncture at which the Buddha expounds upon his anatomical vision is when he speaks to us of impurities. This reveals a connection between internal organs and the question of purity. The general axis around which the idea of purity develops is precisely that of inside/outside (see also Table 2). What is inside the body must remain inside, and the outflow of what should be internal involves its passage into a state of impurity. This explains why, in cultures that adopt this vision, the figure of the surgeon is highly problematic, as they are constantly in contact with impure fluids and organs. However, the Buddha prompts us to reflect on purity as a concept, considering it in its dualistic relationship. Buddhism generally rejects dualism, coming to consider it as true impurity, in a paradoxical conception whereby conceiving the world on a dualistic categorical basis as pure and impure is a source of misleading and therefore of disease (the highest impurity), while there would be an ultra-mundane purity (*suddham paramaṃ arogaṃ*,) beyond the dualisms of pure and impure. There is therefore a clear distinction between the ontological truth, so to speak, and the pragmatic fact, with which a healer must mediate from the early Buddhist point of view. The body is therefore a vehicle of impurity. In the passage of DN 22, dedicated to the contemplative analysis of the repulsive aspects of the body (*kāyānupassanāpaṭikūlamanasikārapabba*), we read the following passage:

puna caparaṃ, bhikkhave, bhikkhu imameva kāyaṃ uddham pādatalā adho kesamatthakā tacapariyantaṃ pūraṃ nānappakārassa asucino paccavekkhati atthi imasmim kāye kesā lomā nakhā dantā taco maṃsaṃ nhāru atthi atthimiñjaṃ vakkam hadayaṃ yakanam kilomakam pihakam papphāsam antam antagaṇam udariyaṃ karīsam, pittaṃ semham pubbo lohitaṃ sedo medo assu vasā kheḷo siṅghāṇikā lasikā muttanti. seyyathāpi bhikkhave ubhatomukhā putoli pūrā nānāvihitassa dhaññassa, seyyathidaṃ — sālīnaṃ vīhīnaṃ muggānaṃ māsānaṃ tilānaṃ taṇḍulānaṃ. tamenam cakkhumā puriso muñcitvā paccavekkheyya ime sālī ime vīhī ime muggā ime māsā ime tilā ime taṇḍulāti.

evameva kho, bhikkhave, bhikkhu imameva kāyaṃ uddham pādatalā adho kesamatthakā tacapariyantaṃ pūraṃ nānappakārassa asucino paccavekkhati atthi imasmim kāye kesā lomā ...pe ...muttanti. iti ajjhantaṃ vā ... pe ... evampi kho bhikkhave bhikkhu kāye kāyānupassī viharati.

Furthermore, a mendicant examines their own body, up from the soles of the feet and down from the tips of the hairs, wrapped in skin and full of many kinds of filth.

“In this body there is head hair, body hair, nails, teeth, skin, flesh, sinews, bones, bone marrow, kidneys, heart, liver, diaphragm, spleen, lungs, intestines, mesentery, undigested food, feces, bile, phlegm, pus, blood, sweat, fat, tears, grease, saliva, snot, synovial

fluid, urine.”

It's as if there were a bag with openings at both ends, filled with various kinds of grains, such as fine rice, wheat, mung beans, peas, sesame, and ordinary rice. And someone with good eyesight were to open it and examine the contents: “These grains are fine rice, these are wheat, these are mung beans, these are peas, these are sesame, and these are ordinary rice.”

In the following sections, there are intriguing questions regarding the body's physiological functions that are linked to fundamental elements. Before delving into a discussion of these issues, I will present a selection of the most intriguing parts.

puna caparaṃ, bhikkhave, bhikkhu imameva kāyaṃ yathāṭṭhitam yathāpaṇihitam dhātuso paccavekkhati. 'atthi imasmiṃ kāye pathavīdhātu āpodhātu tejodhātu vāyodhātū' ti ...seyyathāpi bhikkhave dakkho goghātako vā goghātakantevāsī vā gāviṃ vadhitvā catumahāpathe bilaso vibhajitvā nisinno assa. evameva kho bhikkhave bhikkhu imameva kāyaṃ yathāṭṭhitam yathāpaṇihitam dhātuso paccavekkhati. tthi imasmiṃ kāye pathavīdhātu āpodhātu tejodhātu vāyodhātū' ti [...]

puna caparaṃ bhikkhave bhikkhu seyyathāpi passeyya sarīraṃ sivathikāya chaddītam ekāhamataṃ vā dvīhamataṃ vā tīhamataṃ vā uddhumātakam vinīlakam vipubbakajātam ... so imameva kāyaṃ upasaṃharati: 'ayampi kho kāyo evaṃdhammo evaṃbhāvī evaṃnatīto' ti [...]

puna caparaṃ bhikkhave bhikkhu seyyathāpi passeyya sarīraṃ sivathikāya chaddītam kākehi vā khajjamānaṃ kulalehi vā khajjamānaṃ gijjhehi vā khajjamānaṃ kaṅkehi vā khajjamānaṃ sunakhehi vā khajjamānaṃ byagghehi vā khajjamānaṃ dīpīhi vā khajjamānaṃ siṅgālehi vā khajjamānaṃ vīvidhehi vā pāṇakajātehi khajjamānaṃ [...]

puna caparaṃ bhikkhave bhikkhu seyyathāpi passeyya sarīraṃ sivathikāya chaddītam aṭṭhikasaṅkhalikam samasālohitam nhārusambandham ...pe... aṭṭhikasaṅkhalikam nimaṃsalohitamakkhitaṃ nhārusambandham ...pe... aṭṭhikāni apagatasambandhāni disā vidisā vikkhittāni, aññena hatthattṭhikam aññena pādattṭhikam aññena goppakattṭhikam aññena jaṅghattṭhikam aññena ūrutṭhikam aññena kaṭṭhikam aññena phāsukattṭhikam aññena piṭṭhittṭhikam aññena khandhattṭhikam aññena gīvaṭṭhikam aññena hanukattṭhikam aññena dantattṭhikam aññena sīsakaṭṭhikam [...]

aṭṭhikāni setāni saṅkhavaṇṇapaṭibhāgāni ...pe...

aṭṭhikāni puñjakatāni terovassikāni ...pe...

aṭṭhikāni pūtīni cuṇṇakajātāni ...

Furthermore, a mendicant examines their own body, whatever its placement or posture, according to the elements: “In this body there

is the earth element, the water element, the fire element, and the air element.” It’s as if a deft butcher or butcher’s apprentice were to kill a cow and sit down at the crossroads with the meat cut into portions. [...]

Furthermore, suppose a mendicant were to see a corpse discarded in a charnel ground. And it had been dead for one, two, or three days, bloated, livid, and festering. They’d compare it with their own body: ‘This body is also of that same nature, that same kind, and cannot go beyond that.’ [...]

Furthermore, suppose they were to see a corpse discarded in a charnel ground being devoured by crows, hawks, vultures, herons, dogs, tigers, leopards, jackals, and many kinds of little creatures. [...]

Furthermore, suppose they were to see a corpse discarded in a charnel ground, a skeleton with flesh and blood, held together by sinews ... [then] a skeleton rid of flesh and blood, held together by sinews ... Bones rid of sinews, scattered in every direction. Here a hand-bone, there a foot-bone, here a shin-bone, there a thigh-bone, here a hip-bone, there a rib-bone, here a back-bone, there an arm-bone, here a neck-bone, there a jaw-bone, here a tooth, there the skull ...

White bones, the color of shells ...

Decrepit bones, heaped in a pile ...

Bones rotted and crumbled to powder.

Scholars have examined this practice and have found possible correlations with the concepts of purity and impurity. I will not reiterate the concepts presented in previous studies, but it is important to note that the Buddhist medical system is based on a general notion of bodily purity and integrity. As will be explored in the following paragraphs and in Table 2, the concept of purity in Buddhist medical practice is closely tied to bodily integrity. Organs and fluids that are maintained within the body are considered to be in their proper position, whereas those that are displaced are viewed as impure. However, the idea of purity is also connected to meditative practice and the concept of antinomies. The Canon emphasizes that meditators must overcome the dualism between pure and impure as it can lead to false opinions and suffering. Buddhism also appears to reflect on the fact that impurity is inherent within the individual, and meditation focused on the impurities of the body may serve to deconstruct this perspective by contemplating the feeling of disgust that arises when considering the entrails and internal parts of the body.²⁸

²⁸ See for example *Snp* 2.2.



