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

Special issue:

Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia

Edited by Dagmar Wujastyk, Suzanne Newcombe, and Christèle Barois

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University of Vienna, Inform (LSE), University of Vienna

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Introduction

Dagmar Wujastyk, Suzanne Newcombe, and Christèle Barois

University of Vienna, Inform (LSE), University of Vienna

Wild and diverse outcomes are associated with transmutational practices: the prolongation of life, the recovery of youth, the cure of diseases, invincibility, immortality, enlightenment, liberation from the cycle of rebirths, and unending bliss. This range of outcomes is linked to specific practices taught in separate traditions and lineages in medical, alchemical, yogic and tantric milieus across South and Inner Asia. These practices can be individual or collective, esoteric or secular, and occur in different places from hospital to village to monastery; they involve transmutations of substances as well as transmutations of the body. Every expression by a particular lineage has a distinguishing articulation. Yet there are also very clear commonalities and interconnections between the traditions' aims, methods and expected results. In this special issue of HSSA, we examine transmutational practices and their underlying concepts in the wider context of South and Inner Asian culture. How do these practices and ideas connect and cross-fertilise? And conversely, how are they delineated and distinct?

This collection of articles was created in the framework of AyurYog, a collaborative project that seeks to unpack how the South Asian milieus of yoga, Ayurveda and alchemy have interacted over time. The quest for youthfulness and longevity is a pervasive theme in Indic literatures, and stories of attempts to prolong life or to become young again are found in many different literary genres. This is a huge and largely understudied area of comparative historical research. The AyurYog project was conceived as a way to open research towards exploring the interconnections between what are typically studied as distinct fields of expertise over a *longue durée*. As a way of focusing the scope of the research, the AyurYog project has given special attention to longevity and vitalisation practices called *rasāyana* and *kāyakalpa* as possible key areas of exchange between the disciplines of yoga, alchemy and Ayurveda. For the pre-modern period, the AyurYog project has focused on Sanskrit texts, drawing comparatively on works from medical, alchemical and yogic contexts. For the modern period, the AyurYog project is examining how these concepts and practices have changed as portrayed in government reports, print publications, newspaper art-

icles and in contemporary practices where possible. Some of the initial results of the AyurYog project are to be found in this collection of papers.

The transmutational practices represented in Sanskrit sources dialogue with those of other cultures and languages in South and Inner Asia, sometimes including obvious parallels in terms of terminology, procedures or substances used, and at other times demonstrating conscious distinctions between soteriological and technical frameworks. In order to explore some of these dialogues, AyurYog has facilitated one international academic workshop and an international conference.[1] In both scientific meetings, the group of researchers aimed at bringing together the various specialist approaches of similar practices in distinct times and locations in order to arrive at a deeper understanding of the development and positioning of each particular presentation of transmutational beliefs and practices.

In this volume, we are pleased to be able to draw together for publication a wide scope of research into this area of enquiry. In addition to the examination of these concepts and practices in Sanskritic South Asian traditions, we feature ground-breaking research on the related practices and concepts of *kāyakaṛpam*, *chülen* (Wylie *bcud len*) and *mendrup* (Wylie *sman sgrub*), developed in the Tamil Siddha medico-alchemical tradition and in Tibetan Buddhist and Bonpo contexts, respectively. The issue also offers an exploration of Islamic yogic longevity practices that emerged in Sufi milieus of the Roshang kingdom between the fifteenth and eighteenth centuries. Many practices first described in centuries-old texts survive into the present in various forms, as the articles here detail.

The article by Christèle Barois in this volume takes up the question of how the early Sanskrit medical writers and their commentators conceived of ageing and lifespan in a detailed study of the concept of *vayas*, a Sanskrit term for "age," "vigour," "youth" or "any period of life." Noting the complexity of the different medical writer's conceptions of *vayas*, Barois explains how the medical treatises and their commentaries concur in presenting *vayas* as a general process of transformation that is governed by time, and offers an analysis of what role the different concepts of age and ageing played in medical practice. She questions in particular the meaning of *vayaḥsthāpana*, "stabilization of age," a positive effect of medical *rasāyana*, in light of the definition of *vayas* in classical medicine.

Rasāyana practices, that is, practices generally associated with the prolongation of lifespan and rejuvenation, are first comprehensively described in the early

1 The workshop "Rejuvenation, Longevity, Immortality: Perspectives on *rasāyana, kāyakalpa* and *bcud len* practices" was held in 2016 and the conference entitled "Medicine and Yoga in South and Inner Asia: Body Cultivation, Therapeutic Intervention and the Sowa Rigpa Industry" was held in 2017. A selection of the papers given at these events are available at the AyurYog YouTube channel (Wujastyk et al. 2018).

Sanskrit medical texts, where they are defined as one of eight normative subject areas of Ayurveda.[2] The term "*rasāyana*" itself is difficult to translate, as the two elements of the compound, i.e., "*rasa*" and "*ayana*" or "*āyana*" each have a range of possible meanings. Both Dagmar Wujastyk and Philipp Maas discuss different interpretations of the term in this volume. In Sanskrit medical literature, *rasāyana* describes a type of substance or medicine as well as the regimen and treatment associated with its intake. In most cases, *rasāyana* procedures are depicted in terms of a medical therapy supervised by a physician and administered to a patient, particularly in the context of the more complex treatments. However, the early medical treatises also allude to *rasāyana* as a practice, pro-actively undertaken by individuals wishing for certain results.[3] As shown by Wujastyk, the results of *rasāyana* treatments described in the medical treatises range from anti-ageing effects to the prolongation of life; from the cure of specific diseases to the attainment of perfect health; from the improvement of mental and physical powers to the development of extraordinary powers.

The term "*rasāyana*" is also prominent in Sanskrit alchemical literature, where it is used to describe the characteristics of raw substances and compound formulations, but more often denotes the culmination of alchemical practice. The latter consists of a series of preparatory applications of various cleansing formulations, followed by the intake of mercurial elixirs for transmutation. Here, *rasāyana* describes a regimen in which activities are actively undertaken by practitioners who self-administer elixirs made by themselves in complicated and laborious procedures. As discussed in Wujastyk's article, the alchemical *rasāyana* shares a number of features with the medical *rasāyana* in terms of applied substances, procedures and aims. However, there are also significant divergences. Important concurrences include the methodology of *rasāyana* treatment/practice, which in both

2 The earliest Sanskrit medical texts, the *Carakasaṃhitā* and the *Suśrutasaṃhitā*, date to the early centuries CE, though some of their contents may be several centuries older, while their final redactions date to roughly the middle of the first millennium CE. Citations in this introduction are to the editions of Ācārya (1981, 1992).

3 See, for example, *Carakasaṃhitā, cikitsāsthāna* 1.1.16-28 for a description of "in-the-hut"-treatment in which a physician is called to administer (Sanskrit: *upācaret*, "he should administer") medicines. By contrast, see *Carakasaṃhitā, cikitsāsthāna* 1.2. 32-35, which declares that "one who desires the effects of *rasāyana*" should employ (Sanskrit: *prayojayet*) formulations based on long pepper. Similarly, *Suśrutasaṃhitā, cikitsāsthāna* 27.3 states that a wise physician (Sanskrit: *bhiṣak*) should apply *rasāyana* during the young or middle-aged period of a man, while *Suśrutasaṃhitā, cikitsāsthāna* 29 outlines how a particular *rasāyana* procedure involving the intake of soma is actively undertaken by the person consuming the potion without the involvement of a physician. Most commonly, neutral expressions are used, describing how a drug works, rather than describing its application through a physician or its intake by a practitioner.

literatures is described as entailing the preliminary internal cleansing of the patient's/practitioner's body with predominantly herbal preparations to create optimal conditions for the application of the *rasāyana* tonic or elixir proper. There is also a significant overlap in both literatures in terms of the stated effects of *rasāyana*, such as the cure of specific diseases, the improvement of cognitive abilities and the enhancement of physical power and virility. However, the alchemical texts describe further effects, notably the attainment of immortality, a god-like condition or godhead itself that are absent in medical literature.

An important divergence between medical and alchemical literature lies in the substances used for *rasāyana* and the ways in which these substances are employed. In alchemical literature, mercury is the most prominent substance and the central ingredient in the *rasāyana* process. Its application during the final *rasāyana* activities is preceded by complex metallurgical procedures. From the seventh-century, mercury is included among *rasāyana* ingredients in the Sanskrit medical treatises, but is never presented as the most important substance. From about the ninth century, Sanskrit medical works increasingly included metals and minerals into their pharmacopoeia and their *rasāyana* formulations. Simultaneously, these later medical texts integrated methods for processing these materials that show close parallels to the metallurgical procedures of the alchemical works. However, the metallurgical procedures described in the medical works are usually much simpler than those described in the alchemical works and are not exclusively associated with *rasāyana* practice: They also occur in other medical contexts in which metals and minerals are used in medicinal compounds. The *rasāyana* of early medical literature (up to, and including the seventh-century works attributed to Vāgbhaṭa) is furthermore embedded in a broadly brahmanic worldview with references to Vedic sages and gods as well as to religious observance and the fulfilment of the brahmanic three goals of life (Sanskrit: *trivarga*), i.e., righteousness, wealth, and pleasure.[4]

Here, *rasāyana* is an indirect means to these ends, in that the health and longevity attained through *rasāyana* enables a person to pursue these goals. The alchemical *rasāyana*, by contrast, is typically set within a Śaiva context, with the origins of *rasāyana* being attributed to "perfected beings" (Sanskrit: *siddha*) instead of Vedic sages, and liberation from the cycle of rebirths envisioned as possible within a living body (Sanskrit: *jīvanmukti*).

4 See, for example, the talk by Maas (2017) where he discusses the narrative role of the Vedic sages in the *rasāyana* chapter of the *Carakasaṃhitā*. In regard to the brahmanic goals in life, it should be noted that they are not featured in the *Suśrutasaṃhitā*'s exposition of *rasāyana*. The *Carakasaṃhitā* mentions the fourth brahmanic goal of life, i.e. liberation (*mokṣa*), in other contexts, but not in its *rasāyana* chapter. See also Roşu (1978) on the *trivarga* in ayurvedic literature.

Thus, in the alchemical texts, the practice of *rasāyana* endows practitioners with the long life needed to pursue their spiritual practice, but at the same time is also the means itself to achieve spiritual aims.[5]

While *rasāyana* is prominently featured in Sanskrit medical and alchemical works, it seems it played only a minor role in Sanskrit works on yoga. Philipp Maas' article "On the Meaning of *Rasāyana* in Classical Yoga and Ayurveda" in this volume explores two passages that refer to *rasāyana* in the *Pātañjalayogaśāstra* (PYŚ; references are to Āgāśe and Āpaṭe 1904) and several of its commentaries. Both of the examined passages use the term in the sense of elixir or magic potion. In the first (PYŚ 4.1), a *rasāyana* preparation is explained as an alternative means for acquiring extraordinary capacities (*siddhi*); in the second (PYŚ 3.51), the *rasāyana* potion is associated with preventing old age and death and thus enabling the user to prolong the enjoyment of worldly, and especially sexual pleasures. The effects of *rasāyana* described in these short, and somewhat obscure passages correlate to some degree with descriptions of the effects of *rasāyana* in the oldest Sanskrit medical works. However, in the PYŚ, the intake of *rasāyana* potions is associated with divine or supernatural domains and the intervention of their inhabitants, and thus the circumstances for the use of *rasāyana* potions are different from those described in medical literature. Maas notes differences in the interpretations of the PYŚ's commentators: One reinforces the idea of *rasāyana* as magical elixirs unavailable to humans under normal conditions; another associates *rasāyana* with the use of mercury, thus connecting the PYŚ's *rasāyana* with the mercurial elixirs of alchemical traditions. A further commentary relates *rasāyana* to the intake of soma and Indian gooseberry (Sanskrit: *āmalaka*) and thus establishes a connection with the early Sanskrit medical works, the *Suśrutaṣāṃhitā* and the *Carakasaṃhitā*, which describe soma and Indian gooseberry as key *rasāyana* substances, respectively.

Unfortunately, the present volume does not contain a discussion of *rasāyana* in medieval yoga and Śaiva literature. Here, *rasāyana* can take very different forms to what is described in the medical texts. To give one example of an interpretation of *rasāyana* in a Śaiva text from before the tenth century, the *Netratantra* uses the term *rasāyana* as a synonym of *amṛta* (ambrosia) in its description of meditation

5 For example, the *Rasahṛdayatantra* (Kāḷe and Ācārya 1911), a tenth-century Sanskrit alchemical treatise, describes in its first chapter (in verses 27–33) how the application of an elixir based on mercury and sulphur will prolong life and enable the yogi to attain liberation by providing extra time for its pursuit. And in its nineteenth and final chapter, the same work describes a *rasāyana* process with a series of elixirs through which the practitioner can attain liberation. See Wujastyk (2017) in this volume for a detailed description of chapter nineteen of the *Rasahṛdayatantra*.

on a form of Śiva named Mṛtyujit or Mṛtyuñjaya ("he who overcomes death"), or Amṛteśa ("immortal lord").[6] According to the *Netratantra*:

> The yogin strengthens his body, or that of another, through the increase of the supreme ambrosia from subtle meditation; he becomes provided with a divine body devoid of any disease.[7]

Here, meditation takes the place of intervention with medicinal compounds. Other methods for attaining longevity and freedom from disease that are prominent in *haṭhayoga* literature include other yogic techniques, such as visualisation, breathing excercises, postures, etc. Jason Birch's research shows that reference to *rasāyana* practices (albeit not under the name of *rasāyana*) is rare in *haṭhayoga* texts. Birch has found three instances in *haṭha-* and *rājayoga* literature: the first occurs in the fourteenth-century *Khecarīvidyā*, and is then discussed in its commentary, the post-fifteenth-century *Bṛhatkhecarīprakāśa*, while further textual parallels and identical recipes are found in the eighteenth-century *Yuktabhavadeva* by Bhavadeva. The *Khecarīvidyā*'s fourth chapter, titled "Herbs for Special Powers" (Sanskrit: *siddhyauṣadhāni*) lists recipes for rejuvenation, longevity and immortality. Mallinson (2007: 13) suggests that this chapter was a later addition to the text and notes that a parallel chapter is found in *Matsyendrasaṃhitā* ch. 28.[8] Birch points to similarities between the *Khecarīvidyā*'s recipes and *rasāyana* formulations of the early Sanskrit medical works and suggests that some of its formulations may have been taken or adapted from the medical works, while others have parallels with recipes found in alchemical literature. However, he also notes that he has not found textual parallels between the *Khecarīvidyā*'s fourth chapter and any Sanskrit medical work that can be dated to before the seventeenth century. This research was presented by Jason Birch in his talk "Immortality and Herbs in Medieval Yoga Traditions" at the AyurYog workshop in October 2016 on 'Rejuvenation, longevity, immortality. Perspectives on rasāyana, kāyakalpa and bcud len practices' held at the University of Vienna. Birch also briefly discusses *rasāyana* in the wider context of medical elements in medieval yoga traditions in his article "Premodern Yoga Traditions and Ayurveda. Preliminary Remarks on their Shared Terminology, Theory and Praxis".[9]

On the other hand, it is clear that the authors of *haṭhayoga* literature knew of alchemical procedures. For example, in the *Haṭhapradīpikā* (fifteenth century), an extended metaphor of the mind (*manas*) as mercury unequivocally shows the author's familiarity with mercurial practices:

6 See *Netratantra* 7.12. Brunner (1974: 143) translates *rasāyana* as "elixir for long life."

7 *Netratantra* 7.4cd–5: सूक्ष्मध्यानामृतेनैव परेणैवोदितेन तु। आप्यायं कुरुते योगी आत्मनो वा परस्य च। दिव्यदेहः स भवति सर्वव्याधिविवर्जितः।

8 Chapter 29 of the *Matsyendrasaṃhitā* also seems to be about *rasāyana*. See Mallinson 2007: 170, n. 27.

9 Birch 2018.

> In the same way as mercury, the mind becomes fixed, devoid of unsteadiness due to the assimilation of the sound which is comparable to sulphur, and succeeds in wandering in the space named 'support-less'.[10]

However, longevity practices in the yoga traditions and their connection to alchemical *rasāyana* remain a poorly studied field, partly due to the large number of texts still unedited.

Sanskrit medical works up to at least the eighteenth century continued to include *rasāyana* therapy in their presentations of ayurvedic medicine. However, the more complicated procedures described in the texts seem to have become rare in actual medical practice. Reports of *rasāyana* treatments (under the alternative name of *kāyakalpa*) from the first half of the twentieth century describe the application of methods such as the "in the hut" (*kuṭīpraveśika*) method of *rasāyana* therapy as somewhat experimental.[11] And in one case, treatment depended on the expertise of a yogi rather than on that of ayurvedic physicians. In this volume, Suzanne Newcombe discusses the incident of the rejuvenation of the prominent Indian nationalist Madan Mohan Malaviya (1861–1946) who underwent a heavily-publicised, intensive *kāyakalpa* treatment in 1938 under the supervision of a wandering ascetic, a sadhu called Tapasviji Baba. Malaviya's *kāyakalpa* treatment was based on the *rasāyana* regimen described in the Sanskrit medical works and involved using a *rasāyana* formula from the *Aṣṭāṅgahṛdayasaṃhitā* (a seventh-century Sanskrit medical work). However, treatment was directed by the yogi Tapasviji Baba, who was known to be an expert on the subject. The episode raises interesting questions on the extent to which sadhus and vaidyas exchanged information on medical treatments and techniques. Suzanne Newcombe argues that this marked an important point in the shared history of yoga and Ayurveda, as the two disciplines were subsequently linked together as methods for the promotion of rejuvenation and longevity. Tapasviji Baba himself claimed to have reached the age of approximately 250 years at the time of his death in 1955 by undergoing multiple *kāyakalpa* treatments. Newcombe's article shows that Malaviya's health cure may have marked a turning point for popular perception of ayurvedic prescriptions as rejuvenative, and also set the ground for

10 *Haṭhapradīpikā* 4.96: बद्धं विमुक्तचाञ्चल्यं नादगन्धकजारणात्। मनःपारदमाप्नोति निरालम्बाख्यखेऽटनम्।

11 This method of treatment involves utilizing a purpose-built hut that shields the patient from drafts and sunlight and is first described in the *Carakasaṃhitā*'s *rasāyana* chapter, and also in the *Suśrutasaṃhitā*'s *rasāyana* chapter , though not under the name of *kuṭīpraveśika*. See Newcombe (2017) in this volume; Roşu 1975 and Wujastyk 2015.

the promotion of *pañcakarma* ("five (cleansing) procedures") as the most prominent aspect of ayurvedic therapy.

The term "*kāyakalpa*" is not used in any of the Sanskrit medical works. It is also not found in any of the medieval Sanskrit works on yoga, and it seems to only rarely occur in Sanskrit alchemical works.[12] However, it is common in its Tamilized form of "*kāyakaṟpam*" in Tamil Siddha medico-alchemical literature. As Ilona Kędzia explores in this volume, *kāyakaṟpam* combines elements of yoga with medicine and alchemy and may thus constitute the link between the three disciplines missing in Sanskrit literature. The *kāyakaṟpam* of Tamil Siddha literature has some overlap with medical *rasāyana*, but more closely resembles aspects of the *rasāyana* of Sanskrit alchemical literature, with strong parallels in the use of substances, methods and applications. Both Sanskrit alchemical works and the Tamil Siddha writings ascribe a dual function to plant materials as ingredients in tonics and elixirs on the one hand, but also as substances used as catalysts in metallurgical procedures on the other. Mercury plays as central a role in the Tamil Siddha practices as it does in alchemical *rasāyana*, but the Tamil sources also emphasise the use of various salts and soils, whose chemical composition is a matter of some uncertainty, but that seem specific to the Tamil tradition.

As Kędzia shows, the Tamil Siddha *kāyakaṟpam* practices also exhibit further unique features, such as the integration of yogic techniques and aims. Yogic practices, which hardly find mention in the Sanskrit medical works' presentations of *rasāyana*, are present or at least alluded to in depictions of *rasāyana* in Sanskrit alchemical literature, but play a more central and integrated role in the Tamil texts.[13] A further, and substantial difference between the Tamil and Sanskrit texts lies in how they present their contents: the Tamil Siddha texts conceive of *kāyakaṟpam* as esoteric, secret practices and use a special coded language to describe them. Kędzia suggests that the use of cryptic symbolic expressions and ambiguous technical terms in the Tamil Siddha texts may serve several functions:

12 In a personal communication (email, December 15, 2017), Jason Birch (Haṭha Yoga Project) confirmed that he had not come across the term *kāyakalpa*, or even related terms such as *deha-*, *śarīra-*, etc., *kalpa* in any yoga text, with the one exception being an unnamed nineteenth-century compilation on yoga. A search for "*kāya*" in the Digital Corpus of Sanskrit (DCS, Hellwig 1999–) brings up one single hit for "*kāyakalpa*" in the listed alchemical works: *Rasaratnākara* 1.4.48. There may be further occurrences of the term in alchemical works or parts of works not contained in the DCS.

13 This statement depends on what one includes as "yogic practice." *Suśrutasaṃhitā*, *cikitsāsthāna* 29.12, which describes the intake of soma, notes that the person undertaking *rasāyana* should observe silence and practice "*yama*" and "*niyama*." The latter could be understood generally as referring to good behaviour, but could also refer to the concepts of *yama* and *niyama* as two elements of the eightfold path of yoga as expounded in the second chapter of the *Pātañjalayogaśāstra*.

to protect the great truths of the Siddha doctrine from profanation by uninitiated persons; to allow persons outside the literary elite to access Siddha teachings; and/or to convey mystical experiences that cannot be expressed in ordinary language.

Three articles in this issue address transmutational practices and concepts specific to Tibetan cultural milieus. Anna Sehnalova's article furthers our understanding by describing continuity and changes in the Bonpo *mendrup* ritual. The Tibetan religious tradition of Bon can be understood both as a tradition within Tibetan Buddhism and, in other circumstances, as a contrast to Buddhism as it incorporates many indigenous and pre-Buddhist beliefs and practices (Buddhism arrived in Tibet around the seventh century). As Sehnalova describes, contemporary Bonpos, i.e. monks of Bonpo monasteries and their lay communities, adopt many Buddhist precepts while maintaining non-Buddhist ideas. She suggests that extant *mendrup* rituals epitomise the Bonpo monastic milieu informed by Buddhist and other Indian tantric models. The appellation "*mendrup*" is a compound of two words: 1. *men* (Wylie *sman*), denoting "medicine," a healing substance or in general something beneficial, and 2. *drup* (Wylie *sgrub*) meaning "to achieve, attain, accomplish," and thus can translate as "medicinal accomplishment." The Bonpo *mendrup* bears many similarities to the Nyingma *mendrup* monastic practice described in this volume by Cathy Cantwell, and both traditions are also likely to have originated in the same time period (see below). Within its immense complexity, the Bonpo *mendrup* ritual combines Indian tantrism, Buddhism and its soteriological ideas, the Tibetan medical tradition of Sowa Rigpa (*gso ba rig pa*), alchemy and Tibetan indigenous religious notions. The ritual is centred on an inner-personal transformation through meditation upon tantric deities and self-identification with them, accompanied by the production and consumption of specially empowered substances which are compounded according to the principles of Tibetan medical traditions. Sehnalova explains that in Tibetan contexts, the performance of the *mendrup* ritual can vary from being a small yearly rite for the enhancement of drug efficacy in medical institutions (as discussed in Barbara Gerke's article in this volume), an irregular village event, or an extended monastic celebration.

A full monastic ritual, described by Sehnalova in the Bonpo context and Cathy Cantwell in the Nyingma context, is one of the most elaborate, demanding and expensive rituals of the contemporary Tibetan milieu. In her article in this volume, Sehnalova dates the establishment of the monastic *mendrup* ritual in the Bonpo milieu to the eleventh and twelfth centuries with the discovery of two "treasure texts" detailing the ritual which can be dated to this period. These texts mention the Sanskrit word *rasāyana* (Tibetan *ra sa ya na*), possibly referring to the use of the substance mercury. However, the essential core of the medicine created in the ritual is attributed to a "fermenting agent" known as

phabta (*phabs gta'*). Through mentions of *mendrup* in extant, known Bonpo texts, Sehnalova extrapolates that this ritual has been performed periodically since this period and that contemporary enactments in the Tibetan exile community still clearly follow these eleventh- to twelfth-century descriptions, although different practices are evident in the textual record.

Cathy Cantwell's article describes a similar ritual context of *bcud len* performance in the Tibetan Nyingma monastic tradition. Cantwell explains how "*taking the essence juice*," her translation of *bcud len*, can imply incorporating essences into oneself, but may also refer to the practice of taking or extracting essences from a substance. Nyingma sources also feature the term "*rasāyana*" in Tibetan transliteration (*ra sa ya na*) in the context of Medicinal Accomplishment (*sman sgrub* = *mendrup*) practices. Cantwell shows how the Nyingma practice of *bcud len* is part of a wider set of tantric techniques, and is depicted as a supporting practice for meditation and other yogic practices aiming at enlightenment, i.e., the realization of Buddhahood. Cantwell emphasizes that these *bcud len* practices are subsidiary rather than self-sufficient components of a wider meditation system, often serving as an optional extra to the main meditational practice. The sacred pills, whose spiritual rather than medicinal qualities are emphasized, are distributed at the end of the session to the entire congregation, as occurs in the Bonpo communities.

Barbara Gerke's article in this volume surveys the uses and effects ascribed to Tibetan precious pills (*rinchen rilbu*) and queries which features qualify formulations as "precious".[14] Sowa Rigpa sources attribute precious pills with a wide range of efficacies very similar to those ascribed to *rasāyana* tonics in the Sanskrit medical works, including special powers, prevention of poisoning, rejuvenation, prolonging life and promoting strength and vigour. The focus of Gerke's study is on the rejuvenating qualities attributed to precious pills, and she explores how they are currently advertised, how *chülen* (Wylie *bcud len*), frequently translated as "rejuvenation," is and has been explained in Tibetan works on precious pills, and how Tibetan physicians understand these attributes now. Gerke differentiates between the use of the term *chülen* in the pharmacological context of making medicines; and the use of the term to describe the application of the prepared medicines. In the pharmacological context, she understands contemporary medicinal-focused *chülen* as "essence extraction," a process in which the essence (*chü*) is extracted from substances such as stones, flowers, metals, or minerals through soaking, cooking, and other practices. *Chülen* in the context of the application of the prepared medicine, somewhat inadequately represented

14 Gerke uses THL Simplified Phonetic Transcription to represent Tibetan script, for example writing *chülen* rather than the Wylie *bcud len*.

in its translation as "rejuvenation," conveys the imbibing of the extracted vital essences to support spiritual and physical health.

Gerke also describes how notions of preventative and rejuvenating benefits have been adopted widely in precious pill presentations in notices, leaflets, and on websites, particularly those addressed to a foreign clientele. Historically, precious pills were more closely associated with the treatment of serious diseases, while only those precious pills containing a mercury-sulfide compound called "*tsotel*" (Wylie *btso thal*) were considered to have rejuvenating properties. Indeed, Gerke notes how the subject of *chülen* is only very briefly alluded to in the context of precious pills in the Four Treatises, which provides a more detailed discussion of *chülen* in sections on "maintaining health" and "treating the aged."[15] The latter sections show clear links with the *rasāyana* chapter of the seventh-century Sanskrit medical classic *Aṣṭāṅgahṛdaysaṃhitā* and contain no mention of precious pills at all. Gerke argues that the more widespread presentation of precious pills as having rejuvenating properties is a relatively recent development that is part of their increased production and pharmaceutical commodification, but is also anchored in the *Four Treatises*, where *chülen* benefits are attributed to precious medicines.

A significant difference between the *rasāyana/kāyakaṟpam* of the Sanskrit and Tamil Siddha sources and the Tibetan practices of *mendrup, chülen and ra sa ya na* may lie in the idea of the practice being of significance for the community and beyond. In the Tibetan context, the ritual is considered efficacious beyond any benefit for a single individual. Cantwell explains how the notion of *rasāyana* in particular is linked to a fundamental feature of Buddhist tantra, namely the concept of the tantric bond (Tibetan *dam tshig*, Sanskrit *samaya*) linking the practitioner with the guru, the deity and the community of practitioners. Here, imbibing the sacred substances is understood as a way of connecting the practitioners with the sacred tantric metaphysical understanding.

There is nevertheless some overlap in the method of practice between the Tibetan and Sanskrit traditions. Cantwell describes that for the monastic ritual performers, the *bcud len* preparation begins by the monks performing an internal cleansing of the physical body. Similar preliminary procedures are also conducted in the context of *mendrup* practices. Furthermore, some substances used in *bcud len*, such as shilajit and mercury-sulfide compounds, overlap with the materials used in *rasāyana* recipes in Sanskrit traditions. However, other ingredients, such as juniper and the rhododendron flower, are not found in either the Sanskrit medical or alchemical *rasāyana* texts. The monastic ritual enactments of *bcud len* and *mendrup* contrast with the use of *bcud len* in the medical tradition of Sowa Rigpa. Visualised tantric consecrations during the practice and the

15 Gerke (2013) analyses these chapters.

aim of enlightenment, is central to *bcud len* ritual performance. In contrast, the primary aim of *bcud len* in the context of contemporary Sowa Rigpa milieus is the physical well-being of the physician's patients, rather than any spiritual benefits, even though the physical and spiritual aspects may be seen as complementary. In this, the *bcud len* of Sowa Rigpa is more similar to the *rasāyana* of Sanskrit medical literature, while both alchemical *rasāyana* and Tamil Siddha *kāyakaṟpam* also emphasize spiritual aims.