Figure 1: The meditating Buddha as a skeleton. Statue in Lalitgiri. CC BY-SA 3.0, by MMohanty, Wikimedia Commons.

The deconstructive model of meditation is also applied to the vision of the body, which is dismembered by the gaze of the physician, who might be also an ascetic, revealing its impurities. One work that has extensively explored the issue of purity is Dhammajoti's recently published article.²⁹ This study analyzes numerous suttas that encourage the contemplation of impurities and loathsomeness, such as MN 119, in which the analysis of impurities is a major factor, along with breathing and postures. The elements comprising the body are also dissected, and Dhammajoti observes a connection between this dissection and that inherent in the bodily organs. The body is decomposed until only the skeleton remains, which is a crucial element and perhaps also has symbolic significance. Possibly the skeleton, as a foundational element of the body, upon which everything else rests, is seen as a central element for the ascetic.

It is impossible not to mention the well-known initiatory rite of dismemberment of the body to which certain shamanic cultures are subjected in various parts of the world.³⁰ The issue of purity is mentioned in other discourses analyzed by Dhammajoti, such as DN 5.61 and 10.5, or SN 3.1 and 46.57, where the signs of impurity (*asubha-nimitta*) are discussed, and the composition of the body is contemplated. These discourses, in addition to dissertations on the body,

²⁹ Dhammajoti 2021.

³⁰ Wong 1997.

Element	Property	Internal/External
Earth	Hardness, solidity (<i>kakkhaḷaṃ kharigataṃ</i>)	Internal
Water	Watery, liquid (<i>āpo āpogataṃ</i>)	Both internal and external, but properly internal
Fire	Warming, ageing, fever-heating (<i>santappati, jīrīyati, pariḍayhati</i>)	
Air	Wind, windy (<i>vāyo vāyogataṃ</i>)	

Table 2: Properties of elements.

such as SN 46.2, urge the meditator, in the exercise of dismemberment of their own corporeality, to reflect on the impurity they carry within, but also on the impurity within purity, and the purity within impurity, focusing on perceiving the repulsive and non-repulsive aspects until one attains a state of mindfulness that transcends both.

The sutta found in MN 28 is often regarded as an exemplary instance of the Buddhist understanding of anatomy and bodily function. This early medical concept encompasses the dynamics of the four great elements. After elucidating the Four Noble Truths, the Buddha goes on to explicate attachment to the aggregate of form (*rūpupādānakkhandho*), where the four primary elements are depicted as possessing distinct properties (*catunnañca mahābhūtānaṃ upādāya rūpaṃ*). These primary elements (*dhātu*) are earth (*pathavī*), water (*āpo*), fire (*tejo*), and wind (*vāyo*). Considering that these elements constituted a fundamental aspect of the medical humoral theory of early Buddhism, it is crucial to scrutinize their conception in this sutta. Firstly, each element appears to possess a dual nature: “both internal and external” (*siyā ajjhakkā, siyā bāhirā*). Secondly, each element has a specific role in bodily anatomy. See, for instance, Table 2.

To make an example, water is described as both internal and external, yet it is considered appropriate when it remains internal.³¹ Whether manifested internally or externally, it consistently represents the same element.³² Each element is characterized as impermanent, which aligns with Buddhist beliefs; however, it is worth noting the emphasis on the notion that every organ or element associated with the body possesses an inherent positioning, specifically *internal*. This concept echoes ancient binary ideas concerning purity and impurity.

³¹ *siyā ajjhakkā, siyā bāhirā...ajjhakkā āpo-dhātu, ajjhataṃ paccattaṃ/*

³² *yā ceva kho pana ajjhakkā tejodhātu/*

āpodhātu yā ca bāhirā tejodhātu/āpodhātu, tejo-/āpodhātūvesā/

The externalization of these elements is linked to unfavorable conditions: “there comes a time when the exterior element ‘water’ flares up, causing the exterior element “earth” to vanish”.³³ Similar to old age, the earth element is revealed to be impermanent and perishable.³⁴ The flaring of the water element is also connected to the sinking of oceanic waters (*ogacchanti*), the opposite calamity of water overflow (*saṅṭhāti*), or even total desiccation, “to the extent that there is not enough water to wet the tip of one’s finger” (*āṅgulipabbatemanamattampi*), among other potential issues. Comparable hazards are evoked for the volatile fire element: “It burns entire villages...” and so forth. It can destroy vast fields, deplete bodies of water until its fuel is extinguished.³⁵ Similarly, the wind, in its malevolent “external” form, can inflict comparable damage.

Any of these elements’ imbalance implies great upheavals: “it sweeps away entire villages, towns, cities, counties, regions”.³⁶

On the other hand, when the elements remain inside the body, they perform physiological functions that are their own, as in Table 3. Winds go up and down (*uddhaṅgamā vātā, adhogamā vātā...*) and thus flow into peculiar parts of the body, which are those reported in the Table 3. This conception is clearly proto-medical and we find it both in the classical Indian medical and yogic literature centered on respiration and breathing.³⁷

It is noteworthy that fire stands alone as the only element in Buddhist medical tradition that is not associated with any specific bodily organ, but rather with the physiological process of digestion. Similarly, water’s connection to the body is not entirely clear, as it remains uncertain whether the term *medo* (fat), often associated with water, refers to body fat or should be considered a distinct entity. Notably, water appears to be principally linked to the physiological functions involved in the secretion and production of bodily fluids, such as tears, saliva, mucous membranes, and blood. Therefore, it is plausible that fat, like these fluids, ought to be regarded as a physiological rather than somatic component of the body. Should this be the case, the primary dichotomy within the Buddhist medical framework would be between elements that pertain mainly to physiology (i.e., water and fire) and those capable of performing both bodily and physiological functions (i.e., earth and air).

The wind is an element connected with the animation of specific parts and organs of the body. The wind flows inside the body like a vital breath and enables these parts to remain healthy. Its function is therefore distinct from that of the earth, which appears to be the actual constitutive factor of the organs identified

33 *hoti kho so, āvuso, samayo yaṃ bāhirā āpo-dhātu pakuppati; antarahitā tasmim samaye bāhirā pathavīdhātu hoti/*

34 *khayadhammatā...vayadhammatā paññāyisati/*

35 *...āgamma anāhārā nibbāyati/*

36 *sā gāmaṃpi vahati, nigamaṃpi vahati, nagarampi vahati, janapadampi vahati, janapadapadesampi vahati/*

37 Zysk 2007.

Body domains	Physiology	Organs
Earth	Undigested food, feces, anything else tough, solid, properly internal ^a	Head hair, body hair, nails, teeth, skin, flesh, sinews, bones, medulla ossium, kidneys, heart, liver, diaphragm, spleen, lungs, intestines, mesenterium ^b
Wind	Inspiration, Expiration ^c Belly, bowels, limbs [animated by air flowing in them] ^d	
Water	Bile, Phlegm, pus, blood, sweat, tears, grease, snot, synovial fluid, urine, ... ^f	[Body Fat] ^e
Fire	Digestion ^g	

^a *udariyaṃ karisaṃ, yaṃ vā panaññampi kiñci ajjhattaṃ paccattaṃ kakkhalaṃ kharigataṃ upādinnaṃ/*

^b *kesā lomā nakhā dantā taco maṃsaṃ nhāru aṭṭhi aṭṭhimiñjaṃ vakkāṃ hadayaṃ yakanāṃ kilomakāṃ pihakāṃ papphāsaṃ antaṃ antaṅgaṃ/*

^c *...assāso passāso .../*

^d *kucchisayā vātā, koṭṭhāsaya vātā, aṅgamaṅgānusārino vātā .../*

^e *... medo/*

^f *pittaṃ semhaṃ pubbo lohitaṃ sedo ...assu vasā kheḷo siṅghāṇikā lasikā muttaṃ, yaṃ vā panaññampi kiñci ajjhattaṃ paccattaṃ āpo āpogataṃ upādinnaṃ/*

^g *pariñāma*, the original text reports precisely this: *asitapītakhāyitasāyitaṃ sammā pariñāmaṃ gacchati* (lit. “properly [*sammā*] digesting [*pariñāmaṃ*] what is eaten [*asita*], drunk [*pīta*], chewed [*khāyita*] and tasted [*sāyita*]”).

Table 3: Elements, Physiology and Organs.

Humor-element	Quality
Wind-Air	“very rough, light, cold, delicate, mobile”
Bile-Fire	“sharp, hot, acid, pungent, and fluid”
Phlegm-Water	“sweet, salty, cold, heavy, and viscid”

Table 4: Humors and Qualities.

with it. Similar to fire, the vital flame that performs a specific physiological function such as digestion, air is not constitutive of the organs it inhabits but serves to animate them. Of course, it is also associated with the purely physiological function of respiration, involving inhalation and exhalation.

Two aspects of this sutta are noteworthy: firstly, its complex anatomical knowledge. The list of organs linked to the earth reveals a highly articulated conception, demonstrating knowledge and reflection on bodily parts not found in any other ancient Indian system of thought. Such knowledge is only found in subsequent medical tradition, especially Āyurveda, which came long after these Buddhist discourses. Secondly, this sutta mentions two of the three humors, both associated with a single element, water. The reason for this association remains unclear. It is possible that an archaic conception viewed these two humors (bile, *pitta*, and phlegm, *semha*) as being of a watery, fluid-liquid nature, similar to blood (*lohita*), and had not yet organized themselves into physiological functions specific to certain elements.

In **BhM** 1.22, the functions of the humors are directly related to the qualities of specific elements. In this case, the humors correspond directly to the function of the elements. The **BhM** system appears to be simpler than that in **MN** 28. For instance, Table 4 shows the system as described in **BhM** 1.22.

This aspect will be further explored in the following sections, where the roles of the humors and the interaction between the body and the elements will be analyzed. However, it is immediately evident that **BhM** has modified the system in comparison to **MN** 28. In the suttas, the qualities of water are attributed to both Bile and Phlegm. In **BhM** 1.36, Bile is associated with the digestive fire and digestive functions. Its anatomical location is described as being situated between the intestine and the stomach. Furthermore, bile is linked to the pigmentation of chyle (**BhM** 1.38). With regard to water (**BhM** 1.38–43), its primary function pertains to the lubrication of internal organs, particularly the heart. Located in the chest, water is referred to as the “supporting agent.”

4 ELEMENTS OF INTERACTION

THE SUTTA in MN 62 exhibits a structure and content highly akin to MN 28, particularly the sections addressing the role of the great elements in the body and their functions, which can be quoted almost verbatim. Nonetheless, it presents some distinctions and novel elements concerning meditative practice. For example, the four great elements are associated with the same body parts and physiological functions; however, a fifth element is introduced here: space (*ākāśadhātu*). This element, like all the others, is naturally internal but can be both internal and external. The function of “space” is to govern the ears, nostrils, and mouth (*kaṇṇacchiddaṃ nāsacchiddaṃ mukhadvāraṃ*). Most of its functions appear to overlap with the domains of air, and *ākāśa* might historically be a new element derived from a “duplication” or ramification of the original air element. It progressively assumes more specific functions, related to incorporeal and metaphysical conceptions.

This sutta subsequently introduces various methods of meditation (*bhāvanāṃ*). For each element, it prescribes a particular meditation aimed at transcending the dualism between pleasant and unpleasant, clean and unclean things (*sucimpi nikkhipanti, asucimpi nikkhipanti*) associated with each element. The only exception is the meditation on space (*ākāśasamaṃ ... bhāvanāṃ bhāvehi*). Since space is not established anywhere (*ākāśo na katthaci patitthito*), meditation adopting the quality of space liberates the mind from being preoccupied with pleasant and unpleasant contacts. Subsequently, the Buddha instructs meditation on other concepts: love (*mettaṃ*), compassion (*karuṇāṃ*), rejoicing (*muditaṃ*), equanimity (*upekkhāṃ*), ugliness (*asubhāṃ*), the sign of impermanence (*aniccasañña*), and finally, mindfulness of breathing (*ānāpānassatiṃ*). The meditator should maintain mental presence throughout every aspect of the breathing process, cultivating awareness of their presence in the moment and immersing themselves in a state of unification (*samādhi*) until they apprehend the true nature of impermanence. This meditation technique is considered to be healthful and advantageous (*mahapphalā, mahānisaṃsā*).

The philosophical notion that posits the interplay of distinct elements or elemental archetypes as the foundation of every phenomenal occurrence in the world is a likely antecedent for the development of humoral theory. Traditional Indian medicine is intricately connected with Sāṃkhya philosophy. On one hand, Buddhist medical thought provides the earliest attestations of Indian medicine and humoral theory. On the other hand, the underlying system of classical Āyurveda—incorporating the *guṇas*, the role of *prakṛti*, and a specific cosmological vision—are characteristic elements of Sāṃkhya, to the extent that some scholars have convincingly described Āyurveda as a Sāṃkhya system. The *doṣas* and *pañca-mahā-bhūtas* systems first emerge in Buddhist medicine but are also integral to Sāṃkhya philosophy. As such, we might need to refer to the

Quality (<i>guṇa</i>)	Corresponding humour	Constitutive elements	Physiological characteristics
Essence (<i>sattva</i>)	Wind (<i>vāta</i>)	Space-air (<i>ākāśa + vāyu</i>)	Breath (<i>prāṇa</i>)
Activity (<i>rajas</i>)	Bile (<i>pitta</i>)	Fire-water (<i>agni+āpas</i>)	Strength (<i>tejas</i>)
Inertia (<i>tamas</i>)	Phlegm (<i>kapha</i>)	Earth-water (<i>prthvī+āpas</i>)	Fluids (<i>ojas</i>)

Table 5: Elements of interaction.

latter system to reconstruct the relationship between Buddhism and Āyurveda.

Sāṃkhya philosophy originates from enumeration and cataloging, seeking a single principle as the common denominator of phenomenal plurality. The Sāṃkhya identifies archetypes as basic principles (*guṇa*), which are, in fact, qualities inherent in the material (*prakṛti*) that manifest themselves through the interaction with the vitalistic-conscious principle (*puruṣa*). This manifestation process occurs in a series of successive stages (*tattvas*), which the Sāṃkhya has enumerated (typically twenty-five) and cataloged in meticulous detail. Nevertheless, our focus should be on the *guṇa*, as their nature as determinants of material characteristics is subsequently reflected in medical conceptions. These three elements are absent in older Buddhism.

Despite the differences, Sāṃkhya and Buddhism share a very similar conception of the humors and role of the fundamental elements that make up the cosmos and the human body, and which are therefore important for medical practice. It has already argued that the similarities between Buddhism and Sāṃkhya are imputable to a shared common origin.³⁸

5 ORIGINAL HUMORAL THEORY

ALTHOUGH IT IS EXPLICITLY STATED in suttas like MN 86 that malevolent actions which cause damage or suffering to other living creatures can lead to disease, the general notion of *kamma* as the sole cause of an individual's suffering is rejected. SN 36.21 states that the mere action or "past deeds" is insufficient to account for an individual's experiences and disease.³⁹ In this context, physiological factors of a humoral nature are brought into question.

³⁸ Ruzsa 2017: 168–170.

³⁹ *purisapuggalo paṭisaṃvedeti sukhaṃ vā*

*dukkhaṃ vā adukkhamasukhaṃ vā sabbam taṃ
pubbekatahet/*

*pittasamuṭṭhānānīpi kho sīvaka idhekaccāni vedayitāni uppajjanti...
 sāmampi kho etaṃ sīvaka veditabbaṃ yathā pittasamuṭṭhānānīpi idhekac-
 cāni vedayitāni uppajjanti;
 lokassapi kho etaṃ sīvaka saccasammataṃ yathā pittasamuṭṭhānānīpi id-
 hekaccāni vedayitāni uppajjanti [...]
 semhasamuṭṭhānānīpi kho [...]
 vātasamuṭṭhānānīpi kho [...]
 sannipātikānīpi kho [...]
 utupariṇāmajānīpi kho [...]
 visamaparihārajānīpi kho [...]
 opakkamikānīpi kho [...]
 kammavipākajānīpi kho sīvaka idhekaccāni vedayitāni uppajjanti...*

Sīvaka, some feelings are due to bile disorders.

You can understand this from your personal experience;

Thus, Sīvaka, that some feelings descend from bile disorders is gen-
 erally agreed to be a truth of the world. [...]

Some feelings are due to bile disorders [...]