Longevity and vitalization practices were also developed within Islamic contexts in South and Inner Asia. To date, there is not much research available on the topic. A recent article by Tzvi Langermann entitled "The Chapter on *Rasāyana* (Medications for Rejuvenation) in *Miᶜrāj al-duᶜāʾ*, a Shiᶜite Text from the 12th/18th Century" explores a fairly late example of longevity practices in Shiᶜite Literature. The author of the examined Shiᶜite work, Muḥammad ᶜAlī al-Qazwīnī, uses the Sanskrit name of "*rasāyana*" in Arabic transliteration for the longevity recipes he describes. According to Langermann, Al-Qazwīnī probably took his definition of *rasāyana* as "the chemistry of the body" (*kīmīyāʾ al-badan*) from Muḥammad b. Yūsuf al-Harawī's (d. 949/1542) *Baḥr al-jawāhir*, which offers the following definition: "*rasāyana*: an Indian word whose meaning is 'chemistry of the body.' Books on *rasāyana* are books about electuaries and compounds".[16]

Langermann traces the provenance of the use of the term *rasāyana* in Arabic literature even further back, noting that the term is mentioned briefly by at least two other earlier Arabic writers, namely by the early ninth-century physician ᶜAlī b. Sahl Rabbān al-Ṭabarī, who defines *rasāyana* as "that which rejuvenates, that which renews" (*al-mushabbib al-mujaddid*) and gives several *rasāyana* recipes in his *Firdaws al-Ḥikma*; and by the tenth-century scholar Abū Rayḥān al-Bīrūnī, who refers to *rasāyana* in his book on India and in his translation and reworking of Pātañjali's work on yoga. Langermann also mentions that the famous ninth-century polymath Abu Bakr al-Rāzī, a pupil of al-Ṭabarī, described a rejuvenating drug under the same term used by al-Ṭabarī, i.e., *al-mushabbib.* This recipe was traced back by Oliver Kahl to Ravigupta's *Siddhasāra*, a seventh-century Sanskrit medical work with a short chapter on *rasāyana*.[17]

The connections of *rasāyana* in the literature written by Islamic scholars to the *rasāyana* of Sanskrit medical literature are fairly evident, if not always traceable to specific Sanskrit medical works. There is also a connection with Sanskrit alchemical literature. As Langermann (2018: 147) points out, al-Bīrūnī takes *rasāyana* to be synonymous with alchemy. However, Al-Bīrūnī's initial account of *rasāyana* seems to rather describe the *rasāyana* of the Sanskrit medical classics than that of the alchemical works:

16 Langermann 2018: 148.

17 Kahl 2015: 150–1.

> It means an art which is restricted to certain operations, drugs, and compound medicines, most of which are taken from plants. Its principles restore the health of those who were ill beyond hope, and give back youth to fading old age, so that people become again what they were in the age near puberty; white hair becomes black again, the keenness of the senses is restored as well as the capacity for juvenile agility, and even for cohabitation, and the life of people in this world is even extended to a long period. And why not? Have we not already mentioned on the authority of Patañjali that one of the methods leading to liberation is Rasāyana?[18]

However, in the narrative that follows, al-Bīrūnī retells stories of the making of gold as the purpose of *rasāyana*, and concludes with the following advice: "If this precious science of Rasāyana were banished to the utmost limits of the world, where it is unattainable to anybody, it would be the best".[19] The term *rasāyana* is today often used in the sense of alchemy, as Wujastyk notes in this issue. Perhaps this usage goes back directly to the writings of al-Bīrūnī. The understanding of longevity practices in Islamic contexts and their connection to the various articulations of *rasāyana* in Sanskrit literature is an area of research that deserves more attention.

Forthcoming research by Fabrizio Speziale will hopefully throw more light on the integration of *rasāyana* in Persian medical literature. He presented some preliminary research on this topic in his keynote speech at the AyurYog conference "Medicine and Yoga in South and Inner Asia" in 2017, where he explored concepts, methods and materials associated with *rasaśāstra* and *rasāyana* in Persian literature.[20] His presentation showed that descriptions of *rasāyana*, specifically passages dealing with compound mineral drugs and purified metals, became a feature of Persian texts from the fourteenth century; this interest continued into the nineteenth century. Here again, we may note the conflation of medical *rasāyana* with alchemical *rasāyana*. Speziale's work indicates that *rasāyana* in the Persian works mostly refers to alchemy, the term *rasāyana* being used for the whole of alchemy, rather than the subset of *rasāyana* activities as described by Wujastyk in this issue. Speziale noted that there was not a simple way to translate *rasāyana* or *rasaśāstra* into Persian, since earlier Persian medical culture did not have a specific term to refer to iatrochemistry and did not use the Arabic term *kīmiyā* to refer to iatrochemical materials until the eighteenth century.

The theme of longevity practices in South Asian Islamic contexts is taken up by Projit Mukharji who provides some tantalizing insight into the quests towards

18 Sachau 1910: 188–89.
19 Sachau 1910: 193.
20 Speziale 2017.

immortality and longevity and the connections between Islamic and yogic practices in the Roshang kingdom. The multicultural Roshang kingdom, also known as the Arakan kingdom or Mrauk-U kingdom, straddled the areas we now differentiate as South and South East Asia from 1430 to 1784; its Buddhist kings directly and indirectly patronized generations of Muslim Bengali scholars. Drawing variously from tantric, Sufi, and yogic Nāth traditions, some Muslim Bengali scholars in this milieu described longevity practices within an Islamic tantric soteriology.

Mukharji compares the discussion of life and longevity practices in three Bengali Islamic texts produced in the kingdom of Roshang in the period between the late sixteenth century and the early eighteenth century: an anonymous work called *Yoga Kalandar*, a text entitled *Nurjāmāl bā Suratnāmā* by Haji Muhammad and finally, the *Sirnāmā* by Kaji Sheikh Monsur. These texts describe sets of longevity practices that involve visualisations of spiritual stations (*mokam*) in the body. As Mukharji explains, the concept of *mokams* is roughly analogous to the *cakra* system first described in Sanskrit tantric texts and developed in *haṭhayoga* literature, but each *mokam* is associated with the direct guardianship of a specific archangel and is thus brought into an Islamic context. Practices involving meditation and visualization focused on specific *mokams* were believed to promote both longevity and spiritual attainment.

As Mukharji shows, each of the works uses certain strikingly similar metaphors and images to describe life in the context of these practices. Their imagery of flame, fire and breeze conveys a sense of life that is not linked to the passing of time, but with an idea of life as a material state connected to natural elements such as fire and air. Mukharji asserts that, due to its geographical position, Roshang was influenced by Persianate rather than Sinophone culture. Howerver, we may nevertheless point to Daoist discourses in which imagistic and metaphorical language of inner alchemical transformation can include discussions of light, fire, and various reactive vessels such as stoves, furnaces.[21] The relationships of East Asian transformative beliefs and practices with those of Inner and South Asia is an important area which deserves its own intensive, collaborate research project as this nascent field matures.

A central concept in the inception of the AyurYog project has been that of entanglements. Through comparing these collections of related practices and substances through various times and places we can see continuity of structure in concepts, goals, benefits and methods. But tradition-specific understandings, innovations and adjustments are also clear. It is possible to understand the spectrum of transmutational practices in South and Inner Asia as a shared and moving culture with specific local articulations. This culture of practices relating

21 Littlejohn 2017 and Komjathy 2007: 142.

to promoting health, longevity, and enlightenment developed across millennia. Contemporary national and linguistic distinctions and disciplines of study do not adequately match the multicultural exchanges in which these cultures of concept and practice have developed, flourished, mutated, declined and have been revived over the centuries. Intra-cultural entanglement is a fundamental in the creation of these transmutation practices. The articles in this volume are a preliminary effort to draw out some of the threads of these rich and fascinating processes.

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REFERENCES

Ācārya, Yādavaśarman Trivikrama, ed. (1981). *Carakasaṃhitā, Śrīcakrapāṇidattaviracitayā Āyurvedadīpikāvyākhyayā Saṃvalitā*. 4th ed. New Delhi: Munshiram Manoharlal.

— ed. (1992). *Suśrutasaṃhitā, śrīḍalhaṇācāryaviracitayā nibandhasaṃgrahākhyavyākhyayā nidānasthānasya śrīgayadāsācāryaviracitayā nyāyacandrikākhyapañjikāvyākhyayā ca samullasitā…Ācāryopāhvena trivikramātmajena yādavaśarmaṇā … saṃśodhitā*. 5th ed. Vārāṇasī, Delhi: Caukhambhā Oriyanṭāliyā.

Āgāśe, Ve. Śā. Rā. Rā. Kāśīnātha Śāstrī and Hari Nārāyaṇa Āpaṭe, eds. (1904). *Vācaspatimiśraviracitaṭīkāsaṃvalitavyāsabhāṣyasametāni Pātañjalayogasūtrāṇi Tathā Bhojadevaviracitarājamārtaṇḍābhidhavṛttisametāni Pātañjalayogasūtrāṇi*. Ānandāśramasaṃskṛtagranthāvaliḥ 47. Puṇyākhyapattana: Ānandāśramamudraṇālaya. URL: https://archive.org/details/patanjaliyoga.

Birch, Jason (2018). "Premodern Yoga Traditions and Ayurveda: Preliminary Remarks on Shared Terminology, Theory, and Praxis". In: *History of Science in South Asia* 6. In press.

Brunner, Hélène (1974). "Un Tantra du Nord: le Netra Tantra". In: *Bulletin de l'Ecole française d'Extrême-Orient* 61, pp. 125–97. DOI: 10.3406/befeo.1974.5195.

Gerke, Barbara (2013). "'Treating the Aged' and 'Maintaining Health': Locating bcud len practices in the Four Medical Tantras". In: *Journal of the International Association of Buddhist Studies (2012)* 35.1/2, pp. 329–362. DOI: 10.2143/JIABS.35.1.3078168.

Hellwig, Oliver (1999–). *DCS: Digital Corpus of Sanskrit*. URL: http://kjc-fs-cluster.kjc.uni-heidelberg.de/dcs/index.php.

Kahl, Oliver (2015). *The Sanskrit, Syriac, and Persian Sources in the Comprehensive Book of Rhazes*. Leiden: Brill. ISBN: 9789004290259.

Kāḷe, Tryambaka and Yādavaśarman Trivikrama Ācārya, eds. (1911). *Rasahṛdayatantram Śrīmadgovindabhagavatpādaviracitam, Caturbhujamiśraviracita-Mugdhabodhinīvyākhyāsamullasitam, Kāḷe Ityupahvagurunāthātmajatryambakena Tathā Ācāryopāhvena Trivikramātmajena Yādavaśarmaṇā Saṃśodhitam*. Āyurvedīyagranthamālā 1. Bombay: Nirṇayasāgara Press. URL: https://archive.org/details/Rashridayatantra1927 (on 11 Feb. 2018). Reprint: Lahore, Motilal Banarsidas, 1927.

Komjathy, Louis (2007). *Cultivating Perfection: Mysticism and Self-transformation in Early Quanzhen Daoism*. Leiden: Brill. ISBN: 978-9004160385.

Langermann, Y. Tzvi (2018). "The Chapter on Rasāyana (Medications for Rejuvenation) in Miᶜrāj al-duᶜāʾ, a Shiᶜite Text from the 12th/18th Century". In: *Intellectual History of the Islamicate World* 6.1-2, pp. 144–183. DOI: 10.1163/2212943x-00601010.

Littlejohn, Ronnie (2017). *Daoist Philosophy. 5. Fundamental Concepts in the Daodejing*. The Internet Encyclopedia of Philosophy. URL: http://www.iep.utm.edu/daoism/#H5 (on 11 Feb. 2018).

Maas, Philipp A. (2017). *On Caraka's Account of the Origin of Rasāyana*. Paper presented at the conference "Medicine and Yoga in South and Inner Asia". University of Vienna. URL: https://youtu.be/0q4OJNcRIuc (on 11 Feb. 2018).

Mallinson, James (2007). *The Khecarīvidyā of Ādinātha: A Critical Edition and Annotated Translation of an Early Text of Haṭhayoga*. London and New York: Routledge. ISBN: 0-415-39115-6.

Newcombe, Suzanne (2017). "Yogis, Ayurveda and Kayakalpa – The Rejuvenation of Pandit Malaviya". In: *History of Science in South Asia* 5.2. In press.

Roşu, Arion (1975). "Considérations Sur Une Technique Du Rasāyana Āyurvédique". In: *Indo-Iranian Journal* 17.1, pp. 1–29. ISSN: 1572-8536. DOI: 10.1163/000000075790079222.

— (1978). "Études āyurvédiques: le trivarga dans l'āyurveda". In: *Indologica Taurinensia* 6, pp. 255–60.

Sachau, Edward C. (1910). *Alberuni's India: An Account of the Religion, Philosophy, Literature, Geography, Chronology, Astronomy, Customs, Laws and Astrology of India about AD 1030*. 2 vols. London: Kegan Paul, Trench, Truebner and Co.

URL: https://archive.org/details/alberunisindia_201612 (on 11 Feb. 2018).

Speziale, Fabrizio (2017). "Rasaśāstra, Rasāyana and Persian Medical Culture in South Asia". Paper presented at the conference "Medicine and Yoga in South and Inner Asia". Vienna. URL: http://ayuryog.org/event/conference-medicine-and-yoga-south-and-inner-asia-body-cultivation-therapeutic-intervention (on 11 Feb. 2018).

Wujastyk, Dagmar (2015). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: *AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Cpitoli per una Storia dellÁlchimia nellÁntica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino* XXXVII, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 16 Aug. 2017).

— (2017). "Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature". In: *History of Science in South Asia* 5.2, pp. 1–36. URL: http://hssa-journal.org. In press.

Wujastyk, Dagmar et al., eds. (2018). *AyurYog YouTube Channel*. URL: https://www.youtube.com/channel/UC4ssviEb_KoAtb2U_XaXf_w (on 11 Feb. 2018).

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Edited by Dagmar Wujastyk, Suzanne Newcombe, and Christèle Barois

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University of Vienna

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature

Dagmar Wujastyk

University of Vienna

Both Sanskrit medical and alchemical works describe procedures and formulations called "*rasāyana*".[1] The term "*rasāyana*" is a compound of two words, "*rasa*" (liquid, juice, flavour, nutritive juice, essence) and "*ayana*" (path, way) or "*āyana*" (reaching, attaining). Because of the polyvalent meanings of its elements, in particular of "*rasa*," there are different valid possibilities for interpreting the meaning of *rasāyana*.[2] Fenner (1979: 69) suggested that "(u)sing the term *rasa* in its general sense of essence, the term *rasāyana* could be taken to mean the act of preparing what is of value in something, or simply the act of improvement."[3]

1 The differentiation between Sanskrit medical and alchemical literature is not clearcut in all cases. I generally follow the convention of differentiating between them as proposed by Meulenbeld (1999–2002: IIA, 581–789), who separately lists a series of works under the rubric of "*rasaśāstra*." As the inclusion of these works in a history of Indian medical literature indicates, the relationship between them and medical treatises, i.e., works predominantly dedicated to health and healing, can be very close. Meulenbeld (1999–2002: IA,4) notes that: "Rasaśāstra (alchemy and iatrochemistry) and ayurveda are overlapping areas and became intimately connected with each other in the course of time. Many texts can only be classified as intermediate between the two or as belonging to both at the same time. For this reason my survey embraces the literature on rasaśāstra." See also White 2012: 491 for a useful list of common elements found in alchemical works not found in medical works.

2 Consider, for example, White's (1996: 184) "way of rasa," Palit's (2009: 18): "path that rasa takes," *rasa* being defined as "primordial tissue or plasma" here, and Rāy's translation of *rasāyana* substances and medicines as "Elixir Vitae" (Rāy 1903: 80).

3 Based on a definition of *rasāyana* in the *Carakasaṃhitā*, Fenner (1979: 69) concluded that "rasa can be viewed generally in its meaning as the nutrient fluid which spreads through the body, and specifically as one of the tastes or active principles which makes up this fluid. The term ayana in rasayana can now be understood as the art or way (from ayana = path) of preparing (or, as the Tibetans put it, extracting) the rasa."

In Sanskrit medical literature, *rasāyana* is defined as one of eight subject areas of medicine. The proclaimed aim of *rasāyana* therapies is to preserve or promote health and well-being, but also to prolong life, to halt degeneration caused by ageing, to rejuvenate and to improve cognitive function. The term "*rasāyana*" describes the therapies that together constitute this branch of medicine; the methodology and regimen of treatment; and the medicinal substances and formulations used in these therapies.

Many Sanskrit medical works dedicate chapters to the subject of *rasāyana*.[4] These typically contain lists of recipes and descriptions of their applications, but also definitions of *rasāyana*; expositions on the characteristics and properties of single raw materials; instructions on the methodology of treatment; descriptions of who is suitable for treatment; and prescriptions for behaviours and diet before, during or after treatment, or even in lieu of treatment. The oldest medical works' presentations of *rasāyana* are quite unlike each other: the *Carakasaṃhitā* and *Suśrutasaṃhitā* do not share a single *rasāyana* recipe, though there is some overlap in raw ingredients. There is also a marked difference in their perspectives on the functioning of *rasāyana* as anti-ageing or rejuvenating therapy. The treatises do, however, share ideas about treatment methodology. Both describe two general methods of treatment: a multi-layered treatment that takes place in a purpose-built hut under particular circumstances, and a simpler version that takes place without the special therapy structure.[5] Both involve preliminary treatments of internal cleansing, followed by a mild diet for regaining strength, and then treatment proper with the chosen tonic over a period of time. The *Carakasaṃhitā* embeds its description of *rasāyana* in a narrative about ancient seers (*ṛṣi*) who are presented as the first consumers of *rasāyana* as well as the first human physicians and authors of the medical texts. This narrative framework is, however, absent in the *Suśrutasaṃhitā* and only briefly alluded to in later medical works in the context of particular formulae, as for example, "Cyavana's food" (*cyavanaprāśa*), a *rasāyana* formula associated with the Vedic seer Cyavana. Later works, starting

4 The following Sanskrit medical works were consulted for this article: the *Carakasaṃhitā* (early centuries CE), *Suśrutasaṃhitā* (early centuries CE), *Aṣṭāṅgahṛdayasaṃhitā* (ca. seventh century), *Aṣṭāṅgasaṃgraha* (ca. seventh century CE), *Kalyāṇakāraka* (ca. ninth century CE), *Siddhayoga* (ca. tenth century CE), *Cakradatta* (ca eleventh century CE), *Vaṅgasenasaṃhitā*, (ca. eleventh/twelfth century CE), *Śārṅgadharasaṃhitā* (ca. thirteenth/fourteenth century CE), *Bhāvaprakāśa* (sixteenth century CE), *Yogaratnākara* (eighteenth century CE), *Bhaiṣajyaratnāvalī* (eighteenth/nineteenth century CE). Apart from the *Śārṅgadharasaṃhitā*, all of these works contain separate chapters on *rasāyana.*

5 On the methods of treatment in the hut (*kuṭipraveśika*) and the alternative "wind and heat" treatment (*vātatāpika*), see the works of Roşu (1975), Dominik Wujastyk (2003: 76–78, 125–30) and Dagmar Wujastyk (2015).

with the *Siddhayoga* (ca. 10th century), present simplified versions of the more detailed expositions of the classical works, focussing more on lists of formulae than on descriptions of treatment methods.[6] There is nevertheless a strong continuity with the older works, reflected in the reiteration of classical *rasāyana* formulae and in quotations from the older works. However, the newer works also added new materials to the canon of *rasāyana* substances and formulations, and increasingly introduced new methods of preparing medicines that are closely related to procedures for preparing raw materials and compounds described in alchemical works.

In alchemical literature, the term *rasāyana* occurs in different contexts. It is sometimes used to denote tonics that seem to have a similar function to those described in medical literature. As in medicine, one can also find the term *rasāyana* with the implication of a process, in the sense of a method of treatment or regimen. Most prominently, this regimen is associated with the culmination of alchemical operations, i.e., the intake of the mercurial elixir and its effects. Here, *rasāyana* seems to encompass the preparation of the practitioner for the intake of the mercurial elixir through various cleansing techniques; the formulation and the intake of preparatory tonics and their effects; the formulation and intake of the final mercurial elixir; and the outcomes of that intake.

In the following, I will first examine how the Sanskrit medical treatises dealt with the subject of *rasāyana*. I will consider a number of definitions of the term "*rasāyana*" and how the medical writers envisioned its role as a branch of Ayurveda. I will also explore what areas of application the medical treatises conceived for *rasāyana*. I will then examine how *rasāyana* is presented in alchemical literature. Using the oldest alchemical work's chapter on *rasāyana* as a starting point for comparison with other alchemical works' expositions on the subject, I will attempt to delineate alchemical perspectives on *rasāyana*, highlighting both commonalities and divergences between alchemical works. In the final section of this article, I will discuss whether or how medical and alchemical conceptions of *rasāyana* connect in terms of aims, methods and procedures.

6 Among the works that I consulted for this paper, the *Vaṅgasenasaṃhitā* is the exception to this rule in that it does not just present a pared-down version of *rasāyana* with lists of formulae. Its *rasāyana* chapter is long and varied and contains a number of elements not present in any of the other works' *rasāyana* chapters, such as recipes for different kinds of vinegar, a description of treatment using a head pouch, an enumeration of vital spots, and a list of diseases caused by the humours wind, bile and phlegm, respectively. The presence of these elements is somewhat puzzling as they are not necessarily presented as part of *rasāyana*, but are in the middle of the chapter between recipes and prescriptions that are more commonly found in *rasāyana* chapters.

1. RASĀYANA IN SANSKRIT MEDICAL LITERATURE

The medical treatises offer some definitions of *rasāyana*, or rather, of what is meant to be achieved through *rasāyana*. Let us consider a few such definitions, two from the earliest medical treatises, and one from a later one, the *Siddhayoga* (ca. 10th century), and its elaboration in the *Bhāvaprakāśa* (16th century).

DEFINITIONS

In its description of the eight subject areas of Ayurveda, the *Suśrutasaṃhitā* explains *rasāyana* as follows:

> रसायनतन्त्रं नाम वयःस्थापनमायुर्मेधाबलकरं रोगापहरणसमर्थं च[7]
>
> The "system of *rasāyana*" concerns preserving youthful vigour, promoting longevity, mental power and strength, and eliminating disease.

Several terms of this definition deserve some discussion. The first of these, translated here as "preserving youthful vigour" is "*vayaḥsthāpana*." "*Vayas*" is often used in the sense of "youth," and its characteristics of "vigour," or "power." However, the *Suśrutasaṃhitā* also uses the term "*vayas*" in the broader sense of "age" in three stages: childhood, maturity, and old age.[8] Fixing, or preserving ("*sthāpana*") *vayas*, therefore, may mean preserving youthful vigour, but it could also mean preserving whatever stage of life a person is in. Here, another rule is relevant, namely for whom *rasāyana* treatment is appropriate, defined in the *Suśrutasaṃhitā* as those in the "early or middle" stages of age.[9] The use of "*sthāpana*": "fixing," "preserving," "maintaining," shows clearly that the aim of *rasāyana* as defined in the *Suśrutasaṃhitā* is not rejuvenation, but rather anti-ageing, i.e., halting the progress of ageing rather than reversing it.

7 *Suśrutasaṃhitā, Sūtrasthāna* 1.8. (part)

8 A definition of the three stages of life can be found in *Suśrutasaṃhitā, Sūtrasthāna* 35.29. See also Barois in this volume.

9 See *Suśrutasaṃhitā, Cikitsāsthana* 27.3: पूर्वे वयसि मध्ये वा मनुष्यस्य रसायनम्॥ प्रयुञ्जीत भिषक्प्राज्ञः स्निग्धशुद्धतनोः सदा॥ ३॥ "A wise physician should apply *rasāyana* treatment to a man in his early or middle age, always after his body has been cleansed and oleated (3)."
In this rule, the *Suśrutasaṃhitā*, whose *rasāyana* formulations are described as having anti-ageing and life-extending, but not rejuvenating properties, contrasts with the *Carakasaṃhitā*, which attributes rejuvenating powers to many of its *rasāyana* formulae and gives several examples of very old men regaining their youth through *rasāyana* therapy. The most famous of these formulations is *cyavanaprāśa*, described in *Carakasaṃhitā, Cikitsāsthāna* 1.1.62–74.

In the *Carakasaṃhitā*, we find a longer discussion of what *rasāyana* is in the beginning of its *rasāyana* chapter.[10] The chapter starts out with defining medicine:

> चिकित्सितं व्याधिहरं पथ्यं साधनमौषधम् ।
> प्रायश्चित्तं प्रशमनं प्रकृतिस्थापनं हितम् ॥ ३ ॥
>
> विद्याद्भेषजनामानि भेषजं द्विविधं च तत् ।
> स्वस्थस्योर्जस्करं किंचित्किंचिदार्तस्य रोगनुत् ॥ ४ ॥
>
> One should know "therapeutics," "that which removes disease," "wholesome," "cure," "herbal medicine," "expiation," "calming," "supporting the natural condition," and "beneficial" as names for medicine. And medicine is of two kinds: whatever promotes strength in the healthy, and whatever eliminates disease in those who are ill.

The treatise defines *rasāyana*, together with *vṛṣya* (virility therapy) as belonging to the first category, the promotion of strength and vigour in the healthy. However, this is explained as a matter of emphasis rather than as an absolute difference: While *rasāyana* may mostly be concerned with promoting strength in the healthy, it can also be employed to alleviate disease. A more detailed definition of *rasāyana* follows:

> दीर्घमायुः स्मृतिं मेधामारोग्यं तरुणं वयः।
> प्रभावर्णस्वरौदार्यं देहेन्द्रियबलं परम्॥ ७॥
>
> वाक्सिद्धिं प्रणतिं कान्तिं लभते ना रसायनात्।
> लाभोपायो हि शस्तानां रसादीनां रसायनम्॥ ८॥[11]
>
> Through *rasāyana*, a man gains longevity, memory, mental power, health, youthful vigour, a great radiance, complexion, and voice, an extremely strong body and keen senses, mastery of speech, respect and beauty. *Rasāyana* assuredly is a means for attaining the proclaimed principal asset, etc.[12]

10 See *Cikitsāsthāna* 1.1. 1–8. In the edition of the *Carakasaṃhitā* used here (Carakasaṃhitā), the *rasāyana* chapter is located in the section on therapeutics (*Cikitsāsthāna*) and it is divided into four subchapters: 1. *abhayāmalakīyo rasāyanapāda* ("the *rasāyana* section dedicated to the chebulic and emblic myrobalans"), 2. *prāṇakāmīyo rasāyanapāda* ("the *rasāyana* section dedicated to the desire for vital breath"), 3. *karapracitīyo rasāyanapāda* ("the *rasāyana* section dedicated to hand-plucked (emblic myrobalan fruits)") and 4. *āyurvedasamutthānīyo rasāyanapāda* ("the *rasāyana* section dedicated to the uplift of the science of life").

11 *Carakasaṃhitā, Cikitsāsthāna* 1.1.7–8.

12 I follow Philipp Maas' analysis of *rasa* as here being used in the sense of "principal asset," which in this case refers to the main function of *rasāyana* of providing longevity (*dīrgham āyus*). See Maas' detailed discussion of this passage in this volume.

This passage recurs in a number of later medical texts, albeit with some variations. For example, "*praṇati*" ("respect") is sometimes replaced with "*vṛṣya*" ("manly power," "sexual vigour") and the reference to *rasāyana* as "a means for attaining the proclaimed principal asset, etc." is omitted.[13]

A third definition of *rasāyana*, first found in the *Siddhayoga* and repeated in several later texts, reads:

> यज्जराव्याधिविध्वंसि भेषजं तद्रसायनम्।[14]
>
> A *rasāyana* is a remedy that removes ageing and disease (or: that removes disease caused by ageing).

This statement is typically followed by directions adapted from *Suśrutasaṃhitā, Cikitsāsthāna* 27.3–4 on the appropriate condition and age of someone who wishes to undertake *rasāyana* treatment, i.e., that the body should be purified before treatment[15] and that treatment is appropriate for those in the early and middle stages of life.

The *Bhāvaprakāśa* supplements the *Siddhayoga*'s short definition:

> यज्जराव्याधिविध्वंसि वयःस्तम्भकरं[16] तथा।
> चक्षुष्यं बृंहणं वृष्यं भेषजं तद्रसायनम्।[17]

13 This variation is already found in *Aṣṭāṅgahṛdaya, Uttarasthāna* 39.2 and *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.2. The reading is also adopted in *Siddhayoga* 69.2–3, *Bhāvaprakāśa, Uttarakhaṇḍa* 2.2–3 and *Bhaiṣajyaratnāvalī, Uttarakhaṇḍa* 73.1. A slightly different reading is found in *Vaṅgasenasaṃhitā* 77.371–372: वाक्सिद्धिं प्रणतां कान्तिं लभतेऽन्यात्रसायनात् (372 cd). And an alternative reading is found in *Yogaratnākara* 76.2: दीर्घम् आयुः स्मृतिं मेधामारोग्यं तरुणम् वयः । देहेन्द्रियबलं कान्तिं नरो विन्देत्रसायनात्. A further variant is found in *Rasaratnasamuccaya* 26.1–2, which reads "*vṛṣatāṃ*" for Caraka's "*praṇatiṃ*."

14 See *Siddhayoga* 69.1; *Cakradatta* 66.1; *Vaṅgasenasaṃhitā* 77.371; *Bhaiṣajyaratnāvalī, Uttarakhaṇḍa* 73.1. *Śārṅgadharasaṃhitā* 1.4.13 gives a similar definition: रसायनं च तज्ज्ञेयं यज्जराव्याधिनाशनं॥ "*Rasāyana* is known as that which removes disease and ageing (or: disease caused by ageing)."

15 In the *Suśrutasaṃhitā* (*Cikitsāsthāna* 27.3), readying the body for *rasāyana* therapy includes oleation and purification. Purification is not defined further, but probably means that the patient has undergone emesis and purgation. Later texts add self-restraint and blood-letting to the necessary preparations for *rasāyana* therapy. For example, *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.3 reads: पूर्वे वयसि मध्ये वा तत्प्रयोज्यं जितामनः। स्निग्धस्य स्रुतरक्तस्य विशुद्धस्य च सर्वथा॥ ३॥ "It should be applied in early or middle age to one who has self-restraint, always after he has been oleated, his blood has been let and he has been purged." Omitting the limitations regarding the appropriate age for *rasāyana*, the reading of the second half of this verse is also found in *Siddhayoga*, chapter 69, 4.

16 The edition of the *Bhāvaprakāśa* used here reads *stambhakakaram* instead of *stambhakaram*. Since this adds one syllable too many to the verse, which otherwise consists of eight syllables per quarter, I have emended it to *stambhakaram*.

17 *Bhāvaprakāśa, Uttarakhaṇḍa* 2.1. *Yogaratnākara* 76.1 has the same reading as the *Bhāvaprakāśa*.

> A *rasāyana* is a remedy that removes ageing and disease (or: that removes disease caused by ageing) and produces that which supports youthful vigour, aids eyesight, nourishes, and bestows sexual vigour.

APPLICATIONS

A complex picture of the variety of goals pursued with *rasāyana* treatment emerges when we look at the various *rasāyana* sections of the medical works and examine what effects are attributed to their formulations. The described effects of *rasāyana* medicines and procedures can be broadly divided into five, partly overlapping, thematic groups:

Lifespan and ageing This includes medicines and procedures attributed with effecting rejuvenation, anti-ageing, or the increase of lifespan. In this context, medicines may, for example, be described as providing life-span/vitality (*āyuṣkara*). Phrases concerning the typically male patient often describe him as one who has a long or indeed unlimited life-span (*amitāyu*); or as one who will live for a long time (*jīvati kālaṃ vipulam*). A standard life expectancy of one hundred years (*jīvati śataṃ varśam*) is often mentioned, but we also find several instances in which several hundreds of years of life are promised. The anti-ageing benefits of medicines are often described with expressions like "that liberates from ageing" (*jarāvimukti*), or "preserving youthful vigour" (*vayassthāpana*). Patients are described as "not subject to old age" (*ajara*), "renewed" (*punarnava*) and "free from wrinkles and grey hair" (*nirvalīpalita*), or as "reaching youthfulness" (*yauvanam eti*).

Health This includes medicines and procedures used for the prevention or cure of disease and for the establishment of overall well-being, including the proper functioning of the body and senses. Many *rasāyana* formulations are described as "destroying all disease" (*sarvarogaghnin, āmayanāśana*), while the patient who takes a *rasāyana* medicine becomes "disease-free" (*anāmaya, aruja, niruja, vigataroga, vyādhimukta*). There is also frequent mention of specific diseases or disease groups that can be treated by *rasāyana* medicines and methods. Many of these can be categorized as diseases caused by the ageing process, or else as diseases the elderly would be either particularly prone to or vulnerable to. However, almost all of the named diseases are also serious diseases considered particularly challenging to treat.[18]

18 See Hellwig (2008) for a discussion of the disease categories found in the *rasāyana* chapters in the *Carakasaṃhitā* and *Suśrutasaṃhitā*.

Cognitive power This includes medicines and procedures that restore, establish or enhance memory power, memorization ability and intelligence. Keywords here include "memory (power)" (*smṛti*), "intelligence" (*medhā*), and "understanding" (*dhī*) as effects of medicines, while the patient is supposed to become "clever" (*matimat*), or "intelligent" (*medhāvin*), or "one who retains what he has heard" (*śrutadhārin*).

Virility This includes medicines and procedures which restore or enhance sexual stamina, bodily strength and fertility. Such formulations are described with terms such as "producing sexual vigour" (*vṛṣya*). A patient becomes "one who indulges in sexual pleasures" (*kāmacārin*), who has intercourse with one hundred women (*strīśatāni vrajati*).

Special powers While these are only indirectly alluded to in the definitions of *rasāyana*, medicines and procedures that provide the patient with bodily and mental perfection and with extraordinary capacities, such as the ability to manipulate the world according to their wishes, frequently occur in the medical works' *rasāyana* chapters.[19] Bodily perfection can encompass extraordinary beauty, but also extreme strength and agility; a stable and firm body that resembles a diamond (*vajrakāya*) or a stone (*gātram aśmavat sthirībhavati*) and that is impervious to the elements or to disease; and extreme longevity.

Rasāyana formulations most often unite a range of benefits from several, and in some cases all, thematic groups. However, there are many examples of *rasāyana* that have a specific focus or a bias towards one group, such as the "*medhyarasāyana*," medicines for the improvement of cognitive faculties. It is also not always possible to neatly discern one group from the other. Ageing and health could both be considered the overarching category, since the occurrence of certain diseases, or the loss of cognitive or sensory powers or problems concerning sexual stamina may be understood in terms of health problems, but also in terms of ageing, i.e., health problems caused or exacerbated by the ageing process. As we have seen, these are also the dominant terms in the definitions of *rasāyana* in later medical literature, ambiguously presented in a compound (*jarāvyādhividhvaṃs*) that allows to understand them as the separate categories of "ageing and disease," or as a combined category of "disease caused by ageing."

The medical treatises vary in how much weight they assign to the different elements, though there is a general bias towards addressing longevity and the ageing process in all *rasāyana* chapters that I examined. As noted above, the early texts, i.e., the *Carakasaṃhitā* and the *Suśrutasaṃhitā*, differ from each other in that

19 See Dagmar Wujastyk forthcoming.

the *Carakasaṃhitā* presents *rasāyana* as a method that can be used for the rejuvenation of the aged, while the *Suśrutasaṃhitā* defines *rasāyana* as an appropriate method for anti-ageing, i.e., halting rather than reversing the progress of ageing for the young to middle-aged. This division, however, is subsequently superseded in later works, which build upon both the older treatises' materials on *rasāyana* and therefore integrate or at least juxtapose both perspectives.[20]

The eradication of disease plays a particularly important role in the *Aṣṭāṅgasaṃgraha*, where eighty-eight out of ca. 183 recipes and prescriptions are described as effective against specific diseases or disease groups; and the *Vaṅgasenasaṃhitā*, where forty-eight out of ca. 106 recipes concern specific disease groups.[21] For comparison, out of the ca. fifty-two recipes of the *Carakasaṃhitā*'s *rasāyana* chapters, only four address specific diseases.[22] And only eight of the *Aṣṭāṅgahṛdayasaṃhitā*'s sixty-seven recipes apply to specific diseases. This is an interesting difference to the closely-related *Aṣṭāṅgasaṃgraha*.

As can be seen in the table in the Appendix, page 30 below, the most commonly mentioned disease or disease group is that of "*kuṣṭha*," diseases whose symptoms present primarily on the skin, including what might today be dia-

20 A number of later medical treatises reiterate the dictum from *Suśrutasaṃhitā, Cikitsāsthana* 27. 3: पूर्वे वयसि मध्ये वा मनुष्यस्य रसायनम्॥ प्रयुञ्जीत भिषक्प्राज्ञः (…) – "A wise physician should apply *rasāyana* treatment to a man in his early or middle age (…)," but then nevertheless list recipes that promise to make someone old young again.

21 This statement is based upon a rough count of recipes and prescriptions in the Sanskrit medical works' *rasāyana* chapters. It is difficult to arrive at an absolute count of recipes, as distinctions between recipes and indeed what counts as a recipe are not always clear. To give some examples: Sometimes, the expected outcome of a recipe changes depending on the length of intake. This is a common feature in the *Suśrutasaṃhitā*'s *rasāyana* chapter. That would mean that one could count one recipe as several, but I have opted to count such recipes as one formulation. Further, in the *Suśrutasaṃhitā* (*Cikitsāsthāna* 27.6), cold water, milk, honey and clarified butter are prescribed as anti-ageing substances. The four substances can be taken in different combinations: all together, and in combinations of two or three, or on their own. This would mean a total of fifteen possibilities, all of which have the same effect. Here again, I have counted this as one recipe. Then, many recipes are described as having "the mentioned qualities" (*proktān guṇān*), which could refer to a preceding recipe with details on its application, or otherwise to general *rasāyana* properties. Therefore, while the counts may give a rough idea of the general patterns within *rasāyana* chapters, they are somewhat inexact.

22 The *Carakasaṃhitā*'s *rasāyana* chapters have an official count of fifty-nine recipes, listed at the end of the first three quarter chapters (i.e., *Cikitsāsthāna* 1.1–3): six recipes in the first, thirty-seven in the second and sixteen in the third. The text does not give numbers for the final quarter chapter. It is not quite clear to me how these numbers are arrived at. In my own count, I arrive at six recipes for the first quarter, twenty-seven for the second, seventeen for the third, and a further two recipes in the fourth. This makes a total of fifty-two recipes

gnosed as leprosy.[23] Other common conditions include cough (*kāsa*), dypsnoea (*śvāsa*), and piles (*arśa*). Typically, one medicine is described as effective against a whole group of diseases, so that the list of diseases that can be tackled with *rasāyana* is quite long. Several *rasāyana* medicines may be indicated for the same disease.

We have seen from the *Carakasaṃhitā*'s definition of *rasāyana* that *rasāyana* was primarily considered a method of supporting health in the healthy, i.e., preventing disease and promoting well-being. However, the ways in which diseases are mentioned in the recipes suggests the eradication rather than the prevention of disease. For example, rather than stating that diseases will not arise due to the use of a *rasāyana*, terms for "removing," such as "*vināśāna*," "*hara*," or "√*apa-kṛṣ*" are used to explain the function of a *rasāyana* tonic.[24]

It is not immediately obvious in what ways *rasāyana* treatment against diseases differs from "regular" treatment described in the other branches of Ayurveda, since all of the diseases mentioned in the *rasāyana* chapter are also mentioned in other contexts in the medical works. Hellwig (2008) has tackled this question to some extent for the *Suśrutasaṃhitā* and the *Carakasaṃhitā*. According to his findings, the therapeutic application of *rasāyana* in the *Carakasaṃhitā* "emphasises the connection between the *rasāyana* therapy and the cycle of food, digestion and the building of *dhātus*" and thereby follows the treatise's standard understanding of pathology and treatment.[25] By contrast, *rasāyana* therapy in the *Suśrutasaṃhitā* is associated on the one hand with a special class of disease, the so-called "self-arising" ("*svābhāvika*") diseases. These are conditions such as hunger, thirst, ageing, death, and sleep that are inherent to human bodily existence, but also linked with a linear understanding of the passing of time.[26] On

23 *Kuṣṭha* is both the name of a specific disease, i.e., one that presents with leprosy-like symptoms; and an overarching category that comprises a range of diseases primarily presenting on the skin. In modern ayurvedic practice, *kuṣṭha* is most often used as a synonym for leprosy, but it is worth remembering that this disease category long predates any idea of bacterial infection and that the Sanskrit medical works define *kuṣṭha* on humoral principles. I will in the following refer to *kuṣṭha* as "serious skin diseases."

24 See, for example, *Carakasaṃhitā, Cikitsāsthāna* 1.3.40, where a long pepper tonic is attributed with removing disorders of the spleen (*plīhodaravināśana*), or *Carakasaṃhitā, Cikitsāsthāna* 1.1.40 and 41, where the *rasāyana* called *cyavanaprāśa* is declared a "remover of cough and dypsnoea" (*kāsaśvāsahara*) and attributed with removing (*apakarṣati*, "it removes") a whole number of diseases.

25 Hellwig 2008: 63.

26 The *svabhāvika* diseases are defined in *Suśrutasaṃhitā, Sūtrasthāna* 1.24–25 as: स्वाभाविकास्तु क्षुत्पिपासाजरामृत्युनिद्राप्रकृतयः – "'Arisen by themselves', then, are natural conditions such as hunger, thirst, ageing, death and sleep." Hellwig (2008: 37–39) discusses the interpretation of this passage in Ḍalhaṇa's tenth-century commentary at some length. Ḍalhaṇa differentiates between *svābhāvika* diseases that arise from the humours (*doṣaja*) and those that are inherent to human existence. See also Roşu (1975: 107) on this passage.

the other hand, the *Suśrutasaṃhitā* describes *rasāyana* as a particularly powerful emergency therapy that can be applied with success in the case of the failure of regular medical treatment.[27] The relevant statement is found in *Suśrutasaṃhitā, Sūtrasthāna* 33.3, a chapter on incurable conditions that discusses how to handle major diseases (*mahāvyādhi*) and especially their complications (*upadrava*). The general advice here is that, once complications have arisen, diseases can no longer be treated, except for through *rasāyana*.[28] Notably, there is a significant overlap (though not a complete match) between the diseases listed in this chapter and those mentioned in the chapters on *rasāyana*.[29]

Strengthening the argument for *rasāyana* as the last hope in desperate cases, Hellwig (2008: 48) also makes note of a passage in the *Suśrutasaṃhitā*'s chapter on the signs of death in wounded patients, which states that once signs of death have appeared, death is certain, but can be warded off by faultless brahmans or by persons engaged in *rasāyana*, austerities and repeated recitation of mantras.[30] This seems to suggest an equality in power of the named groups: brahmans on the one side, and persons engaging in *rasāyana*, austerities and/or recitation on the other. It is not entirely clear whether the second group's practice comprised *rasāyana*, austerities and recitation as one combined practice, or whether different specialists undertook them as alternative and equally efficacious practices. The tenth-century commentator Dalhaṇa seems to have considered them separate practices (and practitioners) and defines "persons engaged in *rasāyana*" as "those familiar with medicinal herbs that specifically prevent *svābhāvika* diseases".[31]

27 "Notfallmedizin" in Hellwig 2008: 62.

28 *Suśrutasaṃhitā, Sūtrasthāna* 33.3: उपद्रवैस् तु ये जुष्टा व्याधयो यान्त्य् अवार्यताम्। रसायनाद् विना वत्स तान् शृण्वेकमना मम॥ – "Diseases that have become accompanied by complications, however, are incurable, except for through *rasāyana*. Listen carefully to what I say about them, son." Ḍalhaṇa interprets this to mean that *rasāyana* therapy can cure otherwise incurable disease. रसायनाद्विनेति रसायनेन ह्यसाध्यो व्याधिरपि प्रायः साध्यते – "'Except for through *rasāyana*' means that through *rasāyana*, even an incurable disease is cured as a general rule." See also Hellwig (2008: 48) on this passage and Ḍalhaṇa's commentary on it.

29 The *mahāvyādhi*, as defined in *Suśrutasaṃhitā, Sūtrasthāna* 33.4–5 are *arśa, aśmarī, bhagandara, kuṣṭha, mūḍhagarbha, prameha, udara* and *vātavyādhi*. Their untreatable complications include *atisāra, chardi, hikkā, jvara, mūrcchā, prāṇamāṃsakṣaya, śoṣa, śvāsa*, and *tṛṣṇā*. The disease groups mentioned in the *Suśrutasaṃhitā*'s *rasāyana* chapters include the *mahāvyādhi* and also include *apasmāra, arśa, chardi, kṛmi, kuṣṭha, pāṇḍuroga, raktapitta, śoṇita, śoṣa, svarabheda* (as a symptom of *kuṣṭha*), *udara, unmāda*, and *viṣamajvara*.

30 *Suśrutasaṃhitā, Sūtrasthāna* 28.5: ध्रुवं तु मरणं रिष्टे ब्राह्मणैस्तत्किलामलैः। रसायनतपोजप्यतत्परैर्वा निवार्यते॥
"When the sign of death has occurred, death is certain. It can possibly be averted by faultless brahmans, or by those fully engaged in *rasāyana*, austerities and repeated recitation of mantras." See also Hellwig 2008: 48.

31 Dalhaṇa on *Suśrutasaṃhitā, Sūtrasthāna* 28.5: रसायनपरा इति स्वभावव्याधिनिवारणविशिष्टौषधचिन्तकास्ते रसवीर्यौषधप्रभावेन मरणं निवारयन्ति। Also see Hellwig (2008: 48) on this passage.

It should be noted that while *svābhāvika* conditions play a prominent role in the quoted statements in the *Suśrutasaṃhitā* and also are declared the subject of one of the four *rasāyana* chapters, the *svābhāvika* conditions are not often referred to in descriptions of the effects of *rasāyana* formulations.[32] Indeed, several *svābhāvika* conditions, namely hunger, thirst, and sleep, are not addressed at all. The topic of ageing, however, is prominent, particularly if we consider conditions such as loss of bodily strength, cognitive power or virility as subcategories of ageing. Overcoming death, by contrast, is only directly alluded to once in the context of the use of soma in *rasāyana* therapy, where soma is defined as a substance created for the eradication of ageing and death.[33]

Here, we can hardly speak of medical intervention, as the *Suśrutasaṃhitā* associates the use of soma as well as of divine herbs with overcoming the normal parameters of the human condition. *Rasāyana* with soma or divine herbs is described as an extreme intervention, both in terms of what patients undergo during treatment and in terms of expected outcomes. During treatment, patients experience an almost complete disintegration of their body, while successfully completed treatment results in the attainment of special powers and of a superhuman body.[34] The *Suśrutasaṃhitā* describes the spectacular outcome of *rasāyana* with soma thus:

> The visionary man who makes use of the king of plants, Soma, wears a new body for ten thousand years. Neither fire, nor water, neither poison, blade nor projectile are powerful enough to take his life. He gains the strength of a thousand well-bred, sixty-year-old, rutting elephants. If he wants to go to the lands of northern legend, to the milky ocean, or even to the abode of the king of the gods, nothing can

32 The *Suśrutasaṃhitā*'s *rasāyana* section is divided into four parts. Each part is headed by the phrase "I will now explain [a certain kind of] *rasāyana*, thus spoke Lord Dhanvantari" (*athāto* […] रसायनं व्याख्यस्यामः। यथोवाच भगवान् धन्वन्तरिः॥). The different kinds of *rasāyana* are divided into the following: 1) *rasāyana* that pacifies all disorders (*sarvopaghātaśamanīyam rasāyanam*, *Cikitsāsthāna* 27), 2) *rasāyana* for those desiring enhanced mental functioning and vitality (*medhāyuṣkāmīyaṃ rasāyanam*, *Cikitsāsthāna* 28), 3) *rasāyana* for the prevention of self-arisen disease (*svabhāvyādhipratiṣedhanīyaṃ rasāyanam*, *Cikitsāsthāna* 29), and 4) *rasāyana* for the cessation of afflictions (*nivṛttasantāpīyaṃ rasāyanam*, *Cikitsāsthāna* 30). The headings only marginally reflect the contents of the last two chapters, which deal with the use of soma and celestial herbs, respectively. These are attributed with letting the consumer overcome the human condition altogether, gaining superhuman powers.

33 See *Suśrutasaṃhitā*, *Cikitsāsthāna* 29.3. On the identification of the soma plant, see Falk 1989.

34 This is discussed in more detail by Dagmar Wujastyk (forthcoming). See also White (1996: 26–27) for a translation of the passage describing the disintegration of the body and its gradual reshaping during soma *rasāyana*.

> stand in his way. He is as beautiful as the god of love, as attractive as the second moon. He is radiant, and brings joy to the hearts of all creatures. He truly knows all sacred knowledge, with all its branches and sub-branches. He moves like a god through the whole world, with infallible power.[35]

Later medical works no longer describe the use of soma and divine herbs in *rasāyana* and generally describe less spectacular effects of treatment. However, the idea of attaining extended bodily powers continues to feature as a minor, but recurring theme in the *rasāyana* chapters of the medical works.

2. RASĀYANA IN ALCHEMICAL LITERATURE

When conducting any study on the contents of Sanskrit alchemical texts, one is confronted with the problem that many of the works are only available in incomplete or unreliable editions, if indeed any edition is available at all. Omissions in the text are sometimes due to the condition and partial availability of the manuscripts the editions are based on. However, sometimes they occur due to a conscious decision on part of the editors, as for example in the case of the edition of the *Rasārṇavakalpa* by Roy and B. Subbarayappa (1976). Here, the editors left out a large chunk of the opening section (verses 1–52), because it presented the subject of the text in religious terms and they wished to highlight the scientific elements of the text.[36] In the case of one edition of the *Rasaratnākara*, we have the opposite problem: The editor seems to have added materials. The *Rasaratnākara* is a fairly large compendium and its materials are divided into five separate sections (*khaṇḍa*), each dealing with a different main subject. The second of these is the *Rasendrakhaṇḍa*, which is devoted to medicine. Manuscript evidence shows this section to consist of some twenty chapters, but the Kṣemarāja Śrīkṛṣṇādāsa edition (1909) gives seventy-one, including a chapter on *rasāyana* (chapter 69).[37] In light of how unreliable some of our source materials are, any

35 Translation of *Suśrutasaṃhitā, Cikitsāsthāna* 29, 14–19 by Dominik Wujastyk (2003: 130). Compare also similar outcomes through *rasāyana* therapy with divine herbs in *Carakasaṃhitā, Cikitsāsthāna* 1.4.7.

36 See Roy and B. Subbarayappa 1976: iii. This text was not used for this article.

37 See Dominik Wujastyk (1984: 72) for an outline of the contents of the *Rasendrakhaṇḍa* based on manuscript evidence from the Wellcome Library collection. The contents of the *Rasendrakhaṇḍa* as presented in Kṣemarāja Śrīkṛṣṇādāsa's edition are briefly summarized in Meulenbeld 1999–2002: IIA, 654–655 and 661–662, which unfortunately does not mention the problem that many of the chapters probably stem from another work. Currently, a study of the digital copies of twenty-five *Rasaratnākara* manuscripts from the Berlin State Library collection is being undertaken by Madhusudan Rimal, a PhD student at the University of Alberta. Preliminary results confirm the findings in Dominik Wujastyk 1984.

statement made on what constitutes *rasāyana* in alchemical literature must therefore necessarily be considered somewhat tentative. Nevertheless, some broad trends in how the subject is dealt with in this literature are fairly evident.

Several alchemical works have chapters or large sections dedicated to the subject of *rasāyana*, while references to *rasāyana*, both as a characteristic of a substance or compound and as a procedure, can be found throughout. I have centred my examination of *rasāyana* on early alchemical texts, such as the *Rasahṛdayatantra*, the *Rasārṇava* and the *Rasaratnākara*, but have also consulted later texts such as the *Ānandakanda* and the *Rasaratnasamuccaya*.[38] These texts are linked through extensive intertextual borrowing. I also spot checked further alchemical works for occurrences of the term *rasāyana*, using a keyword search in the digital collections of SARIT and the Digital Corpus of Sanskrit (DCS).[39] Of the main works consulted, the *Rasahṛdayatantra*, *Rasaratnākara*, *Ānandakanda* and *Rasaratnasamuccaya* have chapters presented as expositions on *rasāyana*. The relevant sections in these works are: Chapter nineteen of the *Rasahṛdayatantra*; the *Rasāyanakhaṇḍa* of the *Rasaratnākara*; Part one (*amṛtīkaraṇaviśrānti*), chapters six, eight and nine of the *Ānandakanda*; and chapter twenty-six of the *Rasaratnasamuccaya*. In the case of the *Rasārṇava*, its eighteenth and final chapter can be understood as a description of *rasāyana*, albeit under a different heading. It is presented as a description of how to achieve the transformation of the body (*dehavedha*), but the described procedures are similar to what is described in the *Rasahṛdayatantra*'s final chapter on *rasāyana*. Large parts of the *Rasārṇava*'s eighteenth chapter are also reiterated in the *Ānandakanda*'s sections on *rasāyana* (whose sixth chapter also starts under the heading of "*dehavedha*" rather than of "*rasāyana*"). It is worth noting that while the title of a chapter or part of a work may indicate the subject matter as *rasāyana*, not all content is necessarily dedicated to it.[40]

38 The dating of alchemical works is very uncertain. According to Meulenbeld (1999–2002), the *Rasahṛdayatantra* may be dated to about the tenth or eleventh century, the *Rasārṇava* to about the twelfth and the *Rasaratnasamuccaya* to around the fifteenth or sixteenth century. The dates of the *Rasaratnākara* and *Ānandakanda* are even more uncertain. Hellwig's study of the relative chronology of alchemical works suggests that the *Vādakhaṇḍa* of the *Rasaratnākara* is placed among the oldest strata of alchemical works, while its *Rasakhaṇḍa* may be later (Hellwig 2009a: 62–64). The relation of the different parts of the *Rasaratnākara* to each other is not yet resolved.

39 The results from the keyword search, while very helpful for finding relevant passages, are limited by the fact that the number of alchemical works is small in SARIT, while the DCS contains a substantial number of alchemical works, but often only incomplete versions.

40 For example, the eight chapters of the *Rasaratnākara*'s *Rasāyanakhaṇḍa* have different foci that are not always clearly connected to *rasāyana*. The first chapter describes the conditions needed for the intake of mercurials, and some preparation methods and tools for mercury processing. Chapter two

Outside of such chapters, the term "*rasāyana*" sometimes occurs in definitions of the characteristics of substances or formulations. The meaning of *rasāyana* here seems to follow the usage in medical literature of characterising substances and formulations as tonics that are health-inducing, fortifying, invigorating, or rejuvenating. See, for example, the *Rasārṇava*'s description of chalcopyrites (*mākṣika*):[41]

> माक्षिकं तिक्तमधुरं मेहार्शःक्षयकुष्ठनुत्॥ कफपित्तहरं बल्यं योगवाहि रसायनम्॥[42]
>
> Chalcopyrites, which are bitter and sweet, (act as) a catalyst and a tonic that destroys urinary disorders, piles, wasting disease and skin disorders, removes the humours phlegm and bile, and confers strength.

Or see the *Rasahṛdayatantra*'s definition of the eight minerals (*mahārasa*):

> वैक्रान्तकान्तसस्यकमाक्षिकविमलाद्रिदरदरसकाश्च अष्टौ रसास्तथैषां सत्त्वानि रसायनानि स्युः॥[43]
>
> Tourmaline, iron, copper sulphate, chalcopyrites, iron pyrites, cinnabar, shilajit, and calamine: these eight substances and their essences are tonics.[44]

gives instructions on how to prepare the body for *rasāyana*, and then lists mercurial elixirs in liquid form that may be used for *rasāyana*. Chapter three provides recipes for mercurial pills used in *rasāyana*, but also in mercury processing procedures, while chapter four describes mercurial compounds, oils and powders. Chapter five describes unguents against wrinkles and grey hair for external application, oral intake and nasal application. Chapter six and seven are dedicated to the subjects of virility and sexual stamina. And finally, chapter eight describes how to acquire a divine body and how to turn base metals into gold. Of these, chapters one to four seem to follow the theme of *rasāyana* most closely.

41 I use "chalcopyrites" for *mākṣika* to distinguish it from *vimala*, another kind of pyrites, here rendered as "iron pyrites." This identification is, however, uncertain.

42 *Rasārṇava* 7.14cd–14ef. The DCS notes parallel passages in *Rasamañjarī* 3.84, *Rasaratnasamuccaya* 1.213 and *Yogaratnākara* 1.166. One could also read the text as: "Chalcopyrites are bitter and sweet, and destroy urinary disorders, piles, wasting disease and skin disorders. They remove the humours phlegm and bile and confer strength. They are a catalyst and a *rasāyana*." In this case the question is left open as to what the characteristics of a *rasāyana* would encompass. See Hellwig (2009b: 460) on the concept of "*yogavāhin*" as a substance's characteristic of assimilating and strengthening the action of any substance it is grouped with. References to this term are already found in the earliest medical works (see *Carakasaṃhitā, Vimānasthāna* 1.16, *Suśrutasaṃhitā, Sūtrasthāna* 45.142, *Aṣṭāṅgasaṃgraha, Sūtrasthāna* 12, 25) and are often juxtaposed with the described substances' action as a *rasāyana*.

43 *Rasahṛdayatantra* 9.4.

44 The identification of several of the eight substances is less certain than my translation implies. I have generally oriented myself on Nadkarni 1954, sometimes updating the English term.

Consider also the *Rasamañjarī* 's description of a multi-component formulation:[45]

> कासश्वासमहातिसारशमनं मन्दाग्निसंदीपनं धातोर्वृद्धिकरं रसायनवरं नास्त्यन्यदस्मात्परम्॥[46]
>
> It calms cough, dypsnoea, and severe diarrhoea, kindles weak digestive fire and it stimulates the growth of the tissues. It is the best tonic, there is no other better than it.

More often, the term *rasāyana* is used to denote an action, or a series of actions, perhaps in the sense of Fenner's "acts of improvement." When the term occurs outside of chapters dedicated to *rasāyana*, it is not always clear what these actions entail. See, for example, *Rasārṇava* 7.44cd, where the use of copper sulphate (*sasyaka*, *tuttha*) as part of *rasāyana* is attributed with anti-ageing effects.

> रसायने तु योग्यः स्याद्वयःस्तम्भकरो भवेत्//
>
> If applied in *rasāyana*, it halts ageing.

This passage could be understood to propose the use of copper sulphate for *rasāyana* treatment or as part of *rasāyana* regimen in the medical sense, i.e., in this case as an anti-ageing treatment or regimen. The difference to the *rasāyana* treatment or regimen described in medical works would then simply lie in the use of copper sulphate as the *rasāyana* substance, since copper sulphate was known to the early medical authors, but not used in the context of *rasāyana*. I have also not found it as a *rasāyana* ingredient in the examined later Sanskrit medical works. However, *rasāyana* could here also refer to the regimen and procedures associated with the intake of mercurial elixirs as the culmination of the alchemical endeavour. In that context, it would be one of many preparations taken during the *rasāyana* process rather than a central substance used on its own. However, while the *Rasārṇava* describes the use of copper sulphate in various metallurgical contexts, it does not feature its intake in its eighteenth chapter.[47]

Notably, none of the examined works use the term "*rasāyana*" to denote the subject of their expositions as a whole. We find terms such as "*rasavidyā*" or "*rasaśāstra*" as umbrella terms for the discipline of alchemy instead, though one

45 The *Rasamañjarī* by Śālinātha is a ca. fifteenth-century alchemical work. See Meulenbeld (1999–2002: IIA, 636–638) for a summary of its contents.

46 *Rasamañjarī* 6.313. This is part of a larger description of the effects, which begins in 6.312.

47 *Rasārṇava* 17.75–77, for example, describes the use of *tuttha* in the colouring of lead (a step in aurifaction).

must also keep in mind that the different works offer differing versions of what elements their discipline comprises.[48]

In the following, I will present a detailed description and analysis of the *rasāyana* chapter of the *Rasahṛdayatantra* (RHT), which, as the earliest alchemical text we have access to, may serve as a base text for comparison with the presentation of *rasāyana* in alchemical and medical literature.

RASĀYANA IN THE *RASAHṚDAYATANTRA*

The *Rasahṛdayatantra* by Govinda consists of 506 verses that are divided into nineteen chapters.[49] Laying the groundwork for the final stages of practice, chapters one to seventeen introduce the substances used in the alchemical operation, with a particular focus on the central substance mercury, and delineate the metallurgical processes each substance undergoes before it is used in the making of the mercurial elixirs. Chapter eighteen describes the use of these altered substances in processes for transmuting base metals into gold or silver. The nineteenth chapter is the last chapter in the work, and it presents the culmination of alchemical practice: the *rasāyana* process and its effects.[50]

The chapter begins with:

> अधुना प्रोक्तानपि वक्ष्यामि रसायने योगान्//[51]
>
> I will now speak of the mentioned formulations in the context of *rasāyana*.

It then describes a series of activities and recipes, broadly consisting of the preliminary treatment of cleansing the body (*śodhana*) through purgation, sweating, and emesis; a process called "the preparation of the body" (*kṣetrīkaraṇa*)

48 The term "*rasavidyā*" is found in *Rasahṛdayatantra* 19.79 and *Rasaratnasamuccaya* 6.27, "*rasaśāstra*" in *Rasaratnasamuccaya* 6.61. A further term, *rasavāda* ("the doctrine of mercury," e.g., *Rasāṛṇava* 1.44) could also be understood as an umbrella term for alchemy. However, it seems to mostly be used as a subcategory, as in *Rasendracintāmaṇi* 7.19, where it is juxtaposed with *dhātuvāda* ("the doctrine of metals") and *viṣavāda* ("the doctrine of poisons"). The *Rasendracintāmaṇi* is attributed to Ḍhuṇḍukanātha and dates to about the fifteenth or sixteenth century according to Meulenbeld (1999–2002: IIA, 705).

49 The edition and translation by B. V. Subbarayappa et al. (Rasahṛdayatantra) is divided into twenty-one chapters. It does not contain extra materials, but splits chapter nineteen into three separate chapters. Here, the edition digitized by Oliver Hellwig in the Digital Corpus of Sanskrit is used (Hellwig 1999–). For information on the dating of this text, refer to footnote 38.

50 A partial translation of this chapter was published by B. V. Subbarayappa et al. (Rasahṛdayatantra).

51 *Rasahṛdayatantra* 19.1cd.

involving the intake of herbal and mercurial elixirs; and the intake of a final (?) mercurial elixir that triggers the ultimate transformation of the practitioner's body.[52] However, these stages are not well distinguished from each other and it is not always clear whether the described herbal and mercurial elixirs are meant to be taken in succession or whether they are alternatives to each other.