Some feelings are due to wind disorders [...]

Some feelings are due to their conjunction [...]

Some feelings are due to the weather [...]

Some feelings are due to carelessness [...]

Some feelings are due to overexertion [...]

Some feelings are due to past deeds [...].⁴⁰

In this text, the Buddha promulgates an authentic epistemology of complexity, arguing that illness results from multiple potential conditions and their interactions. While action is one of these conditions, it is not the singular or exclusive cause. This sutta is renowned for being the earliest attestation of the humoral theory of classical Indian medicine in a systematized form with eight causes.⁴¹

⁴⁰ SN 36.21.

⁴¹ The term *sannipātika* delineates a physiological condition wherein “all three humours are either increased or decreased simultaneously” (Wujastyk 2016: 38). In this discourse, I propose a broader contemplation of the humoral irregularity inferred within the *sannipātika*, extending beyond the mere escalation or attenuation of the tripartite humors. In accordance with the notion of imbalance, it is advanced that the *sannipātika*’s perturbation of humors could encompass the concurrent

derangement of any two out of the three humoral elements. This proposition acknowledges the precedent consideration of single-humor imbalance within the initial three scenarios, thereby recognizing the intrinsic interconnectedness of the trio—bile, phlegm, and wind—as expounded by Scharfe (1999: 613). The thematic thread of imbalance or perturbation is evinced by terminologies such as *pariṇāma* (“modification”, as found in *utupariṇāmaja* “produced by changes in the seasons”) or *-uṭṭha* (“increase”, evident in *semhasamuṭṭhāna*,

*pittaṃ semhāñca vāto ca
sannipātā utūni ca.
visamaṃ opakkamikaṃ
kammavipākena atṭhamī'ti//*

Bile, phlegm, wind,
their aggregation,
the weather,
carelessness, overexertion,
and the result of deeds is the eighth cause.

If aggregation (*sannipātā*) implies all the possible conjunctions between the preceding three humors, we should suppose that the complete list of humors' imbalance-related diseases causes is the following:

1. bile-caused disease;
2. phlegm-caused disease;
3. wind-caused disease;
4. bile-phlegm-caused disease;
5. bile-wind-caused disease;
6. phlegm-wind-caused disease;
7. bile-phlegm-wind-caused disease.

The points from 4 to 7 are, obviously, the implication of the *sannipātā*. This term, as Wujastyk (2012: 32) notices, is “a technical term from Āyurveda that is as specific as a modern establishment doctor saying something like ‘hemoglobin levels.’”

There exist various other sources of disease, including weather-caused and deeds-caused. It is reasonable to assume that these terms merely serve as collectives, given the multitude of weather conditions that can exist. As a result, the potential diseases associated with them are likely to be diverse and manifold.

A comparison with the humoral theory presented in *BhM* is in order. We would expect to find a humoral theory similar to that in *SN* 36.21, as it is already identical to the Āyurvedic one, with the exception of the name *kapha*, which is used instead of *semha* in most Āyurvedic treatises. However, the Sanskrit equivalent of *semha*, i.e. *śleṣman*, is often used as a synonym for *kapha*. Liyanaratne's translation of the humoral theory of *BhM* involves the elements directly. In the Āyurvedic *tridoṣa* model seen in Table 5, every humor results from a combination of two elements (as water is present both in bile and phlegm). The *dosas*

vātasamuṭṭhānā, “increase in phlegm,” etc.), thus fostering the plausible supposition of a humoral disequilibrium precipitated by

the concurrent and simultaneous reduction or increasement of two or all three humors.

are described as the root of *roga*, along with bodily elements and waste matter (*dosa-dhātu-malā...rogānaṃ pātubhāve...*). The name of the humors in **BhM** 1.20 resembles the Āyurvedic tradition, involving wind (*vāto*), bile (*pittaṃ*), and phlegm (*kapho*). Liyanaratne (2002: 5) translates them as “Air, Fire, and Water.” To avoid confusion, I would change this translation to adopt the more classical wind, bile, and phlegm triad. Nevertheless, we must acknowledge that blood is mentioned in this passage as part of the bodily elements, and not as a humor. This is important to notice since blood is usually treated in a controversial way, being counted sometimes as a humor and sometimes as a physiological component of the body. The *Suśrutasaṃhitā* sometimes considers blood (*śoṇita*) to be the fourth humor, and blood also appears in Hippocratic medicine, although its role as a humor or not is controversial.⁴² Its role is clearly marked in **BhM** 1.21 as not a humor.

*tesu dosā tayo eva vāto pittaṃ kapho iti sattadhāturaso rattam mamsam
medo ca kīkaso majjātha sambhavo ceti kamā gambhīragāmino*

Out of them, humours are in fact threefold: Wind, Bile, and Phlegm.

The seven bodily elements are chyle, blood, flesh, fat, bones, marrow and then semen. They gradually go deep [into the body].

The **BhM** proceeds to expound upon the distinct characteristics inherent to each humor, which are close to those exposed in the previously analyzed suttas. Each humor denotes a specific bodily function and associated ailment. While the correlation with the system delineated in the suttas is not flawless, any variations are insufficiently substantial to assert that they are discrepant.

In Table 3, we observed that for **MN** 28, each element is associated with a specific bodily function and humor. For instance, fire is linked with digestion, even though it does not possess a distinct humor within its domain. Both bile and phlegm fall under the water domain, and wind is largely coincident with the air element. In fact, because the **MN** 28 system seems to include blood within the water domain, it could be inferred that, in antiquity, blood’s role was not yet explicitly differentiated from that of a humor. Alternatively, humors might have been perceived as physiological fluids with comparable properties to wind-breath, blood, bile, and phlegm. Conversely, the Āyurvedic theory presents a more strictly systematized arrangement, with the element of fire constituting a part of the humor of bile. In **BhM** 1.23–4, we encounter a system that is somewhat intermediate. It is stated that each humor has positive qualities for the body when it is not impaired.

The experience of pleasure, the sustenance of vital force, the creation of body flesh and fat, and even the formation of fetuses in women are all processes that

⁴² Zysk 2021: 10.

Humor	Bodily function/sustenance (BhM 1.23–4)
Wind-Air	“breathing in and breathing out,” “urges,” “proper movement of bodily elements,” “efficient functioning of the sense organs”
Bile-Fire	“digestion, warmth, sight, hunger, thirst, liking for food, aptitude, intelligence, gentleness, and lustre [of the skin]”
Phlegm-Water	“stability, unctuousness, cohesion of joints, and endurance”

Table 6: Humours and functions.

Humor	Seat in the body
Wind-Air	“the intestine, waist, thigh, arteries, bones, skin” (BhM 1.28)
Bile-Fire	“the navel, stomach, perspiration, pus, blood, chyle, sight, touch” (BhM 1.29)
Phlegm-Water	“ <i>kiloma</i> , head, neck, chest, joints, stomach, chyle, fat, napse, and tongue” (BhM 1.30).

Table 7: Humors and seats.

involve bodily elements. As outlined in Table 3, each of these processes has its proper location within the body. A passage in the BhM corroborates this understanding, indicating that every humor in the body has a specific location. Nevertheless, it is noteworthy that many of the bodily elements identified in Table 3 differ from those referenced in MN 28.

The present text reports that, for each of the organs corresponding to their specific humor, one of the items listed is considered to be of paramount importance: the intestine for Wind, the navel for Bile, and the chest for Phlegm. According to Liyanaratne (2002: 6, n. 7), the term *kiloma* refers to a water-carrying artery thought to be located to the right of the heart. Other treatises describe it as having the form of a piece of cloth (*pilotikākāra*).

In BhM 1.44 are introduced six seasons (*vasanta*, *gimha*, *vassāna*, *sārada*, *hima*, *sītala*). Each season is related to the prevalence of a specific humor and thus every season is related to the possibility to accumulate more and more of a certain humor with all its possible pathological implications (1.45–57). I will not go deeper in this system because it is almost identical to that of classical Āyurveda, whose characteristics and problems have been fairly described in another work.⁴³

⁴³ Angermeier 2022.

As previously seen (SN 36.21), Buddhist medicine too considers weather (*utu-pariṇāmajāni*) or carelessness (*visamaparihārajāni*, lit. “not taking care of oneself”) as potentially pathological condition.