Cleansing

The internal cleansing of the body through purgation etc., which is very similar to what chapters in medical works prescribe for preparing for medical *rasāyana* treatment, is not clearly distinguished from the *kṣetrīkaraṇa* process and may, in fact, form part of it. According to *Rasahṛdayatantra* 19.2–4, the cleansing first involves three days of drinking clarified butter with rock salt in the morning, followed by three days of taking a decoction of screw pine (*ketakī*).[53] The body should be made to sweat and then thoroughly cleansed with black hellebore (*kaṭurohiṇī*). Once the body has thus been rid of the humoral substance "phlegm" (*śleṣman*), the persons undergoing treatment recover from the cleansing during three days in which they may eat barley and clarified butter. The following verses (RHT 19.5–7) may describe either an alternative to the above, or a continuation of the cleansing regimen for the next three days, in which one would drink hot water with chebulic myrobalan, rock salt, emblic myrobalan, black pepper, sweet flag, jaggery, and false black pepper in the morning and also turmeric, dried ginger and long pepper.[54] This, the author promises, cleanses the body and makes it strong through overcoming any pathological combination of the humours. This passage is echoed in *Rasārṇava* 18.3–7, while a similar, though not identical, list is found in *Rasaratnākara Rasāyanakhaṇḍa* 1.4–6.[55]

The *Rasahṛdayatantra*'s passage also has a number of parallels in the *rasāyana* chapters of medical works. Its list of substances used for internal cleansing corresponds closely with that of *Carakasaṃhitā, Cikitsāsthāna* 1.1.25–28, though it uses

52 White (1996: 266) also proposes "making (oneself master of) the field" for *kṣetrīkaraṇa*. Hellwig's dictionary does not have a separate entry for *kṣetrīkaraṇa*, but explains it as "Vorbereitung des Körpers auf den *dehavedha*" – "preparation of the body for *dehavedha*" in the entry on "*kalkabandha*," the fixation of mercury into a paste (Hellwig 2009b: 188).

53 *Rasahṛdayatantra* 19.2.

54 The Sanskrit terms for these used in the *Rasahṛdayatantra* are: *pathyā* (chebulic myrobalan), *saindhava* (rock salt), *dhātrī* (emblic myrobalan), *marica* (black pepper), *vacā* (sweet flag), *guḍa* (jaggery), *viḍaṅga* (false black pepper), *rajanī* (turmeric), *śuṇṭhī* (dried ginger) and *pippalī* (long pepper).

55 The *Ānandakanda*'s detailed description of preparing the body in 1.6 mentions the use of *ketakī* (screw pine) (1.6.18–19 and 21); *vacā* (sweet flag), and *viḍaṅga* (false black pepper) (1.6.23); and *guḍa* (jaggery) (1.6.24). The *Rasaratnasamuccaya*'s twenty-sixth chapter, which starts with the definition of *rasāyana* from *Carakasaṃhitā, Cikitsāsthāna* 1.1.7–8, does not include instructions on cleansing the body before *rasāyana*.

different names for them: *pathyā* instead of *harītakī*, *dhātrī* instead of *āmalaka*, *śuṇṭhī* instead of *viṣvabheṣaja*, and it also adds *marica* (black pepper).[56] While the *Rasārṇava*, the *Rasaratnākara* and the *Ānandakanda* also refer to the use of screw pine and the *Rasārṇava* includes hellebore, none of the examined medical works mention either substance.[57] However, they do note that cleansing should be undertaken after the body has been oleated and made to sweat.[58] This may explain the *Rasahṛdayatantra*'s use of screw pine, which can act as a sudative, while the use of hellebore may be seen as an alternative or additional purgative. The *Carakasaṃhitā* and the later medical works following its prescriptions on cleansing techniques also recommend a diet of barley and clarified butter for the three days following the cleansing.

Preparing the Body (kṣetrīkaraṇa)

The *Suśrutasaṃhitā* emphasises that *rasāyana* treatment without prior cleansing of the body cannot be successful, comparing such a partial treatment to dyeing a stained cloth. Its argument about the efficacy of treatment is reiterated in many of the later medical works.[59] The *Rasahṛdayatantra* concurs in the importance of assuring the efficacy of *rasāyana* treatment through proper preparation, but also highlights the issue of safety:

> अकृतक्षेत्रीकरणे रसायनं यो नरः प्रयुञ्जीत।
> तस्य क्रामति न रसः स रसः सर्वाङ्गदोषकृद्भवति॥[60]
>
> Mercury will not penetrate the body of one who undertakes *rasāyana* without having prepared his body. The mercury will cause damage to all parts of the body.

56 *Carakasaṃhitā, Cikitsāsthāna* 1.1.25-28 lists *harītakī* (chebulic myrobalan), *saindhava* (rock salt), *āmalaka* (emblic myrobalan), *guḍa* (jaggery), *vacā* (sweet flag), *viḍaṅga* (false black pepper), *rajanī* (turmeric), *pippalī* (long black pepper), and *viśvabheṣaja* (dried ginger). Compare also *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.21 and *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.14, which list *harītakī* (chebulic myrobalan), *āmalaka* (emblic myrobalan), *saindhava* (rock salt), *nāgara* (dried ginger), *vacā* (sweet flag), *haridrā* (turmeric), *pippalī* (long black pepper), *vella* (false black pepper) and *guḍa* (jaggery) as the substances used for cleansing. The same list is found in *Siddhayoga* 69.4–5.

57 See *Rasārṇava* 18.3 and *Rasaratnākara Rasāyanakhaṇḍa* 1.5 on the use of screw pine, and *Rasārṇava* 18.5 on the use of hellebore.

58 *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.3, *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.3, and *Siddhayoga* 69.4 also mention bloodletting as a cleansing method.

59 See *Suśrutasaṃhitā, Cikitsāsthāna* 27.3–4. *Carakasaṃhitā, Cikitsāsthāna* 1.4.36–37 also states the importance of cleansing the body prior to *rasāyana* treatment. Works that quote the *Suśrutasaṃhitā*'s comparison with dyeing a stained cloth include *Aṣṭāṅgasaṃgraha* (*Uttarasthāna* 49.4–5), the *Siddhayoga* (69.6) and the *Cakradatta* (66.2).

60 *Rasahṛdayatantra* 19.8.

None of the medical works warn of potential damage caused by *rasāyana* substances. This may partly be due to the nature of substances used: mercury is arguably more toxic than the classical medical *rasāyana* substances.[61] The use of mercury as a *rasāyana* ingredient is attested relatively late in ayurvedic medicine, occurring first in a single recipe in the ca. seventh-century *Aṣṭāṅgahṛdayasaṃhitā* and *Aṣṭāṅgasaṃgraha*.[62] Mercury is found more often as a *rasāyana* ingredient in later medical works, starting with the eleventh-century *Cakradatta*, but typically not as a central ingredient.[63] Ideas concerning the need to purify substances before they are used medicinally enter medical works around the time the first alchemical works articulate the concept of purifying or perfecting (*śodhana*) mercury and other substances.[64] However, it should be noted that even those medical works that refer to the various procedures for perfecting substances do not explicitly associate the procedures with making the use of mercury or other substances safe for medical use.[65]

To return to the procedures outlined in the *Rasahṛdayatantra*, the cleansing of the body is followed with a period of regaining strength through taking various grain- and pulse-based liquids. From the text it appears that this is the moment in which the preparation of the body (*kṣetrīkaraṇa*) concludes.[66] But what follows is a description of various deodar cedar oil preparations that might be understood to still be part of *kṣetrīkaraṇa*, either as an alternative to the preceding or as an addition. The first recipe (RHT 19.10–11) is attributed with first cleansing out the abdomen, and then effecting an increase in beauty and mental vigour and allaying all disease, until finally, the body becomes immortal (*amaravapus*) and endowed with great vital power (*mahātejas*). The second, slightly different recipe

61 Note, however, the use of the poisonous leadwort (*citraka*) as a *rasāyana* substance in *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.

62 *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.36 and *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.392. See Dagmar Wujastyk 2013: 18.

63 See Dagmar Wujastyk 2016 on the use of mercury as a *rasāyana* substance in medicine.

64 Procedures for purifying (*śodhana*) mercury are already described in the ninth-century *Kalyāṇakāraka*, and some procedures are also described in the eleventh/twelfth-century *Vaṅgasenasaṃhitā*, while the thirteenth/fourteenth-century *Śārṅgadharasaṃhitā* gives more detailed expositions on the topic. See Dagmar Wujastyk 2013.

65 The possibility of poisoning with unprocessed metals and minerals is first discussed in the sixteenth-century *Bhāvaprakāśa* in the "chapter on the rules concerning the purification and calcination of metals, etc." (*dhātvādiśodhanamāraṇavidhiprakaraṇa*) in the *Pūrvakhaṇḍa*. However, even though various methods of processing mercury are described, there is no discussion on the properties of unprocessed mercury here.

66 *Rasahṛdayatantra* 19.9 reads: इति शुद्धो जातबलः शाल्योदनयावकाख्यमुद्गरसः। क्षेत्रीकृतनिजदेहः कुर्वीत रसायनं विधिवत्॥ "Thus, one who is cleansed, who has become strong through boiled rice, barley grains and mung bean soup, and whose body has been prepared, should undertake *rasāyana* according to rule."

(RHT 19.12) has less dramatic outcomes: it promises the cure of eye disorders. The third recipe (RHT 19.13) is for eliminating colds (*pīnasa*), and also the group of skin diseases (*kuṣṭha*), while the fourth (RHT 19.14) details the use of deodar cedar juice with different carrier substances (either clarified butter, oil, jaggery or honey) to overcome diseases caused by each of the humoral substances.

Deodar cedar is not featured as an ingredient in any of the Sanskrit medical works' *rasāyana* chapters, though it is already found in other contexts in the *Suśrutasaṃhitā*, *Aṣṭāṅgahṛdayasaṃhitā* and *Aṣṭāṅgasaṃgraha*.

After some dietary advice (RHT 19.15), instructions on which kinds of mercury should be consumed follow (RHT 19.16–20). These begin with "Afterwards" (*tadanu*), which may either refer to the dietary advice, or otherwise may indicate that the intake of mercury follows on from the use of the deodar preparations. In the *Rasārṇava* (18.9–10), the protracted use of deodar cedar is clearly followed by the intake of processed mercury. In the *Ānandakanda*, deodar is featured in 1.6.25–26 as the last of the preparatory preparations before *rasāyana* with processed mercury (*āroṭa*) begins. In any case, *Rasahṛdayatantra* 19.18 -20 (and also *Rasārṇava* 18.10) place the use of the mercurials in the context of *kṣetrīkaraṇa* again.

Here, we have another connection with medical literature. The *Rasahṛdayatantra*'s recipe reads thus:

> माक्षिकशिलाजतुलोहचूर्णपथ्याक्षविडङ्गघृतमधुभिः ।
> संयुक्तं रसमादौ क्षेत्रीकरणाय युञ्जीत ॥
> इति कल्कीकृतसूतं घनकान्तमधुघृतादिसंयुक्तम् ।
> भुक्त्वामरतां गच्छेत्क्षेत्रीकरणं प्रधानमिदम् ॥[67]
>
> In the beginning, one should apply mercury mixed with chalcopyrites, shilajit, iron filings, chebulic and belleric myrobalans, false black pepper, clarified butter, and honey for the purpose of preparing the body. Thus, having eaten the mercury that has been made into a paste mixed with mica, iron, honey, clarified butter etc., he attains immortality. This is the best preparation of the body.

Compare this ingredient list with the recipe in *Aṣṭāṅgahṛdayasaṃhitā, Uttarasthāna* 39.161 and *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.392:

> शिलाजतुक्षौद्रविडङ्गसर्पिर्लोहाभयापारदताप्यभक्षः ।
> आपूर्यते दुर्बलदेहधातुस्त्रिपञ्चरात्रेण यथा शशाङ्कः ॥
>
> The depleted tissues of the body of one who eats shilajit, honey, false black pepper, clarified butter, iron, chebulic myrobalan, mercury, and pyrites are replenished within fifteen nights like the moon.

67 *Rasahṛdayatantra* 19.19–20.

The same wording appears in *Rasārṇava* 18.14 and in *Rasaratnasamuccaya* 26.13. In the *Rasārṇava*, it is followed by a recipe of mica and iron and various herbal ingredients and animal products. Using similar phrasing to *Rasahṛdayatantra* 19.20, the *Rasārṇava*'s mica and iron recipe is then described as the best *kṣetrīkaraṇa* through which one would attain immortality.[68] In the medical works' version, mercury appears only as one of several ingredients, not as the main one, as in the *Rasahṛdayatantra*. And significantly, the promised effects do not include the attainment of immortality. Also, the replenishment of the bodily tissues seems to be understood as an end in itself in the medical works, whereas both the *Rasahṛdayatantra* and the *Rasārṇava* place the recipe within the context of readying the body through *kṣetrīkaraṇa*, implying a further step.

The next section of the *Rasahṛdayatantra* is concerned with various mica (*ghana*, *abhra*, *gagana*) preparations (RHT 19.21–27) and mica and iron compounds (RHT 19.28–36), including one with a certain kind of processed mercury (*āroṭa)* applied in *kṣetrīkaraṇa*. Mica is presented as a substance that prolongs life: RHT 19.23 speaks of a person living for one hundred years. However, the treatise also warns of the detrimental effects of the wrong kind of or badly prepared mica, which would cause decrepitude and death. Mica with iron is said to remove obesity, various eye diseases, swellings, pain in the ears and nose, piles, haemorrhoids, urinary disorders and grey hair.[69] Taken for a year, it wards off death and ageing. The section concludes with the following statement:

> एषामेकं योगं क्षेत्रीकरणार्थमादितः कृत्वा। संवत्सरमयनं वा निःश्रेयससिद्धये योज्यम्॥[70]
>
> Having first made one of these compounds for the purpose of preparing the body, one should use it for a year or half a year for the attainment of ultimate bliss.

In medical literature, mica is first mentioned as a *rasāyana* ingredient in the *Cakradatta*, where it is used as part of the *Cakradatta*'s complicated *rasāyana* recipe for "immortality-essence iron" (*amṛtasāralauha*). In this context, the purification and calcination of mica are briefly described as involving maceration with herbal juices and sour gruels, baking in a pit, and bringing the mica to a glow over a fire and then dipping it in milk and washing it.[71] This is already more complicated

68 *Rasārṇava* 18.15ef: भुक्त्वा गच्छेदमरतां क्षेत्रीकरणमुत्तम॥ "Having eaten it, one would attain immortality. It is the best preparation of the body."

69 See *Rasahṛdayatantra* 19.32.

70 *Rasahṛdayatantra* 19.36. The preparations alluded to are *āroṭa* with mica and two types of iron (RHT 19.35)) and mica with iron, mercury, gold and some organic substances (RHT 19.35).

71 *Cakradatta* 66.92–97. The complete procedure for making *amṛtasāralauha* is described in 66. 34–125.

than what is described in the *Rasahṛdayatantra* (19.21), which merely states that a pre-processed mica should be made red hot over a fire and then sprinkled with camphorweed (*surabhī*) and milk. The *Vaṅgasenasaṃhitā*'s *rasāyana* chapter has quite a long section on various mica preparations.[72] However, there is no overlap at all with the *Rasahṛdayatantra*'s mica recipes.

The next section of the *Rasahṛdayatantra*'s *rasāyana* chapter (RHT 19.37–58) discusses what kind of mercury should be used for *rasāyana*, namely mercury that has undergone processing and has amalgamated with other metals and minerals; what kind of mercury ought not to be used (mercury amalgamated with poison, tin or lead); what happens if such mercury is eaten (skin diseases and trembling); the processes of mercury "digesting" other substances and how this relates to the dosage of the end product; the regimen and diet during the period the mercurial is taken; what happens if these rules are not followed; the symptoms of not being able to digest mercury (faintness, sleepiness, fever, burning sensations, sharp abdominal pain, apathy and destruction of the body); and how to treat the arising disorders.

Within this section, RHT 19.49 offers an interesting interlude, as it seems to describe mercurial-enhanced meditation practice that culminates in arriving at a state called "*rasānanda*," "bliss of mercury":

> परमे ब्रह्मणि लीनः प्रशान्तचित्तः समत्वमापन्नः ।
> आश्वासयन्त्रिवर्गं विजित्य रसानन्दपरितृप्तः ॥
>
> He has become absorbed in the highest being. With a stilled mind, he has achieved equanimity. Controlling his breathing, having mastered the three goals, he has become completely content in the bliss of mercury.

The Conclusion of the Rasāyana Process

Finally, the successful intake of a mercurial elixir with sulphur and its outcomes are described (RHT 19.61–64). The effects include producing beautiful offspring, enhanced virility, rejuvenation, increased mental power and bodily strength, and prolonged life-span. There is a sense of gradual improvement over time. The conclusion of the *rasāyana* process is described thus:

> प्राप्तस्य दिव्यबुद्धिं दिव्याश्च गुणाः प्रवर्धन्ते ॥ ६२cd ॥
>
> एवं रससंसिद्धो दुःखजरामरणवर्जितो गुणवान् ।
> खेगमनेन च नित्यं संचरते सकलभुवनेषु ॥ ६३ ॥

72 *Vaṅgasenasaṃhitā* 77.121–238.

दाता भुवनत्रितये स्रष्टा सोऽपीह पद्मयोनिरिव ।
भर्ता विष्णुरिव स्यात्संहर्ता रुद्रवद्भवति ॥ ६४॥

The divine intelligence and divine qualities of one who has attained them grow further. (62cd)

One who has thus become fully perfected through mercury, who has left behind misery, ageing and death and is endowed with good qualities, continually roams all the worlds through moving in the sky. (63)

He will also become a giver and creator here in the triad of worlds, like the lotus-born; one who maintains [the world] like Viṣṇu; and a destroyer like Rudra. (64)

The chapter does not end here, but continues with recipes for several pills: a mercurial pill called "immortal beauty" (*amarasundarī*) for protection against weapons and diseases; a pill called "raising the dead" (*mṛtasaṃjīvanī*) against injuries, fear, grief, disease, ageing, unhappiness, and indeed, for raising the dead; three kinds of "diamond pill" (*vajriṇīguṭikā*), said to confer the strength of nine elephants, make the body indestructible and free it from death, ageing and disease;[73] and one "roaming the sky pill" (*khecarīguṭikā*), through which one would become "highly revered by gods, demons and perfected beings, beginning with Indra".[74] All of these are either placed in the mouth or worn as an amulet.

ON THE STRUCTURE OF THE RASĀYANA PROCESS

As we have seen, the *Rasahṛdayatantra*'s *rasāyana* chapter shares a number of features with the *rasāyana* and *dehavedha* chapters of the other examined alchemical works, both in terms of general structure of the *rasāyana* process and the required conditions for it. All the examined works prescribe cleansing procedures that precede the intake of the elixirs, though there are significant differences in how much detail is given on how to proceed. *Ānandakanda* 1.6.4–26 gives the most detailed description of the applied procedures, presenting them as "five procedures" (*pañcakarman*) of stimulating digestion (*pācana*), oleation (*snehana*), sweating (*svedana*), emesis (*vamana*) and purgation (*virecana*), to which procedures for eradicating disorders associated with vitiated flavours are added.[75] The *Rasaratnākara*'s depiction of cleansing procedures (in *Rasāyanakhaṇḍa* 1.4–8) is

73 *Rasahṛdayatantra* 19.74: एषा मुखकुहरगता कुरुते नवनागतुल्यबलम्। तद्वपुरपि दुर्भेद्यं मृत्युजरारोगनिर्मुक्तम्॥

74 *Rasahṛdayatantra* 19.76cd: देवासुरसिद्धगणैः पूज्यतमो भवति चेन्द्राद्यैः॥

75 Sweating and oleation are more typically considered preliminary treatments in ayurvedic texts, whose "five procedures"

comparatively brief, considering that the *Rasāyanakhaṇḍa* is the longest and most elaborate presentation of the subject of *rasāyana* with its 951 verses. It is similar to the *Ānandakanda*'s presentation of the subject (in 1.6.18–25) in that it specifies what the body is cleansed of, namely disorders due to salty taste (*loṇadoṣa*), to sour taste (*amladoṣa*) and to all kinds of disorders (*doṣa*), categories that are not further explained. And finally, the *Rasaratnasamuccaya*'s *rasāyana* chapter does not set out a method of commencing *rasāyana* therapy with cleansing treatments, only very briefly referring to cleansing through "five procedures" in 26.44.

Most of the examined alchemical works also include the concept of "the preparation of the body" (*kṣetrīkaraṇa*) in their presentation of *rasāyana*, a procedure that is not always clearly differentiated from the cleansing procedures, but that often includes the intake of mercurials, particularly a kind of mercury preparation called "*āroṭa*".[76] The concept of *kṣetrīkaraṇa* deserves a study of its own,[77] but here, it will perhaps suffice to note that the *Rasahṛdayatantra* associates *kṣetrīkaraṇa* with a wide range of effects, including overcoming disease, getting rid of wrinkles and grey hair, prolonging life, or even attaining immortality in a physical body. And even further: As we have seen, RHT 19.36 claims that the described *kṣetrīkaraṇa* preparations, taken for half a year to a year, eventually lead to the attainment of ultimate bliss. This suggests, therefore, that a substance used for *kṣetrīkaraṇa*, and one used following *kṣetrīkaraṇa* may be one and the same, the difference lying only in the amount of time they are taken. In any case, it is notable that the attainment of immortality is considered part of "preparing the body," suggesting that it is not the final aim in the alchemist's endeavour. The step beyond immortality would appear to be the attainment of

for purification comprise emesis, purgation, two different types of enema and the use of errhines. The disorders mentioned in the *Ānandakanda* here are "disorders caused by saline flavour" (*kṣāradoṣa*) (1.6.20), "disorders caused by sour flavour" (*amladoṣa*) (1.6.21 and 23), worms (*krimi*) (1.6.24) and "all diseases" (*sarvaroga*) (1.6.26).

76 The *Rasaratnasamuccaya* does not mention *kṣetrīkaraṇa* in its *rasāyana* chapter (chapter 26), but makes mention of it in 11.66 in the context of the purified mercury preparation called "*āroṭa*" as the most suitable "preparation of the body." Similarly, the *Rasārṇava* (18.10–11) associates *kṣetrīkaraṇa* with the intake of *āroṭa*, though also with a number of other mercurial preparations (see 18.16, 18–19 and 21). The *Rasaratnākara*'s *Rasāyanakhaṇḍa* makes a fairly clear distinction between cleansing procedures and *kṣetrīkaraṇa*, as it describes cleansing procedures in chapter 1.4–8 and *kṣetrīkaraṇa* (with mica) in chapter 2.2–3.

77 The concept of *kṣetrīkaraṇa* is briefly discussed by White (1996: 270–271), where he states that *kṣetrīkaraṇa* "refers to the preparation of the body for the medicines that will be absorbed in the treatment per se" in medical rejuvenation therapy. The source for this was a personal communication from Siddhinandan Misra (White 1996: 493, n. 33). However, it should be noted that the term does not occur in any of the *rasāyana* chapters of the Sanskrit medical works examined for this article.

a god-like status, as described in RHT 19.63–64. However, we also need to make note of the recipes for the various pills at the end of the chapter, which offer differing effects. These point to the possibility of multiple aims of alchemists rather than one single final aim.

Since the order of sequence is not always clear in the *Rasahṛdayatantra*'s presentation of *rasāyana*, one cannot always discern whether all of the described formulations should be taken one after the other, or whether some formulations are perhaps alternatives to each other. This is similar in the *Rasārṇava*'s eighteenth chapter. The recipes in the *Rasaratnākara*'s *Rasāyanakhaṇḍa* and in the *Rasaratnasamuccaya*'s twenty-sixth chapter seem to be alternatives to each other, rather than part of a multi-step process. In this, they resemble the *rasāyana* procedures described in the medical works, which describe the intake of a single tonic over a period of time. By contrast, the *Ānandakanda* (1.8) lays out a very clear course of action, with the intake of one elixir clearly following another in an established order. Whether they use a single or multiple formulations, both alchemical and medical *rasāyana* seem to happen over a sustained period of time, often with months or even years passing.

ON THE EFFECTS OF RASĀYANA

If we consider the various outcomes of *rasāyana* in the *Rasahṛdayatantra* and the other alchemical works, we can see quite different emphases. The *Rasahṛdayatantra*'s *rasāyana* leads to different outcomes that include longevity, strength, beauty, mental vigour, getting rid of wrinkles and grey hair, freedom from disease, and great vital power: These are all also found as effects of *rasāyana* therapy in the medical works. The more specific diseases mentioned include eye disorders (*nayanavikāra*), including classes of eye disorders called *paṭala*, *kāca* and *timira*, colds (*pīnasa*), serious skin diseases (*kuṣṭha*), diseases arising through disorders of the humoral substances wind, bile and phlegm (*vāta*, *pitta*, *kapha*), swellings (*arbuda*), ear and nose pain, piles (*arśa*), anal fistula (*bhagandara*), and urinary (*meha*) and spleen (*plīha*) disorders. All of these are also described in the medical works' *rasāyana* chapters, with the exception of the *kāca* and *paṭala* classes of eye disorders (compare Table 3. in the Appendix). Generally speaking, the alleviation of diseases seems a minor concern in the *Rasahṛdayatantra*'s depiction of *rasāyana*, though it is featured in the context of *kṣetrīkaraṇa* to some extent. Similarly, the *Rasārṇava*'s eighteenth chapter mentions medical cures only in passing in verse 56, referring to a mercury-mica formulation as an agent for overcoming disease in general, strengthening the body and increasing semen production. Much more detail is given on diseases arising through the improper use of mercurials (verses 136–140). In the *Rasaratnākara*'s *Rasāyanakhaṇḍa*, disease is also hardly mentioned at all. Instead, the general focus is on rejuvenation and extreme longevity; cre-

ating a superhuman, invincible body that is extremely hard (*dārḍhya*) or like a diamond (*vajrakāya*); and attaining divinity or at least a comparable condition. In a very few instances, formulations are attributed with eradicating disease in general, and in three cases, with curing specific disorders.[78] And chapters six and seven are devoted to re-establishing or enhancing virility and sexual stamina (*vājīkaraṇa*, *vīryastambhana*). While *vājīkaraṇa/vṛṣya* formally constitutes a separate subject area as one of the eight branches of Ayurveda, there is an increasing amount of overlap between medical *rasāyana* and *vājīkaraṇa* both in terms of aims and of formulations in later medical works.[79]

The *Rasaratnasamuccaya*'s *rasāyana* chapter also emphasises the rejuvenative and life-prolonging effects of its formulations, but gives equal weight to their general health benefits, and several times mentions the eradication of diseases linked with ageing. Its fairly extensive list of specific disease groups tackled by its formulations includes serious skin diseases (*kuṣṭha*), wasting diseases (*yakṣmagada*), jaundice (*kāmala* and *halīmaka*), anaemia (*pāṇḍu*), swellings (*śopha*), constipation (*ānāha*), intestinal inflammation (*grahaṇī*), consumption (*śoṣa*), cough (*kāsa*), fever (*jvara*), all kinds of urinary disorders (*prameha*), hiccups (*hikkā*), erysipelas (*visarpa*), abcesses (*vidradhi*), itching (*kaṇḍu*), falling sickness (*apasmāra*) and disorders connected to humoral imbalance. With the exception of itching (*kaṇḍu*), which is not mentioned in any of the medical works' *rasāyana* chapters, all of these categories of disorders also occur in the early medical works' *rasāyana* chapters. The *Ānandakanda*'s presentation of the *rasāyana* process, by contrast, contains little on the health benefits of its elixirs. There is one recipe for a mercury preparation that is attributed with eradicating all disease and preventing new disease from arising.[80] Depending on the amounts of intake, this preparation is meant to increase semen production, strengthen the body, get rid of grey hair, enhance memorization faculty and eloquence, eradicate eye diseases, boost eyesight, prolong lifespan, become a second Śaṅkara, and live for a thousand, one hundred thousand, or ten million years. The focus of the *Ānandakanda*'s *rasāyana* is generally on the attainment of extreme longevity, or quasi-immortality, special powers, and godhood.[81] Such outcomes are beyond what the medical works typically propose as an effect of

78 See *Rasaratnākara Rasāyanakhaṇḍa* 2. 121–127 for a formulation against "all diseases, ageing and death" (*sarvarogajarāmṛtyu*); 3. 197–220, especially verses 215–216 for a mercury formulation that cures serious skin disorders (*kuṣṭha*), paralysis, wasted limbs, and generally all diseases; or 4.90–91 for a decoction that acts as a vermifuge, eradicates "royal consumption" and unspecified other diseases (*rājayakṣmādiroga*).

79 See Dagmar Wujastyk 2016: 109–110.

80 *Ānandakanda* 1.6.44–49.

81 That is, attaining a condition of "Brahmahood" (*brahmatva)*, or "Viṣṇuhood" (*viṣṇūtā)*, or "Śivahood" (*śivatva*), etc.

rasāyana therapy, though the *Suśrutasaṃhitā*'s *rasāyana* with soma or with divine plants go into a similar direction.

The *Rasahṛdayatantra*'s presentation of *rasāyana* depicts it as a process that includes preparatory therapies for cleansing the practitioner's body internally; a procedure (or perhaps series of procedures) that further prepare the body for the intake of the most potent mercurial elixir; and the effects of these procedures, namely the transformation of the body. The transformation of the practitioner is described as a lengthy process that is drawn out over a period of time, rather than as something that happens in an instant after taking an elixir. While the *Rasahṛdayatantra* gives some recipes for the formulation of both preparatory medicines and mercurial elixirs in its *rasāyana* chapter, its *rasāyana* process does not include all the work that has to go in beforehand to prepare the raw materials. This is instead described at length in the preceding eighteen chapters. Therefore, *rasāyana* in the *Rasahṛdayatantra* does not encompass the metallurgical part of alchemical operations. The same is true for the descriptions of *rasāyana* in the other examined alchemical works, with the exception of the *Rasaratnākara*'s *Rasāyanakhaṇḍa*, which describes a series of mercury processing procedures in its first chapter. These, however, are very brief when compared with the elaborate processes of preparing raw materials described in the *Rasaratnākara*'s *Rasakhaṇḍa*.

While there are many similarities between the alchemical works' presentations of *rasāyana*, there are also significant differences between them. Mainly, the larger compilations (the *Rasaratnākara* and the *Ānandakanda*) include more detail on the procedures and give more recipes for *rasāyana* elixirs. The *Ānandakanda* lays out a more clearly established programme for the intake of a series of elixirs during *rasāyana* than the *Rasahṛdayatantra* or *Rasārṇava*. In the case of the *Rasaratnākara*'s *Rasāyanakhaṇḍa*, the listed elixirs seem to be alternatives to each other rather than part of a programme of taking multiple formulations. The *Rasaratnasamuccaya*'s much shorter presentation of *rasāyana* echoes this.

3. CONCLUSION

There is some structural agreement between the alchemical works' *rasāyana* with that of the medical works, as, for example, the methods of preparing for *rasāyana* with the internal cleansing of the body. However, medical *rasāyana* therapy seems to be a relatively more simple procedure as it is conceived as the application of only one *rasāyana* substance or formulation after the preliminary treatments. As noted above, two of the examined alchemical works seem to similarly describe a *rasāyana* process with one elixir, while the others advocate more complicated procedures with multiple elixirs during, and in some cases, after the *kṣetrīkaraṇa* process.

There is also a substantial difference in the kinds of formulations used for

rasāyana in medicine and in alchemy, though these differences get less pronounced over time with the increasing introduction of iatrochemical methods in medical works. While the earlier medical works mostly describe the use of herbal tonics for *rasāyana* therapy, later medical works (from the ninth/tenth century onwards) incorporate the inorganic and organic materials used in alchemical operations, and, perhaps even more significantly, also apply the methods for processing the new substances, albeit typically in a simplified form. However, mercury, the central focus of the alchemical *rasāyana* process, never becomes the main focus of medical *rasāyana*.

Finally, the probably greatest difference between medical and alchemical *rasāyana* lies in the expected outcomes from the "acts of improvement." The multiple steps of alchemical *rasāyana* include outcomes similar to those listed in the medical works, such as rejuvenation, longevity, and health, but then go much further, extending the effects of *rasāyana* to the attainment of immortality and, beyond that, of godhood. While medical works standardly present *rasāyana* as a method of overcoming of ageing and disease (*jarāvyādhi*), alchemical works describe *rasāyana* as a way of overcoming ageing and death (*jarāmṛtyu*). The alchemical works' phrasing of overcoming ageing and death is then found in later medical works, starting with the *Vaṅgasenasaṃhitā*.[82]

This would make it seem as if alchemical *rasāyana* were a kind of "*rasāyana* plus," an improved and maximised *rasāyana*, with more elaborate procedures and outcomes that are just that much more spectacular due to the special element of alchemy, the mercurial elixir. But that is not quite right, or rather, there isn't a linear development from mild tonic to extreme elixir. In a way, the alchemical *rasāyana* could be understood as a return to form, in that its outcomes are reminiscent of some of the earliest depictions of *rasāyana* in the very oldest medical treatises. Both the *Carakasaṃhitā* and *Suśrutasaṃhitā* describe quite extreme therapies with correspondingly extreme outcomes in the context of the use of soma or divine herbs. These elements become tempered or are left out entirely in the later medical works, starting with the *Aṣṭāṅgahṛdayasaṃhitā* in the seventh century. It is with these early *rasāyana* that I see the strongest correspondence with the *rasāyana* of the alchemical texts in terms of expected outcomes. Perhaps we can also make the argument that there is a parallel between the central *rasāyana* ingredients of soma and mercury.[83] However, for all correspondences, the procedures developed in the alchemical tradition for processing mercury and other substances that precede the intake of the *rasāyana* elixir sharply differentiate alchemical *rasāyana* from the medical *rasāyana* of the oldest medical works.

82 See Dagmar Wujastyk forthcoming.

83 See White 1996: ch. 2 on the parallels between soma and mercury and their shared association with both semen and immortality.

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APPENDIX

List of diseases in the *rasāyana* chapters of different Sanskrit medical works.

Carakasaṃhitā (*Cikitsāsthāna* 1.1–4)	arśa, atibalavāta, grahaṇīdoṣa (pl.), gulma, hikkā, hṛdroga, jaṭhara, kāsa, kṣaya, kuṣṭha, medhāsmṛtijñānahararoga (pl.), mūtraśukrasthadoṣa (pl.), galāmaya, pāṇḍutā, pīnāsa, pipāsa, plīha, śopha, śoṣa, śvāsa, śvitra, udara, uroroga, vaisvarya, vātabalāsaka, vātaśoṇita, viṣamajvara,
Suśrutasaṃhitā (*Cikitsāsthāna* 27–30)	apacī, apasmāra, arśa, bhūtagraha, chardayatā, galagaṇḍa, kṛmi, kuṣṭha, mahāvyādhi, pāṇḍuroga, raktapitta, ślīpada, śoṇita, śoṣa, svarabheda, udara, unmāda, viṣamajvara
Aṣṭāṅgahṛdayasaṃhitā (*Uttarasthāna* 39)	arśa, atibalavāta, galagraha, garodara, grahaṇī, gulma, hidhmā, hṛdroga, jvara, kāsa, kilāsa, kṛmi, kuṣṭha, medodoṣa, meha, mūtraśukrastharoga (pl.), pāṇḍutva, pāyujaroga, plīha (pl.), prameha, śopha, śoṣa, sudustaravāta, śvāsa, śvitram, nikhilakuṣṭha (pl.), viṣamajvara, unmāda, vaisvarya, vami, vātaśoṇita, yakṣman
Aṣṭāṅgasaṃgraha (*Uttarasthāna* 49)	aktāndhyakacā, āmamarut, ānāha, āpacī, apasmāra, apatantraka, arbuda, arman, arśa, ārtavadoṣa, āruci, aśmarī, atibalavāta (pl.), atikārśya, atisāra, atisthaulya, āyāma, bādhirya, bhagandara, dantakarṇaśiroruja, durnāma, duṣṭavraṇa, galagaṇḍa, galagraha, gaṇḍamālā, garodara, ghana, grahaṇī, granthī, gudaja, gude klīma, gulma, halīmaka, hidhmā, hṛdroga, jāḍhya, jalodara, jaṭhara, jvara, kāmala, kaphaja (pl.), kārśya, kāsa, kilāsa, kṛmi, kṣaya, śiragada, kṛśatā, kuṣṭha, lūtākīṭākhusarpadaṣṭa (pl.), mada, madhumeha, mandānalatva, manodoṣa, medodoṣa, meha, mukhagada, mūrcchā, mūtraśukrāśrayadoṣa (pl.), niliroga (pl.), netragada, pāṇḍutva, pīnasa, piṭaka, plīha, prameha, rakta(doṣa), ślīpada, śoṣa, śopha, sthaulya, śukradoṣa, svarabheda, śvāsa, śvayathu, sveda, śvitra, taimira, tamas, tvagvikāra (pl.), udara, unmāda, upalaghana, ūrustambha, vaisvarya, vāmaya, vami, vandhyatā, vardhma, vātabhagna, vātakaphāmaya (pl.), vātaroga (pl.), vātaśoṇita, vidradhi, vilambikā, viṣamajvara, visarpa, vyaṅga, yakṛdroga, yakṣman

Kalyāṇakāraka (*pariccheda* 6, *Svasthyarakṣanādhikāra*)	none
Siddhayoga (chapter 69)	arśa, amlapitta, āruci, atisāra, dāha, duṣṭaśukra, galaśirakarṇaśaṅkhākṣiroga (pl.), jvara, kāsa, kaṭī, khālitya, koṭha, kṛmi, kuṣṭha, meha, moha, mūtraghāta, pīnasa, piṭaka, prameha, śvāsa, śoṣa, śukradoṣa, śvayathu, timira, udara, vaisvarya, vamana, vātapittakṣatajakaphakṛtavyādhi (pl.), vraṇa
Cakradatta (chapter 66)	āḍhyavāta, akṣiroga, amlapitta, ānāha, apasmāra, arbuda, arśa, āruci, āsṛgdara, atikārśya, atisāra, atisthaulya, bhagandara, bradhna, galāmaya, galaśirakarṇaśūlākṣiroga (pl.), grahaṇī, gudakīla, gulma, (five kinds of) gulma, hikkā, hṛdroga, jaṭhara, jvara, kāmala, kāsa, kaṭī, klaibya, kṣaya, koṭha, kukṣiroga (pl.), kuṣṭha, mada, mūtraghāta, pāṇḍutā, piḍaka, pīnasa, pittaṣūla, plīha, prameha, raktapitta, śvayathu, śvāsa, śoṣa, śotha, śukradoṣa, śūla, śvitra, śāṇḍhya, śiroroga, sveda, ślīpada, udara, unmāda, vadanaroga, vaisvarya, vami, vandhya, vātapittakṣatajakaphakṛtavyādhi (pl.), vātabalāsaka, vātaśoṇita, vidradhi, viṣamajvara, yakṣman, yonidoṣa
Vaṅgasenasaṃhitā [84] (chapter 77)	agnimāndya, agnisāda, ajīrṇa, āmajagrahaṇī, āma(jaroga), āmakoṣṭha, āmaśūla, āmavāta, amlapitta, ānāha, apasmāra, arśa, āruci, arocaka, aśmarī, āndhya, atiduṣṭavahni, atikārśya, atisāra, atiślīpada, atisthaulya, bastikukṣigudāruj, bhasmaka, bhagadoṣa, bhagandara, bhrama, chardi, daurbalya, dehakampa, dīrghajvara, durnāma, gadastambha, gaṇḍamāla (pl.), grahaṇī, grahaṇigada, grantārbuda, gudakīla, gude klīma, gulma, halīmaka, hastakampa, hikkā, hṛcchūla, hṛddoṣa, jalodara, jalpatā, jaṭharāgnimāndya, jvara, locanaroga, kāmala, kaphātigāḍha, kaphapittāsra (roga), kāsa, kaṭīśūla, kṛcchra, kṣaya, kukṣiśūla, kuṣṭha, 18 types of kuṣṭha, mada, mandāgnidoṣa (pl.), mastakaroga, medovikāra, meha, mukhāsrava, mukharoga, mūrcchā, mūrḍhaśūla, mūtradoṣa, mūtrakṛcchra, nābhiśūla, netraroga, paittikagrahaṇī, paṅktiśūla, pāmā, pañcakāsa, pāṇḍuroga, pariṇāma, parināmaśūla, pārśvaśūla, piḍikā, pīnasa, pitta(roga), pittaśleṣmādhikagrahaṇīgada, plīha, pradara, prakampa, prameha, raktachardi, raktaroga (pl.), raktolbaṇa, raktapitta, śaṃḍha, sandhivāta, sarvakaphaja, sarvanetrāmaya, sarvapittodbhāva (pl.), sidhman, śiroroga, śleṣmikagrahaṇī, ślīpada, śoṣa, śotha, śramajavyādhi, śrutiroga, śukradoṣa, śukraprameha, śukrāśmarī, śukrāsrava, śvāsa, sveda, śvitra, tridoṣottha(roga), trikaśūla, tṛṣā, udararoga, unmāda, ūrdhvadhūma, ūrdhvavāyu, urustambha, vadanaroga, vahnisāda, vamathu, vami, vardhman, vātapittakaphamahāvyādhi (pl.), vātaprakopa (pl.), vātarakta, vātaślaiśmottarakukṣiroga, vataśoṇita, vibandha, vidradhi, vigandhatva, viṣamajvara, visarpa, viṣṭambhagrahaṇī, yakṛddoṣa, yakṣman

[84] Although the *Vaṅgasenasaṃhitā* enumerates a greater number of different diseases in its *rasāyana* section than the other works, it should also be noted that in this list given here, the difference

Bhāvaprakāśa, (*Uttarakhaṇḍa* 2)	none
Yogaratnākara (chapter 76)	amlapitta, arman, arśa, āruci, atisāra, dāha, dṛḍhaśūlayukta-rakta, doṣajvara, duṣṭaśukra, ghora, grahaṇīgada, gudāṅkura, jīrṇajvara, kaṇḍu, krimi, kṣaya, kuṣṭha, khālitya, meha, moha, pāṇḍu, prameha, rājaruj, samnipāta, śukradoṣa, śvāsa, timira, udararogajāla, vamana, vātāmaya, viṣadoṣa
Bhaiṣajyaratnāvalī, (*Uttarakhaṇḍa* 73)	āḍhyavāta, agnimāndya, ajīrṇa, āmaśūla, āmavāta, amlapitta, ānāha, arbuda, aśmarī, asṛgdara, arśa, āruci, asrapitta, atikārśya, atisāra, atisthaulya, bhagandara, bhrama, bradhna, dāha, daurgandhya, durnāma, galagraha, galamaya, galotthān-antravṛddhi, grahaṇīdoṣa, gulma, halīmaka, hikkā, hṛcchūla, jalodara, jarā, jaṭhara, jihvastambha, jvara, kāmala, kaphavātot-tha, karṇanāsākṣimukhavaijātya, kāsa, kasana, kaṭiśūla, klaibya, kṣaya, kuṣṭha, mada, mūḍhagarbha, mūtraghāta, mūtrakṛcchra, netraroga, paktiśūla, pāṇḍutā, pīnasa, prameha, pūtana, rajaśukrasamudbhava, raktanut, raktapitta, rocaka, saṃnipātajvara, ṣāṇḍhya, śiraśūla, ślīpada, somaruja, śoṣa, śotha, sthaulya, striroga, śūla, śvāsa, śvitra, sveda, tṛṣṇa, tṛṣā, udara, unmāda, vaisvarya, vamana, vamathu, vami, vātabalā-saka, vātaśoṇita, vidradhi, viṣamajvara, vraṇa, vyaṅga, yakṛt, yakṣman, yoniśukradoṣa

TEXT EDITIONS

Ānandakanda	S. V. Radhakrishna, ed. (1952). *Anandakandam, Edited with Translation in Tamil, and Introduction in Tamil and Sanskrit*. Vol. 15. TMSSM Series. Thanjavur: Tanjore Maharaja Serfoji's Saraswati Mahal Library.
Aṣṭāṅgahṛdayasaṃhitā	K. R. Srikantha Murthy (1999–2000). *Vāgbhaṭa's Aṣṭāṅga Hṛdayam, Text, English translation, Notes, Appendix and Indices, translated by K.R. Srikantha Murthy*. 3 vols. Varanasi: Krishnadas Academy.
Aṣṭāṅgasaṃgraha	K. R. Srikantha Murthy (1995–1997). *Aṣṭāṅga Saṃgraha of Vāgbhaṭa, Text, English translation, Notes, Indices etc., translated by K.R. Srikantha Murthy*. 3 vols. Varanasi: Chaukhamba Orientalia.
Bhaiṣajyaratnāvalī	Brahmashankar Mishra (2006). *Bhaiṣajyaratnāvalī of Shri Govinda Dasji, edited and enlarged by Brahmashankar Mishra; commented upon by Ambikadatta Shāstrī; English translation by Kanjiv Lochan; translation technically*

in number of listed diseases is partly due to Vaṅgasena's use of synonyms for diseases, whereas the other authors tend to use one single term for a disease. Repetitions of disease terms are not reproduced in the list.

reviewed by Anand K. Choudhary. 3 vols. Varanasi: Chaukhambha Sanskrit Bhawan.

Bhāvaprakāśa — K. R. Srikantha Murthy (1998–2000). *Bhāvaprakāśa of Bhāvamiśra (Text, English Translation, Notes, Appendeces [sic], and Index)*. 2 vols. Varanasi: Krishnadas Academy.

Cakradatta — Priya Vrat Sharma (2002). *Cakradatta (Sanskrit Text with English Translation). A Treatise on Principles and Practices of Ayurvedic Medicine*. Varanasi: Chaukhamba Publishers.

Carakasaṃhitā — Yādavaśarman Trivikrama Ācārya, ed. (1981). *Carakasaṃhitā, śrīcakrapāṇidattaviracitayā āyurvedadīpikāvyākhyayā saṃvalitā*. 4th ed. New Delhi: Munshiram Manoharlal.

Rasahṛdayatantra — B. V. Subbarayappa, B. S. Ramakrishna Rao, M. Mahadeva Sastry, and S. R. N. Murthy (1997). "Rasahṛdaya Tantram of Govinda Bhagavatpāda". In: *Indian Journal of History of Science* 32, 1–68 (32.1), 69–148 (32.2).

Rasamañjarī — Siddhinandana Miśra (2003). *Rasamañjarī. "Siddhipradā" Hindī Vyākhyāsahitā*. Jayakṛṣṇadāsa āyurveda granthamālā 81. Vārānāsī: Caukhambhā Oriyaṇṭāliyā.

Rasaratnākara — Kṣemarāja Śrīkṛṣṇādāsa, ed. (1909). *Śrīḥ siddhanityanāthapraṇītaḥ rasaratnākaraḥ, (samastarasagranthānāṃ śirobhūṣaṇam), Māthuravaiśyā 'yurvedoddhāraka śālagrāmakṛta bhāṣāṭīkāvibhūṣitaḥ*. Mumbai: Śrīveṅkaṭeśvara Steam Press.

Rasaratnasamuccaya — Āśubodha Vidyābhūṣaṇa and Nityabodha Vidyāratna, eds. (1927). *Saṭīkaḥ Rasaratnasamuccayaḥ: (prācīnarasagranthaḥ)*. Kalikātā: The editors. URL: https://archive.org/details/VagbhataRasaratnasamuccaya1927 (on 2 Jan. 2017).

Rasārṇava — P. C. Ray and H. C. Kaviratna (2007). *Rasārṇava. Edited by P. C. Ray, H. C. Kaviratna. Re-Edited by S. Jain*. Delhi: Oriental Book Centre.

Rasāyanakhaṇḍa — Yādavaśarman Trivikrama Ācārya, ed. (1913). *Śrīnityanāthasiddhaviracito Rasaratnākarāntargataś caturtho Rasāyanakhaṇḍaḥ … saṃśodhitaḥ prakāśitaś ca = Rasayanakhanda, Fourth Part of Rasaratnâkara by Shri Nityanâthasiddha edited by Jadavjî Tricumjî Âchârya*. Āyurvedīya Granthamālā 10. Bombay: The editor, at

the Nirnayasagar Press. URL: https://archive.org/details/TricumjiAcharyaRasayanKhanda1913.

Rasendracintāmaṇi — Siddhinandana Miśra (2000). *Rasendracintāmaṇiḥ, "Siddhipradā" Hindī vyākhyā sahitaḥ, Ḍhuṇḍhukanāthena viracitaḥ, Hindi vyākhyākāraḥ, Siddhinandanamiśraḥ*. Jayakṛṣṇadāsa āyurveda granthamālā 91. Vārānāsī: Caukhambhā Oriyaṇṭāliyā.

Śārṅgadharasaṃhitā — K. R. Srikantha Murthy (1984). *Śārṅgadhara-saṃhitā (A Treatise on Āyurveda) by Śārṅgadhara, Translated into English*. Varanasi, Delhi: Chaukhambha Orientalia.

Śārṅgadharasaṃhitā — Paraśurāma Śāstrī, ed. (1931). *Dāmodarasūnu-Śārṅgadharācāryaviracitā Śārṅgadharasaṃhitā. Bhiṣagvar Āḍhamallaviracitadīpikā Kāśīrāmavaidyaviracita-gūḍhārthadīpikābhyāṃ, ṭīkābhyāṃ, saṃvalitā*. 2nd ed. Muṃbai: Nirṇayasāgara Press. 1st ed. 1920.

Siddhayoga — Premvati Tewari, ed. (2006). *The First Treatise of Āyurveda on Treatment Vṛndamādhava or Siddha Yoga*. Varanasi: Chaukhambha Visvabharati.

Suśrutasaṃhitā — Priya Vrat Sharma (1999–2001). *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith (*sic*) Critical Notes*. 3 vols. Haridas Ayurveda Series 9. Varanasi: Chaukhambha Visvabharati.

Vaṅgasenasaṃhitā — Nirmal Saxena, ed. (2004). *Vaṅgasena Saṃhitā or Cikitsāsāra Saṃgraha of Vaṅgasena. Text with English Translation, Notes, Historical Introduction, Comments, Index and Appendices*. Vol. CXXV. 2 vols. Chowkhanba Sanskrit Series. Varanasi: Chowkhamba Sanskrit Series Office.

SECONDARY LITERATURE

Falk, Harry (1989). "Soma I and II". In: *Bulletin of the School of Oriental and African Studies* 52, pp. 77–90.

Fenner, Edward Todd (1979). "Rasayana Siddhi: Medicine and Alchemy in the Buddhist Tantras". PhD. Madison: University of Wisconsin, Madison.

Hellwig, Oliver (1999–). *DCS: Digital Corpus of Sanskrit*. URL: http://kjc-sv013.kjc.uni-heidelberg.de/dcs/.

— (2008). "*Rasāyana* und die āyurvedische Krankheitskunde". In: *Traditional South Asian Medicine* 8, pp. 32–64.

— (2009a). "Alchemical Procedures and their Implications for the Chronology of Medieval *Rasaśāstra*". In: *eJournal of Indian Medicine* 2, pp. 53–65.

— (2009b). *Wörterbuch der mittelalterlichen indischen Alchemie*. Groningen: Barkhuis & University of Groningen, University Library. ISBN: 9789077922620.

Meulenbeld, Gerrit Jan (1999–2002). *A History of Indian Medical Literature*. 5 vols. Groningen: E. Forsten. ISBN: 9069801248.

Nadkarni, A. K. (1954). *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Notes*. 2 vols. Bombay: Popular Prakashan. URL: https://archive.org/details/IndianMateriaMedicaK.M.Nadkarni (on 11 Aug. 2017). URL is 1926 edition.

Palit, Chittabrata (2009). *An Ancient Indian System of Rasayana: Suvarnatantra - A Treatise on Alchemy*. Delhi: Kalpaz Publications. ISBN: 9788178356921. Google Books: JEkZQYT2RwsC.

Rāy, Praphulla Chandra (1903). *A History of Hindu Chemistry from the Earliest Times to the Middle of the Sixteenth Century, A.D. With Sanskrit Texts, Variants, Translation and Illustrations*. 2nd ed. 1 vols. Calcutta: The Bengal Chemical and Pharmaceutical Works.

Roşu, Arion (1975). "Considérations sur une technique du Rasāyana āyurvédique". French. In: *Indo-Iranian Journal* 17.1, pp. 1–29. ISSN: 1572-8536. DOI: 10.1163/000000075790079222.

Roy, Mira and B.V. Subbarayappa (1976). *Rasārṇavakalpa. Manifold Powers of the Ocean of Rasa*. Indian National Science Academy 5. New Delhi: Indian National Science Academy.

White, David Gordon (1996). *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago: University of Chicago Press. ISBN: 0-226-89497-5.

— (2012). "Rasāyana". In: *Brill's Encyclopedia of Hinduism*. Ed. by Knut A. Jacobsen, Helene Basu, Angelika Malinar, and Vasudha Narayanan. Vol. 3. Leiden & Boston: Brill, pp. 489–99. DOI: 10.1163/2212-5019_beh_COM_9000000059.

Wujastyk, Dagmar (forthcoming). "On Attaining Special Powers through Rasāyana Therapies in Sanskrit Medical and Alchemical Literature". In: *Religious Medicine*. Ed. by Michael Stanley–Baker and Pierce Salguero. Manchester: Manchester University Press. Forthcoming.

— (2013). "Perfect Medicine. Mercury in Sanskrit Medical Literature". In: *Asian Medicine: Tradition & Modernity* 8.1, pp. 15–40. ISSN: 1573-4218. DOI: 10.1163/15734218-12341278.

— (2015). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: *AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Capitoli per una Storia dell'Alchimia nell'Antica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino* XXXVII.2015, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 16 Aug. 2017).

Wujastyk, Dagmar (2016). "Mercury Tonics (Rasāyana) in Sanskrit Medical Literature". In: *Soulless Matter, Seats of Energy*. Ed. by Fabrizio M. Ferrari and Thomas Dähnhardt. Bristol, CT: Equinox Publishing Ltd, pp. 94–115. ISBN: 9781781791295. URL: https://www.equinoxpub.com/home/view-chapter/?id=29654 (on 5 Dec. 2017).

Wujastyk, Dominik (1984). "An Alchemical Ghost: the *Rasaratnākara* by Nāgārjuna". In: *Ambix* 31, pp. 70–83. DOI: 10.1179/amb.1984.31.2.70.

— (2003). *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. 3rd ed. Penguin Classics. London, New York: Penguin Group. ISBN: 0140448241.

Please write to ⟨wujastyk@ualberta.ca⟩ to file bugs/problem reports, feature requests and to get involved.
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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Stretching Life Out, Maintaining the Body. Part I: Vayas in Medical Literature

Christèle Barois

University of Vienna

The representation of the process of human life is at the crux of questions about longevity and rejuvenation practices, and possibly also those that aim at immortality. The key Sanskrit term for "age" is *vayas*, which means "vigour," "youth," or "any period of life." The term is already attested in the *Ṛgveda* with these same meanings, but also meaning "sacrificial food," in the sense that it "gives strength, vitality"[1]. As a criterion for the examination of the patient, *vayas* is invariably divided into three periods: childhood, middle age and old age, and precisely defined in the ancient medical compendia. It refers to the age of the individual body in relation to its form and transformation during life.[2]

This essay is an attempt to clarify the representation of *vayas*, "age," in Sanskrit medical literature and, in so doing, to provide elements for a more refined understanding of the compound *vayaḥsthāpana*, "stabilization of youthful age," a widespread promise of medical *rasāyana*.

1 See the entry for "*vayas*" in Grassmann 1873. See also the article by Renou (1958: 38–40), which discusses the meanings of *vayas* in the *Ṛgveda*.

2 Note also the mention of *vayas* in section 16 of chapter 3 of the *Chāndogya Upaniṣad*, as part of a broader framework of longevity practices, involving both sections 15 and 16 of chapter 3. In *Chāndogya Upaniṣad* 3.16, the number of syllables of each of the three meters (*gāyatrī*, *triṣṭubh* and *jagatī*) which are chanted at the three different pressings (*savana*)—the morning, the midday and the third, evening Soma pressing—are identified with the age of man: the twenty-four syllables of the *gāyatrī* with the twenty-four years of the life of man ; the forty-four syllables of the *triṣṭubh* with the next forty-four years of his life; the forty-eight syllables of the *jagatī*, with the next forty-eight years of his life. To my knowledge, this is the oldest association of a precise tripartition of the duration of life with *vayas* (even if longevity is widely invoked in Vedic texts, in the same way as immortality, fame, strength, etc.). For further discussion, see Barois 2017.

I examine how *vayas* is defined in the *Carakasaṃhitā*, the *Suśrutasaṃhitā*, the *Aṣṭāṅgahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha*.[3] I also examine their commentaries: the *Āyurvedadīpikā*, a commentary to the *Carakasaṃhitā* by Cakrapāṇidatta (late 11th c.); two commentaries to the *Suśrutasaṃhitā*, the *Bhānumāti* by the same Cakrapāṇidatta and the *Nibandhasaṃgraha* by Ḍalhaṇa (12th–13th c.); the *Sarvāṅgasundarā*, a commentary to the *Aṣṭāṅgahṛdayasaṃhitā* by Aruṇadatta (13th c.); and the *Śaśilekhā*, a commentary to the *Aṣṭāṅgasaṃgraha* by Indu (10th–11th c.). Particular attention is given to the context of the definitions of *vayas*.

The detailed examination of *vayas* in the ancient medical compendia and their commentaries is sufficient to give a fairly comprehensive view of the representation of age in Sanskrit medical literature as a whole. For example, the *Bhāvaprakāśa* of Bhāvamiśra (16th c.) takes up the definition of the *Suśrutasaṃhitā*,[4] and today many articles written by āyurvedic doctors rely on these ancient divisions of age.[5]

1. DEFINITION OF *VAYAS* IN *CARAKASASAṂHITĀ VIMĀNASTHĀNA* 8.122

A DETAILED DEFINITION OF *VAYAS* occurs in the "Book on the Fundamental Means" (*Vimānasthāna*) of the *Carakasaṃhitā*, in chapter eight, entitled: "Fundamental Means For the Treatment of Diseases" (*rogabhiṣagjitīyaṃ vimānam*).[6]

Chapter eight of the *Vimānasthāna* is a long chapter, much of which expounds the conditions in which the disciple is taught and the modalities of debate, de-

3 The *Carakasaṃhitā* is the result of the compositions of several authors from the fourth century BCE to the fifth century CE. See Dominik Wujastyk 2003: xx and Meulenbeld 1999–2002: IA, 105–15. The *Suśrutasaṃhitā* also consists of several historical layers, from the third century BCE to the fifth century CE. See Dominik Wujastyk 2003: xx and Meulenbeld 1999–2002: IA, 342–4. Both the *Aṣṭāṅgahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha* are attributed to Vāgbhaṭa, placed *ca.* 600 CE. On the date and authorship of the *Aṣṭāngahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha*, see Meulenbeld 1999–2002: IA, 613–35.

4 See *Bhāvaprakāśa, Pūrvakhaṇḍa, Bālaprakaraṇa* 42–50.

5 To give just one recent example, Namdeo and Vilas (2017) begin their article "Consequences of Aging" with a general review of the concept of age, *vayas*, according to the *Carakasaṃhitā* and the *Suśrutasaṃhitā*. This review follows an introduction that praises the principles of Āyurveda, thanks to which it would be possible "to slow down the process of aging, restore physical and mental strength and prevent the consequences of aging to a certain extent."

6 This translation of *vimānasthāna* is in keeping with Dominik Wujastyk's suggestion that the term "could be viewed as belonging to the word-group *pramāṇa* 'authority for correct knowledge' and *anumāna* 'inference' " (see Dominik Wujastyk 2017). On the structure of the *Vimānasthāna*, see Preisendanz 2007. See also Preisendanz, Pecchia, and Maas (forthcoming).

bate being an integral part of a physician's practice (Ca.Vi. 8.3–67). The passage devoted to *vayas* is a subsection of a broader discussion on the knowledge required to assess the state of the patient and to decide on treatment. Here, we are in the general context of the patient's examination (*parīkṣā*) for the purpose of diagnosis. Ten subjects (*prakaraṇa*) are defined and explained in detail from the point of view of medical praxis (Ca.Vi. 8.68–132). Briefly, these ten topics are as follows: (1) the doer (*kāraṇa*) is the physician; (2) the instrument (*karaṇa*) is the remedy (*bheṣaja*); (3) the source of the act (*kāryayoni*) is the unsuitable ratio of bodily constituents (*dhātuvaiṣamya*);[7] (4) the act (*kārya*) is the balanced ratio of bodily constituents (*dhātusāmya*); (5) the result (*kāryaphala*) is comfort (*sukha*); (6) the consequence (*anubandha*) is life (*āyus*); (7) the place (*deśa*) is land (*bhūmi*) as well as the patient (*ātura*);[8] (8) time (*kāla*), which is defined as transformation (*pariṇāma*), is the year (*saṃvatsara*) as well as the state of the patient (*āturāvasthā*);[9] (9) activity (*pravṛtti*) is the implementation of medical treatment (*pratikarman*); (10) the means (*upāya*) is excellence of the physician, etc., and accuracy of the medical prescription (*abhividhāna*).

Against all expectation, the discussion concerning *vayas* is not directly related to the subject of "time" but to that of "place" (*deśa*) by virtue of the fact that the patient is the "place of application of the therapeutic act" (*kāryadeśa*) (Ca.Vi. 8.94).[10] In this context, the examination of the patient aims, on the one hand, at the knowledge of the measure of *āyus*, that is to say of the life expectancy, and, on the other, at the knowledge of the measure of the strength and intensity of the disease.[11] As indicated by the *Carakasaṃhitā*, the knowledge concerning the measure of life-expectancy is referred to elsewhere, in two other sections,[12] and the remainder of the exposé exclusively concerns the evaluation of the degree of the patient's strength and pathology. This evaluation is important because it allows for determining the dosage and power of drugs according to the condition of the patient (Ca.Vi. 8.94). Since strength determines the intensity of disease, a

7 "Bodily constiuents" follows the translation by Maas (2009: 147).