The principles delineated in Hippocratic medicine are strikingly analogous: heat, cold, wet, and dry represent the fundamental “forces” (δυνάμεις) or primary origins (ἀρχαί) of disease, while the contributing factors (συνεργά) encompass the surplus or deficiency of elements such as heat, cold, nourishment, and analogous variables such as geographical and climatological ones.⁴⁴

The importance of a certain geographical region is mentioned also in BhM 2.64, where regions are associated to specific humoral statuses: *jāṅgala*, plenty of air; *anūpa*, plenty of water (phlegm); and *sādhāraṇa*, which is “balanced.” There is not a region plenty of fire (bile) counted.

These principles establish a form of associative reasoning in which all entities are imbued with primary elements that constitute the various humors. Consequently, the proximity or interaction with an entity suffused with a particular humor influences the equilibrium of that humor within the body. This notion is evident in passages such as BhM 3.32, where it is advised to avoid direct exposure to the wind or proximity to fire following a meal. This recommendation is presumably due to the digestive process involving the biliary humor, which is governed by the element of fire and could be adversely affected by the presence of fire.

The importance of the humoral theory witnessed for the first time in Buddhist texts is such that we find it not only in Āyurveda, but in a similar form also in other Indian religious cultures. Disease in Jainism is comparable to that in Buddhism, and can be attributed to improper lifestyles, unhealthy eating habits, and disruptive bodily energies, particularly the humors of wind (*vātite*), bile (*pittite*), and phlegm (*simbhite*) and their state of *saṃnivātite*, or “combination”.⁴⁵ Possession by spirits is also considered, but it is not unique to Jainism, as it appears in other Indian traditions.⁴⁶

44 Schiefsky 2005: 130.

45 Stuart 2014: 17.

46 In Jainism, as in Buddhism, bodily illness is referred to as *roga* or *vyādhi* (equivalent to the Pāli *byādhi*), and it is closely linked to karma (Donaldson and Bajželj 2021: 76). In order to compare Jain and Buddhist medical views, I consulted two studies, by Stuart (2014) and Donaldson and Bajželj (2021). Regrettably, in Jainism, medicine took a divergent path from Buddhism, which viewed medicine as a cornerstone of its practice (Divino 2023b). Jainism’s initial attitude to-

ward medicine was negative for two reasons: firstly, the cure and the pursuit of well-being were seen as worldly attachments, and secondly, Jain asceticism prescribed acceptance of suffering rather than a cure for it. Over time, this view evolved, and Jain medicine grew into a more intricate system that was coherently integrated with ascetic practices. It was believed that a healthy body was better able to withstand austere practices, and that achieving a constitution not prone to illness was necessary for karmic purification.

6 PHYSIOLOGY AND NUTRITION

THE CONSTITUENTS AND HUMORS play a crucial role in the optimal functioning of the human body. These elements are involved in processes that can be broadly characterized as “physiological,” encompassing vital functions such as respiration, blood circulation, and digestion. Respiration, in particular, is a process of paramount significance.

Sections of *BhM* 1.31–5 are dedicated to elucidating the various forms of the Wind element. According to the text, the Wind element assumes distinct names based on its specific functions. When situated at the apex of the head, it is referred to as *pāṇa* (corresponding to the Sanskrit term *prāṇa*), from which it circulates throughout the chest and neck regions. Furthermore, *pāṇa* is associated with both the heart and the sensory organs, encompassing the process of cognition (*cittassa ca pavattako*).

In Indian medical treatises, respiration is categorized into five distinct functions. The *Caraka Saṃhitā*, the earliest comprehensive text devoted to medical practice, is replete with philosophical concepts and Sāṃkhya elements, indicating the evolution of this thought over time. Within the realm of medicine, the organization of the pneumatic element was carried out by Vāryovida, who classified five types of winds based on their respective functions or the bodily regions they enliven: exhalation (*prāṇa*), inhalation (*apāna*), chest (*samāna*), between the head and navel (*udāna*), and pervasion throughout the body (*vyāna*). Intriguingly, the correlation between air and thought is further reinforced here. The pneumatic element appears to be inextricably connected to the cognitive functions of the mind.⁴⁷ As concerning the five breaths mentioned in *BhM* 1.31–5, they are called *vāyus* and they are organized in function of their organs and their circulation:

In *Sāṃkhyakārikā* 29, it is asserted that the five breaths are intrinsic to the operation of bodily organs, with the *prāṇa* occupying a preeminent position.⁴⁸ Gauḍapāda, in his commentary, identifies the other four as *apāna*, *samāna*, *vyāna*, and *udāna*. The *prāṇa* is posited to act within the oral cavity, lying between the nose and the mouth, and its function is deemed to be responsible for self-perception. The distinction with *apāna* is also thought to be dynamic in nature; however, whereas *prāṇa* signifies a *pra-an*, a breath that moves “towards” something, in reference to its upward trajectory, *apāna* is an exhalation, perceived by Sāṃkhya as a downward breath. In this way, the medical knowledge base of this doctrine can be observed. Concerning the other three, the *samāna* operates in the midsection of the body and is responsible for nutrient digestion and assimilation, while the *udāna* acts between the navel and the cranium, and the *vyāna*

⁴⁷ Zysk 2007: 109.

⁴⁸ Virupakshananda 1995: 74.

Breath (<i>vāyu</i>)	Related organ	Circulation	Functions
<i>pāṇa</i>	Head	Chest, neck	Heart, sense organs, intellect
<i>udāna</i>	Chest	Nose, navel, neck	Expectoration, sneezing, vomiting, sighing, alimentation, physical strength, complexion, memory, effort, speech
<i>vyāna</i>	Heart	Entire body (when fast)	Walking, moving the feet, moving the eyes, any other body action
<i>samāna</i>	Digestive fire	Entire body	Holding, digestion, selection, food evacuation
<i>apāna</i>	Rectum	Groin, bladder, penis, thigh	Feces evacuation, urine, semen, menstrual blood, childbirth

Table 8: The breaths.

is ubiquitous. It is conceivable that in the Sāṃkhya medical conceptualization, these breaths represent the distinct assimilation of oxygen in the bloodstream, as well as its use in vitalizing physiological functions, such as those localized in various domains, such as the brain and the stomach.

The medical art integrates these insights and recognizes the significance of cosmic wind and breath as vitalistic principles. Buddhism acknowledges the importance of breath but regards it as only a corporeal, mundane element. Consequently, the yogic-ascetic techniques involving breath control (*prāṇāyāma*) do not demonstrate the absoluteness of the pneumatic element, but rather its subordination to worldly phenomena, such as posture and thought: “*prāṇāyāma*, breath-control, which came directly after the perfection of the postures (*āsana*), aimed at controlling the body, and before the fixing of the mind (*dhāraṇā*), aimed at controlling mental activity. In this way, *prāṇāyāma* served as the link between body-control and mind-control”.⁴⁹

Another element considered of a “worldly” order and which pertains to the protection of the balance and health of the body is obviously the pharmacological one. The Buddhist pharmacological conception is very similar to the Hippocratic

⁴⁹ Zysk 2007: 108.

one. The **BhK** in fact insists on foods and foods as elements of potential cure or disease of the organism. In other words, food and medicine are considered analogous. An extensive list of medicinal substances can be found in treatises such as the **BhK** and **BhM**. Enumerating all substances endorsed by the Buddha in the **BhK** or those mentioned as therapeutic in the **BhM**, along with the various suggested treatments, is beyond the scope of this discussion. However, upon examining both treatises, a discernible inclination towards certain substances emerges, including plant roots (*mūla*), bitter plants (*kaśāva*), preparations derived from grinding (*nisada*) vegetables, leaves (*paṇṇa*), fruits (*phala*), medicinal gums (*jatu*), salts (*loṇa*), powders (*cuṇṇa*), cloth sieves (*dussacālani*), ointments (*añjana*), and so forth.

Medical treatments in **BhM** typically adhere to the principle of humor balance. If a particular humor increases and subsequently increases its effects, the physician should take action to reduce the humor and its effects. For instance, diseases that cause an increase in blood are treated with bloodletting and purgation (**BhM** 1.75–9). Humors can also interact with one another, enabling a physician to influence other humors or aspects of the same humor (**BhM** 1.81, also 1.113). Due to this balance principle, medicines are commonly divided into two categories: purificatory and pacificatory (**BhM** 1.103). Additionally, drugs and treatments can be classified based on purity (*suddho*): if a treatment heals a disease but creates another imbalance, it is not considered pure (**BhM** 1.115).