8 *deśa* has the general meaning of "environment" (Dominik Wujastyk 2003: 31).

9 On *pariṇāma* in relation with the process of aging, see Tilak 1988: 206–21.

10 This is also clear because *kāla* is then defined as "year" (*saṃvatsara*) and "condition of the patient" (*āturāvasthā*), both of which relate to the appropriate time to carry out such treatment, to administer such medicine. Age is not mentioned.

11 Ca.Vi. 8.94: तस्य परीक्षा आयुषः प्रमाणज्ञानहेतोर्वा स्याद्, बलदोषप्रमाणज्ञानहेतोर्वा।

12 It is stated briefly in Ca.Vi. 8.124 that the characteristics which make it possible to know the measure of life are explained in the Book dealing with the symptoms of imminent death (*indriyasthāna*), and in the chapter entitled "Principles relating to birth" (*jātisūtrīya*) of the Book relating to the body (*śārīrasthāna*), a chapter which evaluates infants' life expectancy essentially on the basis of their anthropometrical proportions (Ca.Śā 8.51).

complex system involving ten criteria for evaluating the strength of the patient is then explained point by point. These ten criteria for strength are: constitution (*prakṛti*), morbidity (*vikṛti*), temperament [according to preeminence] of the bodily constituents (*dhātusāra*),[13] compactness (*saṃhanana*), measure (*pramāṇa*), personal suitability (*sātmya*), mind (*sattva*), digestive capability (*āhāraśakti*), capability for physical effort (*vyāyāmaśakti*), and age (*vayas*). This shows both the complexity and the importance of the notion of strength, which is part of the more general prerequisite knowledge acquired during the examination of the state of the patient. In this context, *vayas*, "age," is a variable of the degree of strength of the patient.

> वयस्तश्चेति कालप्रमाणविशेषापेक्षिणी हि शरीरावस्था वयोऽभिधीयते। तद्वयो यथास्थूलभेदेन त्रिविधं — बालं, मध्यं, जीर्णमिति। तत्र बालमपरिपक्वधातुमजातव्यञ्जनं सुकुमारमक्लेशसहमसंपूर्णबलं श्लेष्मधातुप्रायमाषोडशवर्षं, विवर्धमानधातुगुणं पुनः प्रायेणानवस्थितसत्त्वमात्रिंशद्वर्षमुपदिष्टं; मध्यं पुनः समत्वागतबलवीर्यपौरुषपराक्रमग्रहणधारणस्मरणवचनविज्ञानसर्वधातुगुणं बलस्थितमवस्थितसत्त्वमविशीर्यमाणधातुगुणं पित्तधातुप्रायमाषष्टिवर्षमुपदिष्टम्; अतःपरं हीयमानधात्विन्द्रियबलवीर्यपौरुषपराक्रमग्रहणधारणस्मरणवचनविज्ञानं भ्रश्यमानधातुगुणं वायुधातुप्रायं क्रमेण जीर्णमुच्यते आवर्षशतम्। वर्षशतं खल्वायुषः प्रमाणमस्मिन् काले; सन्ति च पुनरधिकोनवर्षशतजीविनोऽपि मनुष्याः; तेषां विकृतिवर्ज्यैः प्रकृत्यादिबलविशेषैरायुषो लक्षणतश्च प्रमाणमुपलभ्य वयसस्त्रित्वं विभजेत्।[14]
>
> And [the patient should be examined] according to age. What is referred to as *vayas* is the condition of the body with regard to the particular measure of time. According to a rough subdivision,[15] *vayas* is threefold: young, middle and old.
>
> Of these, young [age] [is characterized by] the immaturity of the bodily constituents[16], the lack of secondary sexual characteristics, delicateness, difficulty in enduring pain, deficient strength, prominence of

13 I use "temperament" in its modern meaning of a set of innate traits that characterize a person both from a psychological and physiological point of view and not in its ancient meaning which refers to the predominance of humours. Here, temperament is the pre-eminence of the one among eight bodily constituents. In his edition (Carakasaṃhitā), Sharma translates *dhātusāra* as "constitutional essence."

14 *Carakasaṃhitā*, *Vimānasthāna* 8.122.

15 This suggests that the author(s) of the *Carakasaṃhitā* was familiar with a more refined classification of age, maybe close to that proposed by the *Suśrutasaṃhitā* (see below). Cakrapāṇidatta's commentary indicates that the mention "according to a rough subdivision" shows that there are other subdivisions of age, namely the condition of being young, very young, etc. See *Āyurvedadīpikā ad* Ca.Vi. 8.122: यथास्थूलभेदेनेति वचनाद् बालबालतराद्यवस्थाभेदादधिकमपि वयो भवतीति दर्शयति।

16 The list of bodily constituents is somewhat unstable, sometimes elusive, and even varies within the same treatise depending

> phlegmatic humour, up to sixteen years. Further, it is specified that the development of the bodily constituents and the unsteadiness of mind (*sattva*)[17] generally last up to the age of thirty years.
>
> As for the middle [age], [it is characterized by] the obtaining of a stable condition of strength, virility, manliness, force, comprehension, concentration, memory, speech, discernment, and all the bodily constituents. It is specified that the strength is firm, the mind (*sattva*) is steady, the condition of the bodily constituents remains undamaged, and the bilious humour is prominent up to sixty years.
>
> Then, there is a decline of the bodily constituents, the sense organs, strength, virility, manliness, force, comprehension, concentration, memory, speech, and discernment; gradually the condition of the bodily constituents collapses and the windy humour becomes prominent: this is called old [age], it lasts up to one hundred years.
>
> Certainly the lifespan is one hundred years; in these times[18] However, some human beings live more or less than one hundred years. As for these, after having determined the measure [of their life] by means of the criteria for strength: constitution (*prakṛti*), etc., irrespective of *vikṛti*, "morbidity," and [also] according to the marks of a long lifespan, [the physician] divides *vayas* into three.

Thus, within the context of the examination of the patient (*deśa*), *vayas* is defined as the state of the body according to the measure of time. It is divided into three stages: *bāla*, young, *madhya*, middle, and *jīrṇa*, old, corresponding to three periods of life to which different lengths of time are assigned.[19] Each period of life is associated with specific characteristics. Young age is characterized by a general incompleteness of body development and a preponderance of the phlegmatic humour. This incompleteness lasts up to thirty years with regard to the development of the bodily constituents and the stability of the mind (*sattva*). Middle

on the medical context in which it occurs. See Maas (2009: 135–46), who examines the different lists of bodily constituents in medical literature, as well as in Epic, Purāṇic and Buddhist literature. In the present case, I consider the reference list to be the one given in Ca.Vi. 8.102, in the context of the examination of the temperament according to the preeminence of the bodily constituents (*dhātusāra*): skin, (*tvac*), blood (*rakta*), flesh (*māṃsa*), fat (*medas*), bone (*asthan*), marrow (*majjan*), semen (*śukra*), mind (*sattva*).

17 Ca.Vi. 8.119: सत्त्वमुच्यते मनः।

18 *Āyurvedadīpikā ad* Ca.Vi. 8.122: अस्मिन् काल इति कलौ। "'In these times,' i.e., during the age of *kali*."

19 See Table 1, p. 52 below, that compares the subdivisions of *vayas* according to the *Carakasaṃhitā*, the *Suśrutasaṃhitā*, the *Aṣṭāṅgahṛdayasaṃhitā* and the *Aṣṭāṅgasaṃgraha*.

age is characterized by stability of the bodily constituents and a preponderance of the bilious humour. Old age corresponds to a general collapse, with predominance of the windy humour.

Cakrapāṇidatta (late 11th c.) confirms this division of young age into two periods: a first period corresponding to the immaturity of the bodily constituents (*aparipakvadhātu*) up to sixteen years, and a second corresponding to the increasing of the bodily constituents (*vardhamānadhātu*) up to thirty years.[20] Such a division is not found in the *Suśrutasaṃhitā*, or in the two compendia of Vāgbhaṭa. Cakrapāṇidatta also justifies this division, saying that it makes possible "the distinction with respect to the [appropriate] treatment".[21] And he specifies: "It should have been said in the treatise that the young [patient] up to sixteen is treated with mild (*mṛdu*) medication in small quantities (*alpa*), and that beyond the age of sixteen, though young, [the patient] should not be treated with medication in small quantities."[22] Thus, Cakrapāṇidatta corroborates that *vayas* in the *Carakasaṃhitā* serves to decide the dosage and the power of the drugs to be administered to the patient.

In this respect, it is interesting to note that these divisions of age are given for the canonical lifespan of one hundred years and that, according to whether life is more or less long, childhood, middle age or old age do not correspond to the same ages! This is the reason why the *Carakasaṃhitā* explains how to calculate the "age" of those who have a lifespan greater or less than one hundred years: one must first assess the potential lifespan, literally the measure (*pramāṇa*) of life (*āyus*), and then divide the result by three.

Cakrapāṇidatta is particularly interested in this issue. He explains that the examination of the ten criteria for strength, that is the constitution, etc.,[23] makes it possible to determine the degree of inferior, median or superior strength which conditions life expectancy. For example, the one whose strength is superior with regard to constitution (*prakṛtibala*) has a long life because he has a constitution with phlegmatic predominance or humoral balance; if his strength is inferior with regard to constitution, his life is short; and the same goes for temperament (*sāra*) and the other criteria for strength. The one whose degree of strength is excellent for all the criteria lives beyond one hundred years. Cakrapāṇidatta further clarifies that, in order to assess life expectancy, one should not consider only

20 *Āyurvedadīpikā ad* Ca.Vi. 8.122: बालो द्विविधः अपरिपक्वधातुराषोडशवर्षात्, तथा वर्धमानधातुरात्रिंशत्तमात्।

21 *Āyurvedadīpikā ad* Ca.Vi. 8.122: तदेतयोर्बालभेदयोरुपयुक्तत्वेन भेदमाह।

22 *Āyurvedadīpikā ad* Ca.Vi. 8.122: षोडशवर्षीयो हि बालोऽल्पमृदुभेषजोपचर्यत्वादिना शास्त्रे वक्तव्यः, तदूर्ध्वं बालोऽपि नाल्पभेषजत्वादिना तथोपचर्यते।

23 As for the list of these ten criteria for strength, see above. But morbidity (*vikṛti*) should not be taken into account in this case, as the *Carakasaṃhitā* states, and as Cakrapāṇidatta confirms.

the ten criteria for strength as indicated, but also the "characteristics for [long] life exposed in the Book relating to the body".[24]

Interestingly, Cakrapāṇidatta gives specific examples for calculating *vayas*:

> If the life expectancy [of the patient] is one hundred and twenty years, then he is young up to thirty-six, by deduction, in proportion to the age previously indicated; he is middle-aged until seventy-two, and old the rest [of his life]. The one who is considered to have a short life limited to eighty years because of the mediocrity of [his strength relating to] constitution (*prakṛti*), etc., he is young up to twenty-five years, he is middle aged until fifty and then he is old, etc. This is the way to divide.[25]

Finally, Cakrapāṇidatta specifies that:

> … this proportional division of age into youth, etc., is only valid for those whose lives are neither very far above nor far below one hundred years. For those whose ultimate measure of life does not exceed twenty years, etc., there can be no division of age by deduction, since they die before they reach the condition of middle age.[26]

Thus, *vayas* is a relative concept. The determination of these three periods is likely to change according to life expectancy, which means that the length of each period depends on the individual. From the point of view of the *Carakasaṃhitā*, the knowledge of *vayas* does not relate to long-life issues but has a very direct pragmatic application in the dosage of medications.

2. DEFINITION OF *VAYAS* IN *SUŚRUTASAṂHITĀ SŪTRASTHĀNA* 35.29–31

Another definition of *vayas* is given in the "Book relating to principles" (*Sūtrasthāna*) of the *Suśrutasaṃhitā*, in chapter thirty-five entitled: "Initial approach of the patient" (*āturopakramanīya*).[27]

24 *Āyurvedadīpikā ad* Ca.Vi. 8.122: न केवलं प्रकृत्यादिनायुरवधार्यं, किंत्वायुर्लक्षणैरपि शरीरप्रतिबद्धैः शारीरे वक्तव्यैरित्याह। Cakrapāṇidatta refers here to Ca.Śā 8.51, which describes the physical characteristics of the infant destined for a long life (see note 15 above).

25 *Āyurvedadīpikā ad* Ca.Vi. 8.122: तेन, तस्य विंशतिवर्षाधिकशतं यद्यायुरुपलभ्यते, तदा पूर्वोक्तवयोविभागानुमानादाषद् त्रिंशद्वर्षाणि स बालो भवति, द्विसप्ततिवर्षश्च स मध्यः, शेषे तु वृद्धः; यस्तु प्रकृत्यादीनां मध्यमत्वेनाल्पायुरशीतिवर्षोऽवधार्यते, स पञ्चविंशतिवर्षाणि बालः, पञ्चाशतं मध्यः, ततो वृद्ध इत्यादि विभजनीयम्।

26 *Āyurvedadīpikā ad* Ca.Vi. 8.122: अयं च स्तोकन्यूनाधिकशतायुषां बाल्यादिविभागः कर्तव्यः; येषां तु विंशतिवर्षादि परमायुषो मानं न तेषां तदनुमानेन वयोभेदः, ते ह्यप्राप्तमध्यावस्था एव म्रियन्ते।

27 Meulenbeld (1999–2002: IA, 21) states that this chapter "contains an exposition on general principles related to treatment (*upakramaṇa*)," Sharma, in the Suśrutasaṃhitā edition, says "case-taking."

This chapter deals with the initial observation (*parīkṣā*), in other words, clinical examination. The first duty of the physician is to examine the duration of life (*āyus*), that is to say, again, the life expectancy of the patient. If the patient is viable[28] the physician should then undertake the examination of diseases (*vyādhi*), seasons (*ṛtu*), digestion (*agni*), age (*vayas*), body (*deha*), strength (*bala*), disposition (*sattva*), personal suitability (*sātmya*), constitution (*prakṛti*), drugs (*bheṣaja*), and place (*deśa*). This chapter describes each of these parameters one by one for the knowledge of the general pathological level of the patient.

Much space is devoted to the examination of life expectancy (Su.Sū. 35.4–17), which is evaluated according to two criteria for longevity: on the one hand external features, essentially the size of the different parts and sub-parts of the body, which allow the physician to know if a patient has a long (without indication of duration), middle (seventy years) or short (twenty-five years) life expectancy;[29] on the other hand, temperaments (*sāra*), which are determined according to the pre-eminence of one of the bodily constituents among mind (*sattva*), semen (*śukra*), marrow (*majjan*), bone (*asthan*), fat (*medas*), flesh (*māṃsa*), blood (*rakta*), and skin (*tvac*).[30]

Except for age (*vayas*), mental disposition (*sattva*), personal suitability (*sātmya*), and place (*deśa*), which are contextual criteria that relate to the patient as an individual, the other parameters–diseases (*vyādhi*), seasons (*ṛtu*), digestion (*agni*), body (*deha*),[31] strength (*bala*), constitution (*prakṛti*), and drugs (*bheṣaja*)—are only briefly described in the pragmatic perspective of clinical observation, and the specific definitions are referred to elsewhere in the treatise.

In the general framework of assessing the degree of severity of the patient's illness, the *Suśrutasaṃhitā* is insistent throughout this chapter on the question of the patient's viability, that is, his curability.[32]

In this context a definition of *vayas* is expounded:

28 सत्यायुषि (Su.Sū. 35.3) is commented upon by Ḍalhaṇa as follows: सत्यायुषीति विद्यमाने जीविते व्याध्यादीना परीक्षा कर्तव्या। "If there is life, that is, if life is attested, the observation of diseases and the other [parameters] must be conducted."

29 Su.Sū. 35.4–16. This passage has a long description of the "normal" proportions of the full grown body, which corresponds to twenty-five years old for a man and to sixteen years old for a woman, according to the verse which closes the description (Su.Sū. 35.13: पञ्चविंशे ततो वर्षे पुमान् नारी तु षोडशे। समत्वागतवीर्यौ तौ जानीयात् कुशलो भिषक्।). The compound समत्वागतवीर्य is explained as the "completeness of bodily constituents" by Ḍalhaṇa. This stage is never considered within the definitions of *vayas*.

30 Su.Sū. 35.17. Compare with Ca.Vi. 8.102 ff. (see note 17).

31 Here *deha* refers to obese (*sthūla*), lean (*kṛśa*), and medium (*madhya*) corpulence, which is dealt with in detail in Su.Sū. 15.32–35, as indicated by Cakrapāṇidatta.

32 As a general rule, a physician should not accept patients he cannot cure, but "his decision not to treat a patient should be based on his informed and accurate assessment of the case," On this issue, see Dagmar Wujastyk 2012: 110–16.

वयस्तु त्रिविधं—बाल्यं, मध्यं, वृद्धमिति। तत्रोनषोडशवर्षा बालाः। तेऽपि त्रिविधाः—क्षीरपाः, क्षीरान्नादा, अन्नादा इति। तेषु संवत्सरपराः क्षीरपाः, द्विसंवत्सरपराः क्षीरान्नादाः, परतोऽन्नादा इति। षोडशसप्तत्योरन्तरे मध्यं वयः। तस्य विकल्पो वृद्धिर्यौवनं सम्पूर्णता हानिरिति। तत्र, आविंशतेर्वृद्धिः, आत्रिंशतो यौवनम्, आचत्वारिंशतः सर्वधात्विन्द्रियबलवीर्यसम्पूर्णता, अत ऊर्ध्वमीषत्परिहाणिर्यावत् सप्ततिरिति। सप्ततेरूर्ध्वं क्षीयमाणधात्विन्द्रियबलवीर्योत्साहमहन्यहनि वलीपलितखालित्यजुष्टं कासश्वासप्रभृतिभिरुपद्रवैरभिभूयमानं सर्वक्रियास्वसमर्थं जीर्णागारमिवाभिवृष्टमवसीदन्तं वृद्धमाचक्षते। (29)

तत्रोत्तरोत्तरासु वयोऽवस्थासूत्तरोत्तरा भेषजमात्राविशेषा भवन्ति, ऋते च परिहाणेः; तत्राद्यापेक्षया प्रतिकुर्वीत। (30)

भवन्ति चात्र। बाले विवर्धते श्लेष्मा मध्यमे पित्तमेव तु।
भूयिष्ठं वर्धते वायुर्वृद्धे तद्वीक्ष्य योजयेत्। (31)[33]

Vayas is threefold: childhood, middle [age] and old [age]. In this case, those under sixteen are young; they are divided into three according to whether they drink milk, or eat milk and rice, or eat rice [only]. Those up to one year drink milk, up to two years they eat both milk and rice, and beyond [up to sixteen years] they eat rice [only].

Middle age is between sixteen to seventy years. Its subdivisions are: growth,[34] youth, completeness, and decline. In this case, growth is up to twenty [years], youth is up to thirty [years], completeness of all bodily constituents, sense organs, strength and virility is up to forty [years]. Beyond [forty years], there is a slight decline, up to seventy [years].

Beyond [seventy years], the one whose bodily constituents, sense organs, strength, virility,[35] energy decline day by day, who is affected by wrinkles, grey hair and baldness, who is afflicted with illnesses beginning with cough and affection of breath, unfit for any kind of work, and sinking down like a decayed and rain-soaked house, is called an old man. (29)

Therefore, the dosages of medication increase progressively according to the progressive increase of the stages of *vayas*, except in the case of decline; in this case, [the physician] must treat [the patient] as for the first [division, *i.e.* young].[36] (30)

33 *Suśrutasaṃhitā, Sūtrasthāna* 35.29–31.
34 Sharma, in his Suśrutasaṃhitā edition, translates *vṛddhi* as "adolescence."
35 Ḍalhaṇa glosses *vīrya* by *retas* "semen."
36 *Bhānumāti ad* Su.Sū. 35.30: आद्यं बाल्यं, तदपेक्षया भेषजमात्रा क्रमेण हीनमात्रा कर्तव्येत्यर्थः। "First (*ādya*), i.e. childhood: the dosage of medication should be decreased gradually according to the [divisions of childhood]. This is the meaning." Ḍalhaṇa's explanation is consistent with the *Bhānumāti*.

> And there are [the following verses]: during young [age], the phlegmatic humour prevails, during middle age, the bilious humour [prevails]. During old [age], the windy humour abounds. Having considered thus, [the physician] applies [the treatment]. (31)

As in the *Carakasaṃhitā*, *vayas* is divided into three periods: *bālya*, childhood, [37] *madhya*, middle age, and *vṛddha*, old. This division of life into three parts, as well as the humoural predominance for each of the three divisions is stable in all the texts consulted (see Table 1, p. 52).

The contribution of the *Suśrutasaṃhitā* consists, for the young age, in a subdivision into three according to the nature of the food absorbed; this subdivision defines precise ages; similarly, for the middle age, the *Suśrutasaṃhitā* proposes a new subdivision into four: growth (*vṛddhi*), youth (*yauvana*), completeness (*saṃpūrṇatā*), decline (*hāni*), which is stated to be only a "slight decline" (*īṣatparihāṇi*). Old age begins at seventy years, meaning that one is old here later than in the *Carakasaṃhitā*.[38] The adaptation of the dosage of medications according to the age of the patient is mentioned as part of the presentation on *vayas*. It should also be noted that the *Suśrutasaṃhitā* gives a vivid description of old age, specifying external and visible transformations of the body (wrinkles, gray hair and baldness) and also mentioning diseases (cough and affection of breath), all these elements being absent from the *Carakasaṃhitā*.

Some additional details are provided by Cakrapāṇidatta: he explains that youth (*yauvana*) derives from the verbal root "*yu*" expressing a "junction" (*miśraṇa*). Thereby youth is to be understood as the junction between growth (*vṛddhi*) that precedes and completeness (*pūrṇatā*) that follows.[39] Ḍalhaṇa takes up this same explanation. Cakrapāṇidatta also states that completeness corresponds to the condition of stability (*tādrūpya*) of the "bodily constituents, sense organs, strength and virility".[40] He concludes his comment with the statement that "the increase of the different humours is inferred through the (different) conditions of *vayas*".[41] Ḍalhaṇa's *Nibandhasaṃgraha* (12th–13th c.) does not add any essential element to Cakrapāṇidatta's commentary.

37 To be noted, however, is the substantivation of the first period, *bālya*, "childhood," which refers to the concept of "period of human life," while the other texts considered use *bāla*, an adjective which means "young," but also the masculine noun for "child," "young boy," which can be made a feminine noun.

38 This difference is minimized or evaded in the commentaries.

39 *Bhānumāti ad* Su.Sū. 35.29: यौवनमिति `मुऽ मिश्रणे, इत्यस्माद्रूपं; तेन पूर्वाया वृद्धेस्तु या परायाश्च पूर्णताया मिश्रणं यौवनं ज्ञेयम्।

40 *tādrūpya* refers to a quantitative stability, it does not imply a balanced state and therefore the absence of pathology.

41 *Bhānumāti* ad *Suśrutasaṃhiṭā* 1.35.31: दोषविशेषवृद्धमपि वयोऽवस्थालक्षणीयमाह—बाले इत्यादि।

3. DEFINITION OF *VAYAS* IN THE *AṢṬĀṄGAHṚDAYASAṂHITĀ ŚĀRĪRASTHĀNA* 3.105

THE *AṢṬĀṄGAHṚDAYASAṂHITĀ* PROVIDES A LACONIC DEFINITION of *vayas* in chapter three of the "Book relating to the body," entitled "Apportionment of the [different] parts of the body" (*aṅgavibhāgam śārīram*): this title is in accordance with the first part of the chapter (Ah.Śā. 3.1–76), being followed by the definition of the threefold strength (*bala*), the three kinds of environment (*deśa*), the weight of the bodily constituents in a stable condition (*samadhātu*), the seven kinds of constitutions—whose presentation follows the same pattern as the *Aṣṭāṅgasaṃgraha*, see below—and finally the definition of *vayas*. The chapter ends with a description of the auspicious bodily characteristics auguring a lifespan of one hundred years, a brief mention of the eight temperaments (*sāra*) of the bodily constituents, and the mention of a group of heterogeneous items that promote long life[42].

Here is the verse on *vayas*:

> वयस्त्वाषोडशाद्बालं तत्र धात्विन्द्रियौजसाम्।
> वृद्धिरासप्ततेर्मध्यं तत्रावृद्धिः परं क्षयः।[43]
>
> Up to sixteen [years], *vayas* is young: in that case there is an increase of the bodily constituents, sense organs and vitality (*ojas*). Up to seventy [years], [*vayas*] is median: in that case, there is no increase. Beyond [seventy years], there is decline.

Aruṇadatta's commentary (13th c.) provides further details, which are mainly borrowed from the *Aṣṭāṅgasaṃgraha* (see below). The only notable contribution of the *Aṣṭāṅgahṛdayasaṃhitā* with respect to *vayas* is the recourse to the notion of *ojas*.[44] Aruṇadatta explains it thus: "There is an increase of *ojas*, i.e., it causes an augmentation of all the bodily constituents." [45] Aside from this concise definition of *vayas*, the *Aṣṭāṅgahṛdayasaṃhitā* mentions the predominance of the three *doṣa* according to the tripartition of *vayas* in *Sūtrasthāna* 1.8, and states that *vayas* is to be investigated during the examination of the patient in *Sūtrasthāna* 12.67.

42 Ah.Śā. 3.120: दानशीलदयासत्यब्रह्मचर्यकृतज्ञताः। रसायनानि मैत्री च पुण्यायुर्वृद्धिकृद्गणः। "The group that increases virtue and [lengthens] lifespan is generosity, compassion, trust, abstinence, and gratitude, as well as elixirs and benevolence."

43 Ah.Śā. 3.105.

44 It seems that Arunadatta's explanation is consistent with the conception of *ojas* in the *Suśrutasaṃhitā* as summarized by Meulenbeld (2008: 158) : "Ojas is one single, undivided substance, so closely yoked to *bala* as to make the two terms interchangeable. *Ojas* is pictured as the essence of all the *dhātus*, the series of seven types of tissue. It is the source of unhampered functioning of all the organs of sense (*indriya*). Bodily strength (*bala*) also finds its ground in *ojas*." On this problematic substance, see Meulenbeld 2008.

45 *Sarvāṅgasundarā ad* Ah.Śā. 3.105: तथा सर्वधात्वाप्यायकस्य — ओजसो, वृद्धिः।

4. DEFINITION OF *VAYAS* IN *AṢṬĀṄGASAṂGRAHA ŚĀRĪRASTHĀNA* 8.25–34

Despite a few repetitions, since the *Aṣṭāṅgasaṃgraha* borrows from the *Carakasaṃhitā* and the *Suśrutasaṃhitā*, I will examine the section on *vayas* in this text, which includes interesting variations as well as new elements. The definition of *vayas* is found in chapter eight entitled "Typology of constitutions relating to the body" (*prakṛtibhedhīyaṃ śārīram*) of the "Book relating to the body".[46] As stated by Meulenbeld (1999–2002: IA, 528), this chapter is the corresponding part of the *Aṣṭāṅgahṛdayasaṃhitā, Śārīrasthāna* 3 (*aṅgavibhāgam śārīram*).

Its starts with the description of seven kinds of constitutions (*vātaprakṛti, pittaprakṛti, kaphaprakṛti*, the three known as *saṃsargaprakṛti*,[47] and *samaprakṛti*[48]) according to the degree of prevalence of the three humours (*doṣa*). This combination is fixed at the time of the embryonic development, and lasts until death (As.Śā. 8.1–20). Then seven other kinds of constitutions are briefly mentioned, characterized by the degree of prevalence of the three qualities (*guṇa*, specifically *sattva, rajas, tamas*), organized according to the same principle as the three *doṣa*[49] (As.Śā. 8.21). Finally, seven constitutions are mentioned that are characterized by class (*jāti*), family lineage (*kula*), place of birth or residence (*deśa*), time (*kāla*), age (*vayas*), strength (*bala*), and individual singularities (*pratyātma*), each of which define different characters (*bhāva*) of man.[50] Only age and strength are given detailed consideration, followed by a passage on temperament (*sāra*) according to the pre-eminence of the bodily constituents as a criterion for strength. The chapter ends with a lengthy passage on measurements of the body distinguishing auspicious from non-auspicious (*aniṣṭa*) measurements (As.Śā. 8.41–48).

Here is the passage on *vayas*:

> वयस्त्रिविधं बालं मध्यं वृद्धं च। तत्राषोडशाद्वर्षाद्बालम्। आषष्टेर्मध्यम्। ततो वृद्धम्। (25)
>
> तेष्वपि स्तन्याहारोभयवृत्त्या बालं त्रिविधम्। तस्मिन् देहप्रमाणवृद्धिः श्लेष्मोद्रेकश्च। तेन बालस्य स्नेहमार्दवसौकुमार्याल्पक्रोधत्वसौभाग्यानि भवन्ति। (26)
>
> मध्यमपि त्रिविधं यौवनं सम्पूर्णत्वमपरिहानिश्च। तस्मिन् पित्तोद्रेकः। तेन दीप्ताग्निता प्रज्ञाधिक्यपरिपाकौ व्यवसायश्च। तत्रात्रिंशतो यौवनमाचत्वारिंशतः सर्वधात्विन्द्रियबलवीर्यपौरुषस्मरणवचनविज्ञानप्रश्रयगुणसम्पूर्णत्वमतःपरमपरिहानिः। (27)

46 All the references to the *Aṣṭāṅgasaṃgraha* follow the division and numbering of the edition of Kiñjavaḍekara (Aṣṭāṅgasaṃgraha), with the commentary of Indu entitled *Śaśilekhā*.

47 *saṃsargaprakṛti* is a constitution where there is prevalence of two *doṣa* (*pitta-vāta, pitta-śleṣman* or *śleṣman-vāta*).

48 *samaprakṛti* is a constitution where there is equality between the three *doṣa*.

49 Meulenbeld (1999–2002: IB, 634, n. 417) points out a similar passage in the Ah.Śā. 3.104ab.

50 As.Śā. 8.22: दृश्यन्ते हि पुरुषाणां जात्यादिनियतास्ते ते भावविशेषाः।

वृद्धं तु शश्वत् क्षीयमाणधात्विन्द्रियादिगुणं वलीखलतिकासश्वासाग्निसादादिभिरभिभूयमानं जीर्णं भवनमिवाभिवृष्टमवसीदति। तस्मिन्मारूतोद्रेकः। तेन श्लथसारमांससन्ध्यस्थिता त्वक्पारुष्यमवनामः कायस्य वेपथुः कासः श्वासः श्लेष्मसिङ्घाणकोदीरणं धातुक्षयश्च। (28)

अन्ये पुनराहुः। (29)

बाल्यं वृद्धिः प्रभा मेधा त्वक्शुक्राक्षिश्रुतीन्द्रियम्। दशकेषु क्रमाद्येति मनः सर्वेन्द्रियाणि च। (30)

एवं वर्षतमायुषः प्रमाणमस्मिन्काले। (31)

सन्ति पुनः कर्मविशेषादूनाधिकवर्षशतजीविनो मनुष्याः। (32)

तेषां यथोक्तैः प्रकृतिविशेषैरायुषः प्रमाणमुपलभ्य वयस्त्रिधा विभजेत्। अपि च। (33)

वर्षं वर्षं क्षयं याति नृणां याते शते शते। आयुषोऽपुण्यबाहुल्याद्यदा यन्मानमिष्यते। (34)[51]

Vayas is threefold: young, middle and old. In this case, [*vayas*] is young up to sixteen years; it is middle up to sixty [years]; then, it is old. (25)

Among these, young is threefold, depending on whether one lives on breast milk, on [solid] food, or on both. During [young age], there is an increase in the size of the body and a predominance of phlegm. Thus, at young [age], unctuousness, softness, tenderness, little of anger, and beauty occur. (26)

Middle [age] is also threefold: youth, completeness and non-decrease. During [middle age], there is a predominance of bile. Thus, there is good digestive power, maturity, and a high degree of discrimination, as well as [capability for] physical exertion. In this case, up to thirty [years] is youth; up to forty [years] is completeness of all bodily constituents, sense organs, strength, virility, manliness, memory, speech, discernment and of the quality of having a respectful demeanour; then, there is no decrease. (27)

An old [man] is characterized by a continual decline of the bodily constituents, sense organs, etc. Afflicted by wrinkle, baldness, cough, affection of the breath, weakness of digestion, etc., he sinks down like a decayed and rain-soaked house.

During [old age], there is a predominance of wind. Thus, there occurs laxity of the temperament, flesh, joints and bones, roughness of skin, a hunched body, tremor, cough, affection of the breath, excretion of nasal mucus proceeding from phlegm, and decline of the bodily constituents. (28)

51 *Aṣṭāṅgasaṅgraha, Śārīrasthāna* 8.25–34.

On the other hand, others say: (29)

Childhood, growth, radiance, mental acuity, skin, semen, the sense organs that are the eyes and ears, the mind, and [then] all sense organs: gradually [these ten] disappear [one by one] every ten [years]. (30)

Thus, by these times, the measure of life is one hundred years. (31)

However, there are men who live more or less than one hundred years, depending on the variety of their actions.[52] (32)

For them, one must divide *vayas* into three, after having ascertained the measure of life expectancy according to the peculiarities of their constitution as has been explained.

Moreover: (33)

For men, the prescribed measure of life diminishes by one year every one hundred [years] that pass, due to the abundance of [their] demerit. (34)

The divisions of age according to the *Aṣṭāṅgasaṃgraha* conform to those given by the *Suśrutasaṃhitā* with regard to childhood, except there is no indication of precise durations. For the first time, the increase of the measure of the body (*dehapramāṇa*) is mentioned as part of the definition of *vayas*. Also to be noted is a very different list from the other texts to characterize childhood: unctuousness, softness, tenderness, little of anger, beauty.

Middle age has three divisions (against four for the *Suśrutasaṃhitā*), with the absence of growth (*vṛddhi*). Another peculiarity is that the third middle age period (forty to sixty years) is called "non-decrease" (*aparihāni*), while the *Suśrutasaṃhitā* proposes, as we have seen, a slight decline for a longer period (from forty to seventy years). This is corroborated by Indu (10th–11th c.), who comments thus: "Beyond forty years, it is *aparihāni*, that is to say that there is neither increase nor decrease".[53] In addition, Indu introduces the passage which deals with old age by these words: "The qualities, namely the stability of the body (*vapuḥsthairya*), etc. which have been mentioned before, perish continually, that is, completely,"[54] where the compound *vapuḥsthairya* leaves no doubt about the conception of middle age as being a period not subject to change.

52 Indu specifies that men live more or less than one hundred years according to their acts caused by fate (*daiva*) or resulting from human effort (*pauruṣa*). See *Śaśilekhā ad* As.Śā. 8.32: केचित्तु मनुष्या दैवस्य पौरुषस्य च कर्मणो विशेषादूनाधिकवर्षशतजीविनोऽपि सन्ति।

53 *Śaśilekhā ad* As.Śā. 8.27: चत्वारिंशतः परमपरिहानिर्न वृद्धिर्नाप्यपचयः।

54 *Śaśilekhā ad* As.Śā. 8.28, क्षीयमाणा पूर्वोक्ता वपुःस्थैर्यादयो गुणाः शश्वत्समन्तात्।

As in the *Carakasaṃhitā*, old age begins at sixty years (against seventy years for the *Suśrutasaṃhitā* and the *Aṣṭāṅgahṛdayasaṃhitā*), however the description of old age is literally borrowed from the *Suśrutasaṃhitā*, supplemented with other details relating to the external condition of the body (laxity of joints and bones, roughness of skin, a hunched body, tremor).

It seems, therefore, that the *Aṣṭāṅgasaṃgraha* provides a synthetic overhaul of the question of age according to the preceding treatises, but also to other unidentified sources. Indeed, it exposes another way of dividing age according to ten criteria: childhood (*bālya*), growth (*vṛddhi*), radiance (*prabhā*), mental acuity (*medhā*), skin (*tvac*), semen (*śukra*), the sense organs that are the eyes (*akṣi*) and ears (*śruti*), mind (*manas*), and [then] all the sense organs, which disappear one by one every ten years, thus justifying a canonical lifespan of one hundred years.[55] The inclination towards exhaustivity and synthesis of the *Aṣṭāṅgasaṃgraha* is also clear when the text takes up from the *Carakasaṃhitā* the subject of calculation of age for those who live more or less than one hundred years.

The examination of *vayas* in the *Carakasaṃhitā*, the *Suśrutasaṃhitā*, the *Aṣṭāṅgahṛdayasaṃhitā*, and the *Aṣṭāṅgasaṃgraha* reveals a subtle, complex and unstable conception not only of the periods of life, but also of the gradual differentiated processes of transformation that characterize them. There is indecision regarding the transition from childhood to adulthood and the divisions of middle age. But the tripartition and the preeminence of humours for each period are the same for all texts.

Vayas is conceived as part of a general process of transformation (*pariṇāma*) governed by time. The fact that age is counted from the moment of conception,

55 The *Bhāvaprakāśa, Pūrvakhaṇḍa, Bālaprakaraṇa* 42–50, whose definition of *vayas* follows the *Suśrutasaṃhitā* (four divisions of middle age), also includes a list of items that decrease successively for each period of ten years, respectively: childhood (*bālya*), growth (*vṛddhi*), splendour (*chavi*), mental acuity (*medhā*), skin (*tvak*), vision (*dṛṣṭi*), semen (*śukra*), valour (*vikrama*), intellect (*buddhi*), organs of action (*karmendriya*), consciousness (*cetas*), life (*jīvita*). This somewhat different list in fact comprises twelve elements, but it is possible to count just ten elements if we consider that semen and valour are worth one (as they are in a compound, *śukravikramau*) and that *jīvita* marks the time of death. Surprisingly, a tenfold division for the age of horses is given in works on veterinary medicine, where the method for the "knowledge of age" (*vayojñāna*), essentially according to shape, colour and number of teeth, is rather well developed. See, for example, the *Aśvasāstra* and the *Aśvacikitsā* of Nakula (*ca.* 1000 CE). Furthermore, the *Aśvasāstra* (1952) lists the length of life of human beings (one hundred years), elephants (one hundred and twenty years), horses (thirty-two years), cows (twenty-four years), asses and camels (twenty-five years), dogs (sixteen years), jackals (twenty-five years), worms (seven days) and bees (fourteen days). On Nakula's works, see Meulenbeld 1999–2002: IIA, 567–8.

	Young (predominance of *śleṣman*)	**Middle (predominance of *pitta*)**	**Old (predominance of *vāta*)**
Ca.Vi. 8.122 (*bāla, madhya, jīrṇa*)	**Up to 16 years** (general immaturity) **Up to 30 years** (continuation of the development of the bodily constituents and unsteadiness of mind)	**From 30 to 60 years**	**From 60 to 100 years**
Su.Sū. 35.29–31 (*bālya, madhya, vṛddha*)	**Up to 16 years:** - up to 1 year (*kṣīrapa*) - from 1 to 2 years (*kṣīrānnāda*) - from 2 to 16 years (*annāda*)	**From 16 to 70 years** - from 16 to 20 years (*vṛddhi*) - from 20 up to 30 years (*yauvana*) - from 30 up to 40 years (*saṃpūrṇatā*) - from 40 up to 70 years (*hāni*)	**From 70 years onwards**
Ah.Śā. 3.105 (*bāla, madhya, para*)	**Up to 16 years**	**From 16 to 70 years**	**From 70 years onwards**
As.Śā. 8.25–34 (*bāla, madhya, vṛddha*)	**Up to 16 years** divided into three (*stanyavṛtti, āhāravṛtti, ubhayavṛtti*) without any mention of duration	**From 16 to 60 years** - from 16 up to 30 years (*yauvana*) - from 30 up to 40 years (*saṃpūrṇatva*) - from 40 up to 60 years (*aparihāni*)	**From 60 years onwards**

Table 1: Comparative table of the divisions of the ages of life according to Ca., Su., Ah, and As.

as stated by the *Carakasaṃhitā*, the *Suśrutasaṃhitā*[56] as well as the *Mānavadharmaśāstra*,[57] confirms that it refers to a process of transformation at a subtle level or inaccessible to the senses. In this context, the meaning of *āyus* as "life expectancy" or "potential length of life" is prevalent. The measure of *āyus* is evaluated at two moments that leave no doubt as to its meaning: at birth, after the naming sacrament of the infant and also, in the present case, at the first examination of a patient by a physician. The fact that life expectancy influences the division of age shows the relativity and flexibility of the representation of age and accounts for its persistent meaning of "vigour".[58]

5. *VAYAS* IN TERMS OF DIAGNOSIS AND MEDICAL PRESCRIPTION

How is *vayas* taken into consideration in medical practice? Which treatments require special attention to age? It may be expected that *vayas* plays an active role in diagnosis and prescription, insofar as it is a criterion for strength. The contexts of use examined in the *Carakasaṃhitā* and the *Suśrutasaṃhitā* betray differences between texts:

In the *Carakasaṃhitā*, *vayas* is taken into consideration among a list of other criteria[59] of the patient's examination (Ca.Sū. 15.5; Ca.Vi. 1.3), especially during emesis (*vamana*) or purgation (*virecana*) treatments (Ca.Sū. 15.17), or in the case of unctions (*abhyaṅga*), oily and non-oily enemas (*anuvāsana, āsthāpana*) and the drinking of oil (*snehapāna*) (Ca.Vi. 2.13). Some notable occurrences can be found in the section on sexual stimulants (*vājīkaraṇa*), where *vayas* refers to youth and qualifies the attractive woman (Ca.Ci. 2.1.9) or the vigour of the young man (Ca.Ci. 2(3).30). In the fourth part of chapter two of *Cikitsāsthāna*, which deals with sexual stimulants that fortify the strength of man (*pumāñjātabalādikaṃ vājīkaraṇapādam*), four kinds of men are listed: those whose strength proceeds

56 See Ca.Śā 4.7–26 and Su.Śā. 3, 18 and 30, which describe the embryo's development from conception onwards.

57 Mānavadharmaśāstra 2.36 ("Time for initiation"): "For a Brahmin, the vedic initiation should be carried out in the eighth year from conception; for a Kṣatriya, in the eleventh year from conception; and for a Vaiśya, in the twelfth year from conception." Olivelle observes *ad Mānavadharmaśāstra* 2.24 (Mānavadharmaśāstra: 246): "*sixteenth year*: we must assume on the basis of the statement in verse 36 that all ages are counted from conception rather than from birth."

58 In some cases, *vayas* means only "vigour," see, for example, Ca.Sū. 27.64.

59 Ca.Sū. 15.5 = Ca.Sū. 15.17 = Ca.Vi. 2.13: दोषभेषजदेशकालबलशरीराहारसात्म्यसत्त्वप्रकृतिवयसाम्, affection, medication, environment, time, strength, body, diet, personal suitability, mind, constitution, and age. Ca.Vi. 1.3 adds *sāra*, temperament, to this list (दोषभेषजदेशकालबलशरीरसाराहारसात्म्यसत्त्वप्रकृतिवयसाम्).

from time, those who are firm through practice, those who manage by means of effort, and those who are bulls by nature.[60] As might be expected, the strength related to time falls under age and seasons, according to Jejjaṭa (*ca.* 8th c.),[61] who indicates that *vayas* refers to "youth" (*yauvana*), a term absent from the definition of *vayas* in the *Carakasaṃhitā*, but which is used in the definitioas given by the *Suśrutasaṃhitā*, and the *Aṣṭāṅgasaṃgraha*. In a different vein, the *Carakasaṃhitā* teaches that the venomousness of certain snake species depends on age. [62]

But what particularly distinguishes the use of *vayas* in the *Carakasaṃhitā* is the persistence of a conception correlated with the development of bodily constituents (*dhātu*). The causal link of age with the increase, stability or decline of the bodily constituents, which in this case encompass all the bodily components that proceed from *rasa* as well as *mala*, is evident in Ca.Sū. 28, which deals with different kinds of food and drink (*vividhāśitapītīya*): Ca.Sū. 28.4 indicates that "all bodily constituents, whether they be bodily excretions or 'favouring' constituents (*prasāda*), which thrive through *rasa* and *mala*, conform to their own (normal) measure depending on the age and body".[63] The compound *yathāvayaḥśarīram*, "according to age and body" is interpreted by Cakrapāṇidatta as being, on the one hand the measure of bodily constituents according to age, and on the other hand the measure of bodily constituents according to body, which is tall, small, lean or obese depending on the constitution.[64]

In the *Suśrutasaṃhitā*, *vayas* in practice has a somewhat different usage. Su.Sū. 2, on the initiation of the student (*śiṣyopanayanīyam adhyāyam*), indicates that age should be taken into consideration for initiation: according to Ḍalhaṇa, *vayas* refers in this case to childhood (*bālya*) or youth (*tāruṇya*);[65] according to Cakrapāṇidatta, it refers to the "first stage of the middle age since [this age is] adapted for the study [of the Āyurveda]" [66] (that is to say from sixteen to twenty years, if one refers to the definition of *vayas* in the *Suśrutasaṃhitā*, see Table 1, p. 52). On another note, the *Suśrutasaṃhitā* frequently applies the criterion of

60 Ca.Ci. 2.(4.)7: कालयोगबलाः केचित् केचिदभ्यसनध्रुवाः। केचित् प्रयत्नैर्व्यज्यन्ते वृषाः केचित् स्वभावतः।

61 See Meulenbeld 1999–2002: IA, 191–4. Sanskrit text according to Carakasaṃhitā: 4. 42–3.

62 Ca.Ci. 23.136, chapter on the treatment of poisoning (*viṣacikitsitam*).

63 Ca.Sū. 28.4: ते सर्व एव धातवो मलाख्याः प्रसादाख्याश्च रसमलाभ्यां पुष्यन्तः स्वं मानमनुवर्तन्ते यथावयःशरीरम्।

64 *Āyurvedadīpikā ad* Ca.Sū. 28.4: यथावयःशरीरमिति यस्मिन् वयसि बाल्यादौ यादृशं मानं धातूनां तादृशं पुष्यन्तः, तथा यस्मिन्शरीरे प्रकृत्या दीर्घे ह्रस्वे कृशे वा स्थूले वा यादृशं मानं धातूनां तादृशं पुष्यन्त इति योजना। Sharma goes wrong when he notes that, "the word *yathāvayaḥ* is interpreted by Cakrapāṇidatta as the condition and measure of *dhātus* and parts of the body according to age." (Carakasaṃhitā: 3. 255–6).

65 *Nibandhasaṃgraha ad* Su.Sū. 2.3: वयः अत्र बाल्यं तारुण्यं वा।

66 *Bhānumatī ad* Su.Sū. 2.3: वय इति प्रथममध्यममेवाध्ययनोचितत्वात्।

age to the vegetable world: age of a tree (Su.Sū. 11.11, Su.Ci. 10.13), of a grain and also of meat (Su.Sū. 46.338).[67] It shares with the *Carakasaṃhitā* the criterion of age for the venomousness of certain species of snake.[68]

More importantly, in the *Suśrutasaṃhitā*, *vayas* is necessarily taken into consideration in the treatment of bone and joint trauma and in the application of enemas:

Suśrutasaṃhitā, *Nidānasthāna* 15, on the pathology of fractures (*bhagnānāṃ nidānam*), emphasizes that the patient's curability depends on age: certain types of fractures and dislocations are difficult to treat when the patient is lean, or old, or if he is a child.[69] In addition, the ideal time to treat fractures is during the "three stages of middle age," which enables the solidification [of the bone] of the patient if treated by experts.[70] In the *Suśrutasaṃhitā*, these "three stages of middle age" correspond to the period between sixteen and forty years (see Table 1, p. 52), which Ḍalhaṇa confirms exactly.[71] Age is also considered at length in the corresponding chapter of the *Cikitsāsthāna* on the treatment of fractures (*bhagnānāṃ cikitsitam*): here it is stated that fractures are easily treated in the "first age, when the patient is unlikely to be subject to disease, and during the cold season," with the specification that "the [broken] joint becomes firm in one month for the first age, in two months for the middle age and in three months beyond," that is to say, in old age.[72]

Lastly, the *Suśrutasaṃhitā* provides an excellent example of age being taken into account for medical prescription, in chapter thirty-five of the *Cikitsāsthāna*, "On the treatment according to the proportional measurements of the clyster and substances for enemas" (*netrabastipramāṇapravibhāgacikitsitam*). First, the dimensions of the clyster are given according to age: a length of six *aṅgula*, a girth corresponding to the little finger, a retaining ring[73] at a distance of a finger and a half, a mouthpiece the size of a heron's feather, and a flow the dimension of a lentil (*mudga*) for the one-year-old patient. A length of eight *aṅgula*, a girth corresponding to the index finger, a retaining ring at a distance of two fingers, a mouthpiece the size of a hawk's feather, and a flow the size of a [small] bean

67 The *Carakasaṃhitā* also sometimes indicates the age of plants or trees for certain formulations, but without using the term *vayas*.

68 Su.Ka. 4.32, chapter on method for the treatment of poisoning by snake-bites ("*sarpadaṣṭaviṣavijñānīyaṃ kalpam*").

69 Su.Ni. 15.11: कृशवृद्धबालानाम्।

70 Su.Ni. 15.15cd–16ab: मध्यस्य वयसोऽवस्थास्तिस्रो याः परिकीर्तिताः। तत्र स्थिरो भवेज्जन्तुरुपक्रान्तो विजानता।

71 *Nibandhasaṃgraha ad* Su.Ni. 15.15cd: मध्यस्येत्यादि। तिस्रोऽवस्था इति षोडशवर्षादूर्ध्वं चत्वारिंशद्यावत् पूर्यते।

72 Su.Ci. 3.15cd–17ab: प्रथमे वयसि त्वेवं भग्नं सुकरमादिशेत्। अल्पदोषस्य जन्तोस्तु काले च शिशिरात्मके। प्रथमे वयसि त्वेवं मासात्सन्धिः स्थिरो भवेत्। मध्यमे द्विगुणात्कालादुत्तरे त्रिगुणात् स्मृतः। See also Ah.Utt. 27.25d–27ab.

73 The *karṇika*, literally "ear," is an element attached to the pipe, guarding against its being thrust into the rectum.

(*māṣa*) for the eight-year-old patient. A length of ten *aṅgula*, a girth corresponding to the middle finger, a retaining ring at a distance of two and a half fingers, and a flow the dimension of a chickpea (*kalāya*) for the sixteen-year-old patient.[74]

The quantity of substances for the non-unctuous enema is also calculated according to age: two, four or eight *prastha* for the patient of one, eight and sixteen years respectively, which are measured according to the capacity of the patient's hand.[75] The same degree of detail is also expounded for the patient above twenty-five years (Su.Ci. 35.9).

Then it is stated that the measurement of the clyster for old age patients is the same as for adults, but that the quantity of drug is that prescribed for a sixteen-year-old patient.[76] Finally, it is specified that a mild enema is particularly suitable for children and old people, because pungent enema affect their strength and lifespan.[77] These statements are in perfect conformity with the aforementioned definitions of *vayas*.

The accuracy of these details indicates that with regard to practical and technical issues, age is taken into particular consideration in the *Suśrutasaṃhitā*, whereas the *Carakasaṃhitā* shows greater homogeneity and theoretical coherence, which may also reflect a greater distance from the reality of the implementation of the treatments. These two tendencies are in keeping with the definitions of *vayas* in the *Suśrutasaṃhitā* and the *Carakasaṃhitā*, respectively.

6. MAINTAINING THE AGE (*VAYAḤSTHĀPANA*)

Aside from the use of *vayas* alone to denote age within the context of the practice of medicine, the term appears repeatedly within a verbal locution (for example: *vayas tiṣṭhati*) or in the compound *vayaḥsthāpana*, meaning literally "stabilization of age," a positive effect attributed to certain drugs and remedial measures in the context of medical *rasāyana*.[78] It is interpreted quite differently depending on the authors:

74 Su.Ci. 35.7: तत्र सांवत्सरिकाष्टद्विरष्टवर्षाणां षडष्टदशाङ्गुलप्रमाणानि कनिष्ठिकानामिकामध्यमाङ्गुलिपरिणाहान्यग्रेऽध्यर्धाङ्गुलद्व्यङ्गुलार्धतृतीयाङ्गुलसंनिविष्टकर्णिकानि कङ्कश्येनबर्हिणपक्षनाडीतुल्यप्रवेशानि मुद्गमाषकलायमात्रस्रोतांसि विदध्यान्नेत्राणि।

75 Su.Ci. 35.7–8: तेषु चास्थापनद्रव्यप्रमाणमातुरहस्तसंमितेन प्रसृतेन संमितौ प्रसृतौ द्वौ चत्वारोऽष्टौ च विधेयाः। (7) वर्षान्तरेषु नेत्राणां बस्तिमानस्य चैव हि। वयोबलशरीराणि समीक्ष्योत्कर्षयेद्विधिम्। (8)

76 Su.Ci. 35.9: सप्ततेस्तूर्ध्वं नेत्रप्रमाणमेतदेव, द्रव्यप्रमाणं तु द्विरष्टवर्षवत्।

77 Su.Ci. 35.10: मृदुर्बस्तिः प्रयोक्तव्यो विशेषाद्बालवृद्धयोः। तयोस्तीक्ष्णः प्रयुक्तस्तु बस्तिर्हिंस्याद्बलायुषी।

78 An introduction to the sections dealing with *rasāyana* therapies in the *Carakasaṃhitā*, the *Suśrutasaṃhitā* and later medical texts is found in **wujad-2015**, as well as a review of the multiplicity of interpretations of the term *rasāyana*. See also Dagmar Wujastyk's contribution in this issue.

Chapter four of *Carakasaṃhitā, Sūtrasthāna*, "On the six hundred kinds of evacuatives" (*ṣaḍvirecanaśatāśritīyam adhyāyam*) contains a list of fifty great extractives (*mahākaṣāya*), distributed in ten groups (*varga*).[79] The last group includes five categories of plants/substances that aim at "maintaining" (*sthāpana*), among which there is a group of ten plants for "age-sustaining" (*vayaḥsthāpana*) (Ca.Sū. 4.8).[80]

In this passage, where it is used as an adjective, the editor Sharma explains *vayaḥsthāpana* by "that which stabilizes the (youthful) age.[81] In other words it prevents senility." He notes that Cakrapāṇidatta interprets *sthāpana* differently, depending on the category of plants,[82] and proposes that a "uniform pattern should be followed and as such, '*sthāpanam*' should be interpreted as 'that which stabilizes' ".[83] Meulenbeld (1999–2002: IA, 13) translates *vayaḥsthāpana* as "preserving youthful vigour." As for Sircar (1984), he refers to those plants collectively named *vayaḥsthāpanāni* as "anti aging and geriatric drugs;" In their edition, Śarmā and Dash prefer "longevity promoters" (Ca.Sū. 4.18), but in another context they translate *vayaḥsthāpana* as "causing rejuvenation" (Ca.Sū. 25.40).[84]

In the *Carakasaṃhitā*, except for the group of ten plants for "age-sustaining" listed *Sūtrasthāna* 4, all the other plants that have the property of stabilizing age are mentioned in the context of *rasāyana* complex formulations: these include the

79 Meulenbeld (1999–2002: IA, 13) emphasizes that: "The groups begin with medicinal substances which are *jīvanīya* (vitalizing) and end with those which are *vayaḥsthāpana* (preserving youthful vigour), thus stressing the *rasāyana* aspect of *āyurveda*. The arrangement, names and actions of the fifty groups are remarkable in several respects and suggest that Sū. 4 may represent an old part of the *Carakasaṃhitā*." As.Sū. 15.42–46 is a parallel passage to Ca.Sū. 4.8. The group of plants named "*sthāpana*" is identical to that given by Ca.Sū. 4.18, and includes the category of "age-stabilizers" *vayaḥsthāpana*. See Meulenbeld 1999–2002: IA, 495.

80 These ten plants are: *amṛtā, abhayā* (= *harītakī*), *dhātrī* (= *āmalakī*), *muktā, śvetā, jīvantī, atirasā, maṇḍūkaparṇī, sthirā and punarnavā* (Ca.Sū. 4.18). This group of ten plants is also referred to in the section on *rasāyana* therapies (Ca.Ci. 1(3).3).

81 Carakasaṃhitā: 3. 67–8. For this definition, Sharma relies on Cakrapāṇidatta *ad* Ca.Sū. 4.8: वयस्तरुणं स्थापयन्तीति वयःस्थापनम्। It should be noted that *vayas* also means "old" in medical treatises, with a connotation of experience or respectability (Ca.Sū. 7.58), a quality applied to the teacher (Ca.Sū. 8.18) or the sages (Ca.Sū. 26.6).

82 Ca.Sū. 4.8: शोणितस्थापनो वेदनास्थापनः संज्ञास्थापनः प्रजास्थापनो वयःस्थापन इति पञ्चकः कषायवर्गः। "There are the [following] group of evacuatives: haemostatic, sensostatic, resuscitative, fœtus-promoting, and age-sustaining" (tr. Carakasaṃhitā). From this list, it is clear that *sthāpana* is conceived as a general therapeutic effect that applies to different specific circumstances.

83 This discussion is due to the fact that *sthāpana* means "maintaining," "preserving," "prolonging," or even "strengthening," depending on the context.

84 Carakasaṃhitā. They thus make *vayaḥsthāpana* a synonym for *rasāyana*, which they also translate as "causing rejuvenation," attributed to a milk and ghee regimen (Ca.Sū. 25.40: क्षीरघृताभ्यासो रसायनानाम्।).

plants *āmalakī*, *hāritakī*, *pippalī*,[85] *nāgabāla*,[86] *bhallātaka*[87]. In the *Suśrutasaṃhitā*, "age-sustaining" is attributed to milk,[88] clarified butter,[89] castor oil,[90] as well as, in the context of *rasāyana* therapies, cold water, milk, honey and ghee,[91] the plant *balā*[92] when taken by the patient being treated indoors,[93] and the *śaṇaphala*.[94] Finally, in *Suśrutasaṃhitā Cikitsāsthāna* 33, the chapter on the treatment of disorders curable by means of emetics and purgatives (*vamanavirecanasādhyopadravacikitsitam*), purgation is attributed with the ability to stabilize age, or at least to slow down its progression.[95]

The chebulic myrobalan (*harītakī*) and the emblic myrobalan (*āmalaka* or *āmalakī*) are at the heart of the *rasāyana* formulations in *Carakasaṃhitā*, *Cikitsāsthāna* 1, the chapter dedicated to *rasāyana*. For example: Among the many

85 See Ca.Ci. 1(3).40: बृंहणं स्वर्यमायुष्यं प्लीहोदरविनाशनम्। वयसः स्थापनं मेध्यं पिप्पलीनां रसायनम्। "The *rasāyana* based on long pepper (*pippalī*) strengthens [the body], improves the voice, lengthens lifespan, eliminates the spleen enlargement, stabilizes the age, and increases mental acuity."

86 Ca.Ci. 1(2).11 (recipe named *nāgabāla rasāyana*): संवत्सरप्रयोगादस्य वर्षशतमजरं वयस्तिष्ठति। "Through the use of the *nāgabāla rasāyana* for one year, his age is maintained free from decrepitude for one hundred years."

87 Again, two recipes of marking nuts (*bhallātaka*) mixed with milk or honey have the same effects (तत्प्रयोगाद्वर्षशतमजरं वयस्तिष्ठति). See Ca.Ci. 1(2).13 (recipe named *bhallātakakṣīra*) and Ca.Ci. 1(2).14 (recipe named *bhallātakakṣaudra*).

88 In Su.Sū. 45, a long chapter on how to use liquid substances ("*dravadravyavidhim adhyāyam*"), a passage is devoted to the effects and numerous properties of different kinds of milk (Su.Sū. 45.47–64), among which is the stabilization of age (*vayaḥsthāpana*).

89 In the same chapter (Su.Sū. 45, on how to use liquid substances), a passage is also devoted to the effects and numerous properties of various kinds of clarified butter (Su.Sū. 45.96–105), among which is also mentioned stabilization of age (*vayaḥsthāpana*).

90 Still in the same chapter (Su.Sū. 45, on how to use liquid substances), in a passage devoted to the effects and properties of various oils (*taila*) (Su.Sū. 45.112–130), one of the various effects attributed to castor oil is stabilization of age (*vayaḥsthāpana*).

91 Su.Ci. 27.6: शीतोदकं पयः क्षौद्रं सर्पिरित्येकशो द्विशः। त्रिशः समस्तमथवा प्राक् पीतं स्थापयेद्वयः। "Cold water, milk, honey and clarified butter, taken alone, either two, three or all together, on an empty stomach, stabilize age."

92 Su.Ci. 27.10 : एवं द्वादशरात्रमुपयुज्य द्वादश वर्षाणि वयस्तिष्ठति; एवं दिवसशतमुपयुज्य वर्षशतं वयस्तिष्ठति।, "The use of *balā* mixed with milk during twelve days stabilizes age for twelve years; administered for one hundred days [this treatment] stabilizes age for one hundred years." The other plants quoted in Su.Ci. 27.10 (*atibāla*, *nāgabalā*, *vidārī* and *śatāvarī*) are said to be used in the same way.

93 On the indoor *rasāyana* treatment, see **wujad-2015**.

94 Su.Ci. 27.13: पयसा सह सिद्धानि नरः शणफलानि यः। भक्षयेत्पयसा सार्धं वयस्तस्य न शीर्यते। , "The age of a man who eats *śana* fruits prepared with milk accompanied with half the milk [as beverage] does not decay."