While it is impossible to cover all pharmacological therapies in the **BhM**, a general overview can be provided. Drugs are categorized according to the principle of humors. For example, drugs that are predominantly phlegmatic are those in which the characteristics of phlegm are most pronounced. Aside from Phlegm, Bile, and Air, whose characteristics are covered by the so-called “drug of Water, Fire, or Air element,” **BhM** 2.8 also mentions a drug of ethereal nature (*nābhasa*), whose characteristics are delicateness, viscosity, lightness, and sound; it “creates hollowness and lightness.” Drugs are also classified by taste, which is a symptom of a certain reaction between a humor and a bodily process.

The abstention from consuming animal flesh in early Buddhism is a well-established fact. It might be anticipated that this prohibition would extend to the medical domain, with the prevalence of plant-based products in medicine attributed to both ethical considerations and the efficacy of these alternatives.⁵⁰ Nevertheless, ethical concerns appear to be the predominant factor. In **Dhp** 26.405, we encounter the following verses:

*nidhāya daṇḍaṃ bhūtesu, tasesu thāvaresu ca.
yo na hanti na ghātetī, tamahaṃ brūmi brāhmaṇaṃ.*

⁵⁰ See Salguero 2015: 43 on the issue of plant-based products.

Whosoever has laid down the stick against fearful and fearless beings,
Who neither hurts nor kills, that one I declare a Brahmin.

The critique of animal sacrifice, aimed at the Brahmins, is echoed in the principle of non-violence and the commitment to refrain from causing harm to any living being, as evidenced throughout the Pāli Canon:

*ñhito ahaṃ aṅgulimāla sabbadā
sabbesu bhūtesu nidhāya daṇḍaṃ.
tuvañca pāñesu asaññatosi
tasmā ñhitohaṃ tuvamaññhitosīti.*

Aṅgulimāla, forever have I ended —
Laid aside, violence towards all creatures.
Yet, you cannot halt harming living beings;
Thus, I have stopped, but you have not.⁵¹

Interestingly, these passages seem to imply that abstaining from the consumption of animals is not solely an ethical matter, but also has tangible ramifications for the health of those who avoid food products derived from violence. Consequently, this practice holds substantial medical implications as well. In *Sn* 2.7, for example, the killing of animals is connected to the proliferation of diseases.

Nevertheless, it is essential to note that this ethical principle is also manifested in other Buddhist concepts intrinsic to medicine, beyond merely dietary and nutritional aspects. For instance, *BhK* 8 explicitly opposes surgery (*satthakamma*). There are two plausible explanations for this, and they may coexist concurrently: on one hand, this aversion towards surgery may share the same origin as in Jainism, that is, the abhorrence of violence. Given that surgery is perceived as a brutal medical practice, aggressively intervening on the body, it is comprehensible why it is disfavored by the Buddha. Secondly, there is the matter of preserving bodily integrity, which, as observed earlier, is a significant concern for reasons of purity. For instance, a monk “should not get surgery within two inches in width of the private parts nor have enemas”.⁵²

Hippocratic medicine too places an essential emphasis on nutrition.⁵³ In numerous passages, Hippocrates asserts that food has a direct impact on health.⁵⁴ Nevertheless, of equal importance is the individual’s subjective response to certain foods, which implies a non-universal but rather general, reaction to different foods intended as medicines.

⁵¹ MN 86.

⁵² *sambādhasa sāmantā dvaṅgulā satthakammaṃ vā vatthikammaṃ vā kārapetabbaṃ /*

⁵³ Schiefky 2005: 28–29.

⁵⁴ *Ibid.* 241.

The **BhK** predominantly presents a vegetarian pharmacological profile. The majority of substances approved for medicinal applications are derived from plant sources, with the exception of certain tonics that incorporate animal fats. In **BhK 22**, five cow-derived products are enumerated as permissible for use, including milk, curd, cow's butter, and ghee. However, **BhK 2** suggests that in extreme cases of illness attributed to demonic possession, the consumption of meat and raw blood is allowed.⁵⁵ This passage may also represent the incorporation of popular remedies and exorcism rituals that have permeated Buddhist medical literature. **BhK 10** specifically prohibits a number of animal meats such as elephant, horse, dog, snake, lion [tiger, leopard, bear], or hyena meat.⁵⁶

The food section of the **BhM** is perhaps the most problematic aspect of the text. As food is considered a drug, it is capable of altering or balancing the moods of the body. In **BhM 5.1–16**, a number of foods from the grain family are mentioned, and their specific properties on the body are enunciated. Numerous food preparations are then explained, mainly rice-based, and their expected beneficial effects. However, the problematic section begins at **BhM 5.53–71**, when the consumption of meat is explicitly introduced. The most disparate forms of meat are mentioned, such as goat, peacock, sparrow, pigeon, and even iguanas and rats. Contemplating meat as a consumable food in a Buddhist medical treatise appears to be in clear contradiction with the primarily vegetarian tradition of their religion. This inconsistency can perhaps be attributed to the enormous influence that other medical treatises, in which meat is considered edible, had on the **BhM**. It must be noted, however, that the **BhM** considers some types of meat to be more toxic than beneficial. Peacock meat, gray partridge, iguana, and black partridge are addressed as foods to be avoided in **BhM 8.1–2**.

In contrast, Jainism strictly prohibits the consumption of meat and any medicine obtained through harmful means. There is a generalized distrust of medical practice, considered in some cases brutal and to be avoided (Donaldson et al., 2021, p. 87).⁵⁷ Unfortunately, “instead of a healer and a protector of life, the doctor is in fact seen as violent”.⁵⁸

7 CONCLUDING REMARKS

THE STUDY of the medical tradition in ancient Buddhism has often been overshadowed by studies of more established epistemologies such as Āyurvedic. Nevertheless, there is ample evidence of a Buddhist medical art throughout the Pāli Canon that in recent years it is starting to be systematically studied. In this

⁵⁵ *anujānāmi, bhikkhave, amanussikābādhe āmakamaṃsaṃ āmakalohitanti/*

⁵⁶ *na...hatthimaṃsaṃ, assamaṃsaṃ, sunakhamāsaṃ, ahimaṃsaṃ, sīhamaṃsaṃ,*

taracchamaṃsaṃ paribhuñjitabbaṃ/

⁵⁷ Donaldson and Bajželj 2021: 87.

⁵⁸ Stuart 2014: 70.

article, we have attempted to provide a rigorous introduction to the medical conception of ancient Buddhism, highlighting the main elements that can be attributed to it.

We have then explored the concept of purity and impurity. Furthermore, we have examined the complex and multifaceted conception of illness and suffering in Buddhism, highlighting the distinction between existential discomfort and clinical understanding of illness. The body is central to the teachings of Buddhism, reflecting the religion's preoccupation with the elimination of suffering and the attainment of enlightenment.

We have also analyzed the Buddha's anatomical knowledge, which is revealed in various anatomical suttas, and his emphasis on maintaining good health and the absence of illness. Nevertheless, the Buddha's focus on the body does not contradict his emphasis on its impermanence and the ephemerality of all things. Rather, the deconstruction of one's identity through meditation and the dissection of the body are exercises in confronting the transience of life.

Finally, we have examined the deconstructive model of meditation, which is applied to the vision of the body, revealing its impurities. In doing so, we have highlighted the significance of the body in the quest for enlightenment and the Buddha's rejection of the Brahmanic authority and rituals.

Overall, this article has aimed to provide an insightful introduction to the medical conception of ancient Buddhism, highlighting its unique features and its relevance to contemporary discussions in the field. While there is still much to be done in terms of systematically studying the Buddhist medical art, this article hopes to provide a solid foundation for further research and opens up new avenues for exploring the intersection of religion and medicine in ancient Buddhism.

In this concluding section I intend to give some hints that may be of interest to future studies on Buddhist medicine. The study of the development of medicine in the Buddhist field is an area of research that holds great potential for the future. While this study has provided a general overview of the *BhM*, there is much more that could be explored. One area of future research could focus on the translation of the *BhM*'s second part, which contains more technical aspects related to therapy, such as eye therapy and single organs. Additionally, the final section of the *BhM*, which presents the Buddhist version of the *Rasāyana*, could help to further contextualize the history of Indian medicine in which Buddhists have participated.

A systematic comparison between the medical concepts expounded in the *Nikāya* suttas and those of the *BhK* and *BhM* must account for the significant temporal distance among these three phases. Nonetheless, it is noteworthy that, despite this temporal distance, the humoral theory, which underpins the *BhM*, is central to the suttas, albeit articulated differently. In contrast, the *BhK* emphas-

izes ethical aspects and monastic regulations over humor imbalances. Following these observations, one may question the appropriateness of comparing the **BhK** and **BhM**. Nevertheless, I assert that such a comparison would yield little value, as the *Āyurvedic* influence on the **BhM** is evident, if not preponderant. Conversely, the **BhK** appears more concerned with providing practical guidance, and the pharmacology it presents is not structured on the humoral paradigm or the ratio of imbalance = deflection of humor x , rebalancing = drug y associated with humor x .

One of the significant differences between the two texts is their stance on dietary regulations. The **BhK** provides detailed guidelines on permissible foods and prohibits certain types of meat consumption and cooking by monastics. The **BhM**, on the other hand, offers a more complex and problematic account of dietary practices. While it recognizes the interdependence of nutrition and medicine, it presents an inconsistent stance on the consumption of meat. The text acknowledges the benefits of a primarily vegetarian diet, yet includes a section on meat consumption that contradicts the traditional Buddhist stance on meat as a consumable food.

Despite these differences, both texts share an underlying principle of using medicine to maintain balance and harmony in the body. The **BhM** categorizes medicines based on the principle of humor balance, while the **BhK** focuses on the use of medicinal substances derived mainly from plant sources. Both texts emphasize the importance of purificatory and pacificatory treatments and caution against the use of impure drugs.

This critical comparison highlights the contrasting approaches and emphasis of the **BhK** and **BhM**, while also identifying their shared underlying principles. It demonstrates how these texts reflect the cultural, social, and historical context in which they were produced and provide valuable insights into early Buddhist medical practices. However, it also highlights the need for caution in interpreting these texts, given the possibility of historical inaccuracies, influences from other medical traditions, and inconsistencies in dietary practices.

Another potential avenue of research is the historical perspective of the origin of the concept of disease and the formulation of a “medical system” at the beginning of Buddhist history. This could involve examining nuclear concepts of the medical idea, such as the idea of pure and impure, the conception of the body and anatomy, and the relationship between human beings and nature. While the Pāli Canon alone presents numerous elements in this regard, there is much more ancient philological material that can be explored in the future from a Buddhist point of view.

In conclusion, this study has highlighted the importance of further research into the development of medicine in the Buddhist field. While it has provided a general overview of the **BhM**, there is still much more that can be explored, both

in terms of technical aspects related to therapy and the historical perspective of the very origin of the concept of disease and the formulation of a “medical system.” By exploring these areas in more detail, scholars can gain a deeper understanding of the role that Buddhism has played in the development of medicine throughout history. Ultimately, this can help to shed light on the rich cultural and intellectual heritage of Buddhist thought and its ongoing influence on medical practice today.

PRIMARY TEXTS

Pāli sources have primarily been cited from the printed PTS editions, but reference has also been made to the online archive of SuttaCentral (Sujato et al. 2005–).

- AN Hardy, E. (1900) (ed.), *The Aṅguttara-Nikāya Part V. Dasaka-Nipāta and Ekādasaka-Nipāta* (London: Pali Text Society), ARK: [ark : / 13960 / t3mw7vm07](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t3mw7vm07).
- BhK “Bhesajjakhanda” (1879), in Herman Oldenberg (ed.), *The Vinaya Piṭakam, Vol. I: The Mahāvagga, i*, 5 vols (London: Williams and Edinburgh: Norgate), 199–252, ARK: [ark : / 13960 / t9g511h6r](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t9g511h6r).
- BhM Liyanaratne, Jinadasa (1996–2009), *Bhesajjamañjūsā*, 3 vols (Oxford: Pali Text Society), *Bhesajjamañjūsā, Chapters 1–18* (1996), *The Casket of Medicine* (Oxford, 2002), *Bhesajjamañjūsā, Chapters 19–60* (Oxford, 2009).
- Dhp Ānandajoti Bhikkhu (2020), *A Comparative Edition of the Dhammapada. with Parallels from Sanskritised Prakrit Edited Together with a Study of the Dhammapada Collection* (4th edn., Colombo: University of Peredeniya), [https : / / www . ancient - buddhist - texts . net / Buddhist - Texts / C3 - Comparative - Dhammapada / Comparative - Dhammapada . pdf](https://www.ancient-buddhist-texts.net/Buddhist-Texts/C3-Comparative-Dhammapada/Comparative-Dhammapada.pdf), (on 2 July 2023); Cf. also the online edition at SuttaCentral.
- DN Davids, T. W. Rhys, and Carpenter, J. Estlin (1890–1911) (eds.), *The Dīgha Nikāya* (London: Henry Frowde for the Pali Text Society), ARK: [ark : / 13960 / t79t0d125](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t79t0d125); v. 2: [ark : / 13960 / t7bs44top](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t7bs44top); v. 3: [ark : / 13960 / t7pp49q4d](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t7pp49q4d).
- MN Trenckner, Wilhelm, and Chalmers, Robert (1888) (eds.), *The Majjhima-Nikāya: Vol. I* (Pali Text Society Text Series, 60; London: Published for the Pali Text Society, by H. Frowde), [https : / / archive . org / details / MajjhimaNikayaTrenckner](https://archive.org/details/MajjhimaNikayaTrenckner), (on 27 June 2023).
- SN Feer, Léon (1894) (ed.), *Samyutta-nikāya, Part IV: Salāyatana-vagga* (London: Henry Frowde for the Pali Text Society), ARK: [ark : / 13960 / t2d797h5x](https://nbn-resolving.org/urn:nbn:de:bsz:551-190001-t2d797h5x).

Snp Andersen, Dines, and Smith, Helmer (1913) (eds.), *Sutta-Nipāta* (Oxford: Oxford University Press for the Pali Text Society), ARK: [ark : / 13960 / t7vn0kh6p](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-39660-p0077-7).

REFERENCES

- Angermeier, Vitus (2022), "The Seasons in Ancient Indian Medicine: Long Winters or Extensive Rains?," *History of Science in South Asia*, 10: 247–71. DOI: [10.18732/hssa89](https://doi.org/10.18732/hssa89).
- Cousins, Lance (2022), *Meditations of the Pali Tradition: Illuminating Buddhist Doctrine, History, and Practice*, ed. Sarah Shaw (Boulder, CO: Shambhala Publications), ISBN: 978-1611809879.
- Crosby, Kate (2020), *Esoteric Theravada: The Story of the Forgotten Meditation Tradition of Southeast Asia* (Boulder, CO: Shambhala Publications), ISBN: 9781611807943.
- Dennison, P. (2023), *Jhana Consciousness: Buddhist Meditation in the Age of Neuroscience* (Boulder: Shambhala Publications), ISBN: 9780834844667.
- Dhammajoti, K. L. (2021), "Meditative Experiences of Impurity and Purity—Further Reflection on the *aśubhā* Meditation and the *śubha-vimokṣa*," *Religions*, 12: 2. DOI: [10.3390/rel12020086](https://doi.org/10.3390/rel12020086).
- Divino, Federico (2022), "Alcune note sulla concezione di corpo e di malattia nella medicina buddhista," *Rivista Della Società Italiana di Antropologia Medica*, 23/54: 271–98, <https://www.amantropologiamedica.unipg.it/index.php/am/article/view/644>.
- (2023a), "An Anthropological Outline of the Sutta Nipāta: The Contemporary Experience in Early Buddhist Poetry," *Religions*, 14: 2. DOI: [10.3390/rel14020172](https://doi.org/10.3390/rel14020172).
- (2023b), "Reaching the End of the World: An Anthropological Reading of Early Buddhist Medicine and Ascetic Practices," *Religions*, 14: 2. DOI: [10.3390/rel14020249](https://doi.org/10.3390/rel14020249).
- Donaldson, Brianne, and Bajželj, Ana (2021), "Jainism's Evolving View of Medicine," in id. (eds.), *Insistent Life: Principles for Bioethics in the Jain Tradition* (Berkeley, CA: University of California Press), chap. 4, 75–106. DOI: [10.1515/9780520380578-006](https://doi.org/10.1515/9780520380578-006).
- Giustarini, G. (2017), "Healthcare in Pali Buddhism," *Journal of Religion and Health*, 57: 1224–36. DOI: [10.1007/s10943-017-0402-4](https://doi.org/10.1007/s10943-017-0402-4).
- Hofmann, Bjørn (2002), "On the Triad Disease, Illness and Sickness," *The Journal of Medicine and Philosophy*, 27/6: 651–73. DOI: [10.1076/jmep.27.6.651.13793](https://doi.org/10.1076/jmep.27.6.651.13793).

- Jones, Dhivan Thomas (2017), "Illness, Cure, and Care: Selections from the Pāli Canon," in Pierce Salguero (ed.), *Buddhism and Medicine: An Anthology of Pre-modern Sources* (New York: Columbia University Press), 3–11. DOI: 10.7312/salg17994-004.
- Liyanaratne, Jinadasa (1996), *Bhesajjamañjūsā, Chapters 1–18* (Oxford: Pali Text Society).
- (2002), *The Casket of Medicine* (Oxford).
- (2009), *Bhesajjamañjūsā, Chapters 19–60* (Oxford).
- Mazars, Sylvain (2008), *Le bouddhisme et la medecine traditionnelle de l'Inde* (Paris: Springer), ISBN: 9782287745447.
- Mitra, J. (1985), *A Critical Appraisal of Āyurvedic Material in Buddhist Literature, with Special Reference to Tripiṭaka* (Varanasi: Jyotirlok Prakashan).
- Nandisena Bhikkhu (2012), "Mental Illness According to Theravada Buddhism. Towards a Theory of Mental Illness Based upon the Buddhas Teachings," in Khammai Dhammasami, Padmasiri de Silva, Sarah Shaw, Dion Peoples, and Jamie Cresswell (eds.), *Buddhist Psychotherapy: Academic Papers presented at the 2nd IABU Conference at Mahachulalongkornrajavidyalaya University* (Bangkok: International Association of Buddhist Universities), chap. 13, 137–44, http://www.undv.org/vesak2013/book/buddhist_psychotherapy.pdf, (on 27 June 2023).
- Rapport, N. (2008), "Gratuitousness: Notes Towards an Anthropology of Interiority," *The Australian Journal of Anthropology*, 19/3: 331–49. DOI: 10.1111/j.1835-9310.2008.tb00357.x.
- Ratnam, M. V. Ram Kumar, and Rao, Digumarti Bhaskara (2003), *Dukkha: Suffering in Early Buddhism* (New Delhi: Discovery Publishing House), ISBN: 9788171416530.
- Ruzsa, Ferenc (2017), "Sāṃkhya: Dualism without Substances," in Joerge Tuske (ed.), *Indian Epistemology and Metaphysics* (London: Bloomsbury Academic), chap. 7, 153–81, ISBN: 9781350126688. DOI: 10.5040/9781474219112.ch-007.
- Salguero, Pierce (2015), "Toward a Global History of Buddhism and Medicine," *Buddhist Studies Review*, 32/1: 35–61. DOI: 10.1558/bsrv.v32i1.26984.
- (2022), *A Global History of Buddhism and Medicine* (New York: Columbia University Press), ISBN: 9780231546072.
- 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: 609–29. DOI: 10.2307/604837.
- Schiefsky, Mark J. (2005), *Hippocrates: On Ancient Medicine* (Studies in Ancient Medicine, 28; Leiden: Brill), ISBN: 978-90-04-13758-5.

- Stuart, M. J. (2014), "Mendicants and Medicine: Āyurveda in Jain Monastic Texts," *History of Science in South Asia*, 2/1: 63–100. DOI: 10.18732/H27P45.
- Sujato, Bhante, Bucknell, Rod, Kelly, John, et al. (2005–) (eds.), "SuttaCentral: Early Buddhist Texts, Translations, and Parallels," SuttaCentral Development Trust, <http://suttacentral.net>, (on 14 Aug. 2023).
- Sumanacara, Ashin (2012), "A Psychological Analysis of Physical and Mental Pain in Buddhism," in Khammai Dhammasami, Padmasiri de Silva, Sarah Shaw, Dion Peoples, and Jamie Cresswell (eds.), *Buddhist Psychotherapy: Academic Papers presented at the 2nd IABU Conference at Mahachulalongkornrajavidyalaya University* (Bangkok: International Association of Buddhist Universities), chap. 12, 124–36, http://www.undv.org/vesak2013/book/buddhist_psychotherapy.pdf, (on 27 June 2023).
- Teasdale, J. D., and Chaskalson, M. (2011), "How Does Mindfulness Transform Suffering? Ii: The Transformation of *dukkha*," *Contemporary Buddhism*, 12/1: 103–24. DOI: 10.1080/14639947.2011.564826.
- Trungpa, Chögyam (2009), *The Truth of Suffering and the Path of Liberation*, ed. Judith L. Lief (Boston & London: Shambhala), ISBN: 9781590306680.
- Virupakshananda, Swami (1995), *Sāṃkhya Kārikā of Īśvara Kṛṣṇa with the Tattva Kaumudī of Śrī Vācaspati Miśra* (Mylapore, Madras: Sri Ramakrishna Math Printing Press), ARK: <ark:/13960/s2k1dd79pnj>.
- Wong, S. H. (1997), "Shamanic Dismemberment," in *The Sacred Heritage: The Influence of Shamanism on Analytical Psychology* (New York: Routledge), chap. 15. DOI: 10.4324/9780203948552.
- Wujastyk, Dominik (2009), "Interpreting the Image of the Human Body in Pre-modern India," *International Journal of Hindu Studies*, 13/2: 189–228. DOI: 10.1007/s11407-009-9077-0.
- (2012), "The Path to Liberation through Yogic Mindfulness in Early Āyurveda," in D. G. White (ed.), *Yoga in practice* (Princeton University Press), 31–42, ISBN: 9780691140858. DOI: 10.5281/zenodo.8267476.
- (2016), "Models of Disease in Ayurvedic Medicine," in Mark Jackson (ed.), *The Routledge History of Disease* (Abingdon: Routledge), chap. 3, 38–53, ISBN: 9780415720014. DOI: 10.4324/9781315543420-4.
- (2022), "The Science of Medicine," in Gavin Flood (ed.), *The Wiley Blackwell Companion to Hinduism* (2nd edn., Oxford: Blackwell), chap. 23, 399–413. DOI: 10.1002/9781119144892.ch23.
- Wujastyk, Dominik, Cerulli, Anthony, and Preisedanz, Karin (2013) (eds.), *Medical Texts and Manuscripts in Indian Cultural History* (Delhi: Manohar), ISBN: 9789350980194.

- Zysk, Kenneth G. (1982), "Studies in Traditional Indian Medicine in the Pali Canon: Jīvaka and Āyurveda," *The Journal of the International Association of Buddhist Studies*, 5/1: 70–86, <http://nbn-resolving.de/urn:nbn:de:bsz:16-jiabs-85636>.
- (1991), *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery* (New York: Oxford University Press), ISBN: 9780195059564.
- (1993), *Religious Medicine. The History and Evolution of Indian Medicine* (Abingdon, Oxon: Routledge), ISBN: 9781560000761.
- (1995), "New Approaches to the Study of Early Buddhist Medicine: Use of Technical Brāhmaṇic Sources in Sanskrit for the Interpretation of Pali Medical Texts," *Pacific World: Journal of the Institute of Buddhist Studies*, 11: 143–54, <http://www.shin-ibs.edu/documents/pwj-new/new11/07Zysk.pdf>, (on 20 Aug. 2023).
- (2007), "The Bodily Winds in Ancient India Revisited," *Journal of the Royal Anthropological Institute*, 13: S105–S115. DOI: 10.1111/j.1467-9655.2007.00407.x.
- (2021), "Doṣas by the Numbers: Buddhist Contributions to the Origins of the Tridoṣa-Theory in Early Indian Medical Literature with Comparisons to Early Greek Theories of the Humours," *History of Science in South Asia*, 9: 1–29. DOI: 10.18732/HSSA68.

Please write to (wujastyk@ualberta.ca) to file bugs/problem reports, feature requests and to get involved.

The History of Science in South Asia • Department of History and Classics, 2-81 HM Tory Building, University of Alberta, Edmonton, AB, T6G 2H4, Canada.