95 Su.Ci. 33.27: बुद्धेः प्रसादं बलमिन्द्रियाणां धातुस्थिरत्वं बलमग्निदीप्तिम्। चिराच्च पाकं वयसः करोति विरेचनं सम्यगुपास्यमानम्।, "Properly implemented purgation results in clarity of intellect, strength of sense organs, stability of bodily constituents, strength, improvement of digestive power, and slowing down of the ripening process of age." The same formulation is also found in Ah.Sū. 18.60.

properties attributed to chebulic myrobalan (Ca.Ci. 1(1).29–35) is an excellent ability to stabilize age;[96] a decoction of chebulic myrobalan (which also contains emblic myrobalan) promises a life of one hundred years free from old age, etc., including age stabilization[97] if used for three years. A clarified butter recipe with emblic myrobalan, as well as an electuary made from emblic myrobalan and long pepper (*pippalī*) promise the same effects.[98]

The capacity of the three myrobalans (*triphalā*) to stabilize age is mentioned both in the *Carakasaṃhitā*, where a *triphalā rasāyana* allows for living a hundred years free from old age and disease, and in the *Suśrutasaṃhitā*, in a chapter devoted to purgative formulations: a recipe of *triphalā* mixed with clarified butter cures all diseases and stabilizes the age provided it is used over a long period.[99]

As a conclusion to the list of properties and actions of the two *rasāyana* substances par excellence, chebulic myrobalan and emblic myrobalan, *Carakasaṃhitā, Cikitsāsthāna* 1(1).37 states: "Thus, with such effects, the physician must consider the fruits of the chebulic and emblic myrobalans as elixirs of immortality".[100]

To this, Cakrapāṇidatta adds an interesting commentary, which differentiates the two plants in terms of medical application. He says, in essence: "Even if other substances are qualified for *rasāyana* formulations that afford a lifespan of one thousand years, nevertheless the chebulic myrobalan and the emblic myrobalan are mentioned at the beginning of the chapter [dedicated to *rasāyana*] along with their properties and effects, because of their twofold application, namely dispelling disease and promoting vitality; even if, in this case, the emblic myrobalan [is mentioned] among [the substances that] stabilize age, considering that it is the chebulic myrobalan which suppresses the disease, the chebulic myrobalan is thus mentioned first."[101]

By commenting in this way on the question of the priority of the exposé of the two substances, Cakrapāṇidatta not only highlights the distinction of the effects of *rasāyana*: to cure, on the one hand, to strengthen life, on the other hand, but he clearly places age stabilization on the strengthening side. Thus, *vayaḥsthāpana* is

96 Ca.Ci. 1(1).30: वयसः स्थापनीं पराम्।

97 Ca.Ci. 1(1).77: त्रिवर्षप्रयोगादस्य वर्षशतमजरं वयस्तिष्ठति।

98 Ca.Ci. 1(2).4 (recipe named *āmalakaghṛta*): अस्य प्रयोगाद्वर्षशतं वयोऽजरं तिष्ठति। ; Ca.Ci. 1(2).7 (recipe named *āmalakāvaleha*): अस्य प्रयोगाद्वर्षशतमजरं वयस्तिष्ठति।

99 See Ca.Ci. 1(3).42: प्रयोजयन्समामेकां त्रिफलाया रसायनम्। जीवेद्वर्षशतं पूर्णमजरोऽव्याधिरेव च।; Su.Sū. 44.71cd–72ab: त्रिफला सर्वरोगघ्नी त्रिभागघृतमूर्च्छिता। वयसः स्थापनं चापि कुर्यात् संततसेविता।

100 Ca.Ci. 1(1).37: अतश्चामृतकल्पानि विद्यात् कर्मभिरीदृशैः। हरीतकीनां शस्यानि भिषगामलकस्य च।

101 *Āyurvedadīpikā ad* Ca.Ci. 1(1).37: यद्यपि द्रव्यान्तराणि दशवर्षशतायुष्कररसायनाधिकृतानि सन्ति, तथापि हरीतक्यामलके एव रोगहरत्वायुष्करत्वरूपोभयधर्मयोगादध्यायादौ गुणकर्मभ्यामुच्येते; तत्रापि यद्यपि आमलकं वयःस्थापनानाम् (सू अ २५) इत्युक्तं तथापि रोगहरत्वे हरीतकी प्रकर्षवतीति कृत्वा हरीतक्यग्रेऽभिहिता।

concerned with the healthy body only, which concurs with the fact that old age and time-related transformations are inherent diseases (*svābhāvika*) (by the very fact of having a body).[102]

The effort of the early medical compendia to systematize the time-related variables of change according to individuals, as reflected in the definition of *vayas*, testifies to a quest for a thorough knowledge of the ageing process, and consequently for the mastery of age stabilization and rejuvenation.

The condition of non-decrease (*aparihāni*), that is to say a stable state, which escapes change, is clearly envisaged for the period of forty to sixty years in the *Aṣṭāṅgasaṃgraha*, and supported by the commentary of Indu. Non-decrease is also mentioned in the brief definition of *vayas* in the *Aṣṭāṅgahṛdayasaṃhitā*. In a way, this state of non-decrease is close to that described in the *Carakasaṃhitā*, namely "a stable condition (*samatva*)[103] of strength, virility, manliness, strength, comprehension, concentration, memory, speech, discernment and all the bodily constituents" as well as a stability of the bodily constituents, etc. for the entire middle age (from thirty to sixty years). This may also correspond to the period of completeness (*saṃpūrṇata*) of all the bodily constituents, etc. described in the *Suśrutasaṃhitā*, for the period of thirty to forty years, an interpretation supported by Cakrapāṇidatta, who explains that this is a state of stability (*tādrūpya*).

Furthermore, although this link is never explicit in the texts, we should note a convergence of the variables at stake with regard to *vayas* with the effects of the *rasāyana* treatments. For example, in the *Carakasaṃhitā*, middle age is defined as the obtaining of a stable condition of strength, virility, manliness, force, comprehension, concentration, memory, speech, discernment, and all the bodily constituents (Ca.Vi. 8.122, see above), while the effects of *rasāyana* are longevity, memory, mental acuity, youth, nobility of radiance, complexion and voice, great strength of the body and sense organs, perfection of speech, esteem and beauty, and *rasāyana* is defined as a mean for attaining excellent bodily constituents.[104] This convergence is even more significant in the *Aṣṭāṅgasaṃgraha*, whose definition of *vayas* mentions radiance (*prabhā*) and mental acuity (*medhā*) (As.Śā. 8.30, see above).

102 See Ca.Śā 1.110–115, on the "natural" (*svābhāvika*) diseases: old age, death, together with all the other disorders influenced by the time factor. On the category of *svābhāvika* diseases as the specific object of *rasāyana* therapies, see Oliver Hellwig 2008.

103 *samatva* also means "normal condition," but this is unlikely in this particular context.

104 Ca.Ci. 1.7–8: दीर्घमायुः स्मृतिं मेधामारोग्यं तरुणं वयः। प्रभावर्णस्वरौदार्यं देहेन्द्रियबलं परम्। वाक्सिद्धिं प्रणतिं कान्तिं लभते ना रसायनात्। लाभोपायो हि शस्तानां रसादीनां रसायनम्। For a discussion of this passage, see **wujad-2015**, as well as the papers of Dagmar Wujastyk and Philipp A. Maas in this volume.

Does *vayaḥsthāpana* denote "non-decrease" in the context of medical *rasāyana* and specifically refer to the period of stability described in the definitions of *vayas*? In fact, the meaning of *vayaḥsthāpana* as it appears in the texts is quite allusive: on the one hand, we observe that if the property of stabilizing age is attributed to a relatively large number of substances, *vayaḥsthāpana* is never the unique property of a given substance, but only one property among many others. Longevity (*dīrghāyus*) and health (*arogya*), which appear repeatedly in these lists of properties, are categories of effect sufficiently analogous to create confusion and doubt about the meaning of *vayaḥsthāpana*. On the other hand, there is no general definition or explanation of *vayaḥsthāpana* either in the medical treatises or in the commentaries, even though we might expect one in relation to the elaborate definitions of *vayas*. In order to clarify the meaning or meanings of *vayaḥsthāpana* in medical compendia and beyond, it is therefore necessary to separately examine its contexts of use within the lists of properties as well as in the definitions of *rasāyana*, where *vayaḥsthāpana* or synonymous locutions occur systematically.[105]

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ABBREVIATIONS

Ah. *Aṣṭāṅgahṛdayasaṃhitā*
As. *Aṣṭāṅgasaṃgraha*
Ca. *Carakasaṃhitā*
Ci. *Cikitsāsthāna*
Ka. *Kalpasthāna*

105 The context of use of *vayaḥsthāpana* is examined in Barois (in preparation).

Ni. *Nidānasthāna*

Śā. *Śārīrasthāna*

Su. *Suśrutāsaṃhitā*

Sū. *Sūtrasthāna*

Vi. *Vimānasthāna*

TEXT EDITIONS

Aṣṭāṅgahṛdayasaṃhitā — K. R. Srikantha Murthy (1991–1995). *Vāgbhaṭa's Aṣṭāñga Hṛdayam: Text, English Translation, Notes, Appendix, and Indices*. 3 vols. Krishnadāsa Āyurveda Sīrīja 27. Varanasi: Krishnadas Academy.

Aṣṭāṅgahṛdayasaṃhitā — Aṇṇā Moreśvara Kuṇṭe, Kṛṣṇaśāstrī Navare, and Hariśāstrī Parādakara, eds. (1939). अष्टाङ्गहृदयम्, श्रीमद्वाग्भटविरचितम्, श्रीमदरुणदत्तविरचितया सर्वाङ्गसुन्दर्याख्या व्याख्यया हेमाद्रिप्रणीतया आयुर्वेदरसायनाह्वया टीकया च समुल्लसितम् = *The Astāngahṛidaya. a Compendium of the Ayurvedic System Composed by Vāgbhaṭa with the Commentaries (sarvāngasundarā) of Arunadatta and (āyurvedarasāyana) of Hemādri*. 6th ed. Bombay: Pāndurañg Jāwajī at the Nirṇaya Sāgar Press. URL: https://archive.org/details/Ashtanga.Hridaya.of.Vagbhata (on 4 June 2017).

Aṣṭāṅgasaṃgraha — K. R. Srikantha Murthy (1995–1997). *Aṣṭāṅga Saṃgraha of Vāgbhaṭa: Text, English translation, Notes, Indeces* [sic]. 3 vols. Jayakrishnadas Ayurveda Series 79. Varanasi: Chaukhambha Orientalia.

Aṣṭāṅgasaṃgraha — Rāmacandraśāstrī Kiñjavaḍekara, ed. (1938–1940). अष्टाङ्गसङ्ग्रहः मूलसूत्राणि शशिलेखाटीका, टुप्टिप्पणी, शरीरपरिशिष्टम्, अष्टाङ्गहृदयशारीरम्, शारीरकोष्ठकानि, शारीरचित्राणि, सूत्र-शब्द-विषयसूच्यः, विषयप्रवेशः, निवेदनम्, इत्यादिभिः संवलितम् = *Aṣṭāṅga sangraha, with Indu's Śaśilekhā Commentary, Notes, Diagrams, and Appendices*. 3 vols. Āyurvedakalpataruḥ 1. Poona: Citraśālā Mudraṇālaya. Reprinted, Delhi: Sri Satguru Publications, 1990, with an introduction by Vaidya Bhagwan Dash.

Aśvaśāstra — S. Gopalan, Svāminātha Atreya, and K. S. Subramanya Śāstri (1952). *Aśvaśāstram by Nakula. With Coloured Illustrations*. Tanjore Saraswati Mahal Series 56. Tanjore: S. Gopalan.

Bhāvaprakāśa — K. R. Srikantha Murthy (1998–). *Bhāvaprakāśa of Bhāvamiśra: Text, English Translation, Notes, Appendices and Index*. 2 vols. Krishnadas Ayurveda Series 45. Varanasi: Krishnadas Academy. ISBN: 9788121800006.

Carakasaṃhitā — Priya Vrat Sharma (1981–1994). *Caraka-saṃhitā: Agniveśa's Treatise Refined and Annoted by Caraka and Redacted by Dṛḍhabala (text with English Translation)*. 4 vols. Varanasi, Delhi: Chaukhambha Orientalia.

Carakasaṃhitā — Rāma Karana Śarmā and Bhagwan Dash, eds. (1976–2002). *Agniveśa's Caraka Saṃhitā. Text with English Translation and Critical Exposition Based on Cakrapāṇi Datta's Āyurveda Dīpikā*. 7 vols. Chowkhamba Sanskrit Studies 94. Varanasi: Chowkhamba Sanskrit Series Office. ISBN: 9788170800514.

Carakasaṃhitā — Yādavaśarman Trivikrama Ācārya, ed. (1941). **महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्-वेददीपिकाव्याख्यया संवलिता** = *The Charakasamhitā by Agniveśa Revised by Charaka and Dṛidhabala with the Āyurveda-Dīpikā Commentary of Chakrapāṇidatta*. 3rd ed. Mumbayyāṃ: Nirnaya Sagara Press. URL: https://archive.org/details/Caraka1941 (on 1 Jan. 2018).

Mānavadharmaśāstra — Patrick Olivelle (2006). *Manu's Code of Law: A Critical Edition and Translation of the Mānava-dharmaśāstra, with the Editorial Assistance of Suman Olivelle*. New Delhi: Oxford University Press. ISBN: 9780195681482.

Suśrutasaṃhitā — Priya Vrat Sharma (1999–2001). *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith* (sic) *Critical Notes*. 3 vols. Haridas Ayurveda Series 9. Varanasi: Chaukhambha Visvabharati.

Suśrutasaṃhitā — Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman, eds. (1939). **सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपा-णिदत्तविरचितया भानुमतीव्याख्याया समेतम्** = *Sushrut-sañhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen*. Śrīsvāmi Lakṣmīrāma Nidhi Granthamālā = Shrī Swāmī Lakshmī Rām Trust Series 1. Agra: Śyāmasundara Śarman. URL: https://archive.org/details/in.ernet.dli.2015.35080 (on 29 Jan. 2018). Printed at the Nirṇayasāgara Press, Bombay.

Suśrutasaṃhitā — Yādavaśarman Trivikrama Ācārya, ed. (1931). वैद्यव-रश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः = *The Sushrutasaṃhitâ of Sushruta with the Nibandhsangraha Commentary of Shree Dalhaṇâchârya*. 2nd ed. Mumbayyāṃ: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye. URL: https://archive.org/details/susruta1931 (on 27 Feb. 2018).

SECONDARY LITERATURE

Barois, Christèle (in preparation). "Stretching Out Life, Maintaining the Body, Part 2: *vayaḥsthāpana* in Medical Literature and Beyond". In preparation.

— (2017). "Longevity Practices from the Chāndogya Upaniṣad Onwards". Paper presented at the conference "Medicine and Yoga in South and Inner Asia," 1–3 August 2017, University of Vienna.

Grassmann, Hermann Gunther (1873). *Worterbuch zum Rig-veda*. Leipzig: Brockhaus. URL: https://archive.org/details/in.ernet.dli.2015.6636 (on 28 Jan. 2018). Searchable at http://www.sanskrit-lexicon.uni-koeln.de/scans/GRAScan/2014/web/index.php.

Hellwig, Oliver (1999–). *DCS: Digital Corpus of Sanskrit*. URL: http://kjc-sv013.kjc.uni-heidelberg.de/dcs/.

— (2008). "*Rasāyana* und die āyurvedische Krankheitskunde". In: *Traditional South Asian Medicine* 8, pp. 32–64.

Jośī, Veṇīmādhavaśāstrī and Nārāyaṇa Harī Jośī (1968). आयुर्वेदीय महाकोशः अर्थात् आयुर्वेदीय शब्दकोशः संस्कृत–संस्कृत. 2 vols. Muṃbaī: Mahārāṣṭra Rājya Sāhitya āṇi Saṃskṛti Maṃḍaḷa. URL: https://archive.org/details/AyurvediyaSabdakosa1968.

Maas, Philipp A. (2009). "The Concepts of the Human Body and Disease in Classical Yoga and Āyurveda". In: *Wiener Zeitschrift für die Kunde Südasiens* 51, pp. 123–62. DOI: 10.1553/wzkslis123.

Meulenbeld, G. Jan (1999–2002). *A History of Indian Medical Literature*. 5 vols. Groningen Oriental Studies XV. Groningen: Egbert Forsten. ISBN: 9069801248.

— (2008). "The Woes of Ojas in the Modern World". In: *Modern and Global Ayurveda: Pluralism and Paradigms*. Ed. by Dagmar Wujastyk and Frederick M. Smith. Albany, NY: State University of New York Press, pp. 157–176. ISBN: 978-0-7914-7490-7.

Namdeo, Kadam Krishna and Jadhav Viraj Vilas (2017). "Consequences of Aging". In: *World Journal of Pharmaceutical and Medical Research* 3.3, pp. 83–88.

URL: http://www.wjpmr.com/download/article/20042017/1491024955.pdf (on 29 Jan. 2018).

Preisendanz, Karin (2007). "The Initiation of the Medical Student in Early Classical Āyurveda: Caraka's Treatment in Context". In: *Pramāṇakīrtiḥ. Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday*. Ed. by B. Kellner, H. Krasser, H. Lasic, M. T. Much, and H. Tauscher. Vol. 2. 2 vols. Wiener Studien zur Tibetologie und Buddhismuskunde 70. Wien: Arbeitskreis für Tibetische Und Buddhistische Studien Universität Wien, pp. 629–68. ISBN: 9783902501097. URL: https://www.istb.univie.ac.at/caraka/file_download/36 (on 29 Jan. 2018).

Preisendanz, Karin, Cristina Pecchia, and Philipp A. Maas, eds. (forthcoming). *Text of the* Carakasaṃhitā, Vimānasthāna 8 *as Critically Edited by the "Philosophy and Medicine in Early Classical India" Projects at the University of Vienna*. Forthcoming.

Renou, Louis (1958). *Etudes sur le vocabulaire du Ṛgveda*. Publications de l'Institut français d'Indologie 5. Pondichéry: l'Institut français d'Indologie.

Sircar, N. N. (1984). "Pharmaco-therapeutics of Dasemani drugs". In: *Ancient Science of Life* 3.3, pp. 132–135.

Tilak, Shrinivas (1988). "Religion and Aging in Indian Tradition: A Textual Study". PhD. Montreal: Faculty of Religious Studies, McGill University. URL: http://digitool.library.mcgill.ca/thesisfile75680.pdf (on 29 Jan. 2018).

Wujastyk, Dagmar (2012). *Well-Mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda*. New York: Oxford University Press New York. 264 pp. ISBN: 9780199856275.

— (2016). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: *AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Cpitoli per una Storia dellÁlchimia nellÁntica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino* XXXVII.2015, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 16 Aug. 2017).

Wujastyk, Dominik (1998). *The Roots of Āyurveda. Selections from Sanskrit Medical Writings*. 1st ed. Penguins Books. ISBN: 9780140436808.

— (2003). *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. 3rd ed. Penguin Classics. London, New York, etc.: Penguin Group. ISBN: 0140448241.

— (Aug. 6, 2017). "What is "vimāna" in the *Compendium of Caraka*?'" Presentation at International Congress on Traditional Asian Medicine, 6–12 August 2017 at Kiel, Germany. URL: https://www.academia.edu/34180036/ (on 29 Jan. 2018).

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Philipp A. Maas

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Rasāyana in Classical Yoga and Ayurveda

Philipp A. Maas

University of Leipzig

INTRODUCTION

The *pātañjalayogaśāstra* is the oldest surviving systematic Sanskrit exposition of yoga from a brahmanical perspective. It was probably partly compiled and partly composed at the end of the fourth or the beginning of the fifth century CE by an author-redactor with the name Patañjali.[1] In the second and third chapter of his work, Patañjali discussed various superhuman powers or abilities (*aiśvarya* or *siddhi*) that a yogi obtains during his progress towards spiritual liberation.[2] These superpowers arise in consequence of practicing the eight ancillaries or means (*aṅga*) of yoga. Already at an early stage on the way to liberation, the yogi acquires a whole range of extraordinary abilities by keeping ascetic commitments (*yama*) and observances (*niyama*).[3] Additional superpowers and paranormal insights arise through the sequential application of three forms of object-related meditations, i.e., fixation (*dharaṇā*), meditation or visualization (*dhyāna*), and absorption (*samādhi*).[4] These specifically yogic practices are, however, not the only way of reaching paranormal abilities. Patañjali also recognized four additional non-yogic means to superpowers, of which he provides a list at the very beginning of the fourth chapter (*pāda*) of his *Pātañjalayogaśāstra*:

> Birth, herbs, mantras, ascetic practice, and absorption generate superpowers (*siddhi*) (*sūtra* 4.1). A superpower [generated] by birth is innate to the body. "By herbs" [means] from *rasāyana* in the mansions of Asuras, and the like. "By mantras" [means] attaining the power of levitation, to become minute, etc. Ascetic practice [generates] the superpower of reaching whatever one wants, e.g., one goes wherever

1 See Maas 2013: 57–68.

2 On yogic powers in different South Asian traditions, see Jacobsen 2012.

3 See *Pātañjalayogaśāstra* 2.35–2.45.

4 See *Pātañjalayogaśāstra* 3.16–3.55.

> one wants to go, in any form one desires, and the like. Absorption generates the superpowers that have been explained [in the previous section of the *Pātañjalayogaśāstra*].[5]

This brief passage provides a window to a detail of the religious world view of Patañjali and his contemporaries, in which the belief in the possibility of overcoming the limitations of human existence played a prominent role.[6] From the perspective of yoga, the most important method leading to superpowers is the last-mentioned absorption (*samādhi*), which Patañjali portrayed comprehensively in the preceding part of his *yogaśāstra*.[7] The remaining four means for the generation of *siddhi*s are (1) birth (*janman*), i.e., according to the commentaries of Vācaspatimiśra I and of Śaṅkara, rebirth as a divine being with innate extraordinary powers, (3) *mantra*s, i.e., magical formula, and (4) ascetic practices that apparently differ from the specifically yogic form of asceticism that Patañjali referred to as the result of religious observances (*niyama*) in *Pātañjalayogaśāstra* 2.34–44.[8] The present article is focused on the second mentioned cause of superpowers, i.e., "herbs" (*oṣadhi*), because Patañjali related this cause to *rasāyana*.

Patañjali's reference to *rasāyana* is brief and quite obscure. It is not at all obvious what exactly he had in mind when he explained that the generation of superpowers "'by herbs' [means] from *rasāyana* in the mansions of Asuras, and the like." In attempting to elucidate this difficult passage, the following part of this chapter analyses the explanations of this passage by the three commentators Vācaspatimiśra I, Bhoja and Śaṅkara, which finally leads to a discussion of the meaning of *rasāyana* in Ayurveda.

1. VĀCASPATIMIŚRA'S *TATTVAVAIŚĀRADĪ* ON *RASĀYANA*

VĀCASPATIMIŚRA I COMMENTED on Patañjali's reference to *rasāyana* in his tenth-century *Tattvavaiśāradī* as follows:

5 *Pātañjalayogaśāstra* 4.1 (Āgāśe 1904: 176, lines 1–5): जन्मौषधिमन्त्रतपःसमाधिजाः सिद्धयः (*sūtra* 4.1)। देहान्तरिता जन्मना सिद्धिः। ओषधिभिरसुरभवनेषु रसायनेनेत्येवमादिः। मन्त्रैराकाशगमनाणिमादिलाभः। तपसा संकल्पसिद्धिः, कामरूपी यत्र तत्र कामग इत्येवमादि। समाधिजाः सिद्धयो व्याख्याताः।

6 Vasubandhu provided a very similar account of superpowers from a Buddhist perspective in his *Abhidharmakośabhāṣya* 7.53. Whether *Pātañjalayogaśāstra* 4.1 is a reformulation of *Abhidharmakośabhāṣya* 7.53 or whether both accounts of superpowers are derived from a common source, which at the present stage of research is unknown, cannot be decided with certainty.

7 See above, note 4.

8 On the power-generating effect of non-yogic ascetic practices as depicted in the *Mahābhārata*, see Shee 1986: 196–200 196–200.

> He (i.e., the author of the *bhāṣya*-part of the *Pātañjalayogaśāstra*) explains superpowers generated by herbs: "In the mansions of Asuras." It is well-known that if a human being reaches for some reason or other a mansion of Asuras and applies the *rasāyana* that lovely Asura maidens present to him, he attains freedom from old age and death and other superpowers. Or by using *rasāyana* in this very world [one may obtain superpowers], like the sage Māṇḍavya, who inhabited the Vindhya mountains after (or: because) he had used *rasa*.[9]

In this brief explanation, Vācaspati differentiated two kinds of *rasāyana* that are supposedly available in different parts of the cosmos, i.e., either "in the mansions of Asuras" or "in this very world." In both cases *rasāyana* generates the extraordinary capacity of overcoming old age and death as well as other superpowers. In order to exemplify how humans may use *rasāyana*, Vācaspati referred to the sage (*muni*) Māṇḍavya. This sage is a well-known character in several narratives. The large majority of these narrate how the sage survived impalement that he suffered as a punishment for a crime of which he was innocent.[10] Quite surprisingly, neither of these mythological accounts of Māṇḍavya's life contains the motif of *rasāyana*. Nor does any story mention the residence of its protagonist in the Vindhya mountains. It therefore appears that Vācaspati alluded here to an altogether different narrative of the sage Māṇḍavya than the ones that have survived to the present day,[11] and, accordingly, it remains unclear which conception of *rasāyana* in the world of humans Vācaspati expected to share with his audience. The only specific information that he provides is that the word *rasa* in *rasāyana* refers to a substance that may be used or consumed (*upa*+√*yuj*). Due to the semantic polyvalence of the term *rasa*,[12] the substance that Vācaspati may have referred to defies identification.

Vācaspati's reference to *rasāyana* in a different realm of the cosmos is also obscure. The only information that the commentator added to Patañjali's original remark is that *rasāyana* is applied by lovely Asura maidens, i.e., by the girls of a special class of demonic beings. What may have been Vācaspati's source of this

9 *Tattvavaiśāradī* on *Pātañjalayogaśāstra* 4.1. (Āgāśe 1904: 176, lines 17–20): ओषधिसिद्धिमाह – असुरभवनेष्विति। मनुष्यो हि कुतश्चिन्निमित्तादसुरभवनमुपसंप्राप्तः कमनीयाभिरसुरकन्याभिरुपनीतं रसायनमुपयुज्याजरामरणत्वमन्याश्च सिद्धीरासाद्यति। इहैव वा रसायनोपयोगेन यथा माण्डव्यो मुनी रसोपयोगाद्विन्ध्यवासीति।

10 *Mahābhārata* 1.101 (Sukthankar, Belvalkar, et al. 1933–1959). The different versions of the narrative are analysed in Utgikar 1923.

11 Wezler (1997: 535, n. 12) argues, however, that Vācaspati mentioned Māṇḍavya in the context of *Pātañjalayogaśāstra* 4.1 as an example for miraculously achieved longevity.

12 Dagmar Wujastyk 2017: 1 (in this volume).

specification? Did he expect his readers to share with him mythological knowledge that is, again, lost today? Or did Vācaspati provide an *ad hoc* explanation of Patañjali's reference to the mansions of Asuras that he himself did not fully understand?

It is possible that Vācaspati's explanation of *Pātañjalayogaśāstra* 4.1 was influenced by a further mention of *rasāyana* that occurs in *Pātañjalayogaśāstra* 3.51. There, Patañjali introduces a fourfold classification of yogis according to their respective spiritual progress towards liberation.[13] The yogi on the second level, who is called a yogi "at the honey stage," is spiritually advanced to such a degree that he becomes attractive to heavenly beings or gods. The gods may then tempt him to abandon his spiritual aspirations in favor of heavenly pleasures. Patañjali describes this as follows:

> If heavenly beings, i.e., the gods, notice in this regard the purity of the mind of a Brāhmaṇa who realizes the stage [of spiritual progress called] "Full of Honey," they invite him to their heavenly places: "Hello there, please stay here, please enjoy yourself here. This enjoyment is lovely. This girl is lovely. This *rasāyana* prevents old age and death …".[14]

The gods offer the yogi sexual pleasure (*bhoga*) along with a means to overcome its innate transience, i.e., a *rasāyana* that "prevents old age and death." This purpose of *rasāyana*, i.e., longevity, agrees with the one that Vācaspati specifies in his commentary on *Pātañjalayogaśāstra* 4.1 in order to supplement the sparse information that Patañjali had provided.

Patañjali's two references to *rasāyana* in *Pātañjalayogaśāstra* 3.51 and 4.1 differ from each other mainly in two respects. First, the account of *rasāyana* in 3.51 does not mention mansions or Asuras, and, second, the reference in 4.1 does not contain the motif of sexual pleasure. Since a reference to the purpose of *rasāyana* as well as the motif of lovely girls occur in 3.51 as well as in Vācaspati's commentary on 4.1, Vācaspati's comment on 4.1 may result from the combination of both references to *rasāyana*.

Vācaspati may have been acquainted with the well-known mythological account of Naciketas' encounter with the god of death in the *Kaṭha Upaniṣad*. This narrative is not located in an Asura mansion but in the house of Death in the next world. There, Death offers three boons to Naciketas, who finally chooses an answer to a question concerning the nature of the afterlife of humans. Death

13 See Maas 2014: 78–85.

14 *Pātañjalayogaśāstra* 3.51 (Āgāśe 1904: 169, lines 7–10): तत्र मधुमतीं भूमिं साक्षात्कुर्वतो ब्राह्मणस्य स्थानिनो देवाः सत्त्वविशुद्धिमनुपश्यन्तः स्थानैरुपनिमन्त्रयन्ते "भो इहास्यतामिह रम्यतां कमनीयोऽयं भोगः कमनीयेयं कन्या रसायनमिदं जरामृत्युं बाधते …" इति।

is initially reluctant to answer this question and tries to persuade Naciketas to relinquish this wish by offering various alternatives in the following way:

> [24]And if you would think this an equal wish – You may choose wealth together with a long life; Achieve prominence, Naciketas, in this wide world; And I will make you enjoy your desires at will. [25]You may ask freely for all those desires, Hard to obtain in this mortal world; Look at these lovely girls, with chariots and lutes, girls of this sort are unobtainable by men.[15]

This passage from the *Kaṭha Upaniṣad* shares with Vācaspati's explanation of *Pātañjalayogaśāstra* 4.1 the motifs of longevity and sexual pleasures in a different realm of the cosmos as an alternative to a spiritual or philosophical aspiration. Whether or not the *Kaṭha Upaniṣad* actually may have influenced Vācaspati remains, however, an open question.

In any case, Vācaspati's explanation of *rasāyana* does not fully elucidate its base text, partly because Vācaspati's reference to Māṇḍavya remains incomprehensible due to historical contingencies and partly because Vācaspati did not have much to say on the specifics of *rasāyana* treatments in Asura mansions. Even on the basis of this limited information it is, however, possible to conclude that the commentator thought of *rasāyana* as a magically potent herbal elixir of life. This elixir is unavailable for humans under normal conditions. In this respect, Vācaspati follows his base text, i.e., *Pātañjalayogaśāstra* 4.1, closely.

2. BHOJA'S *RĀJAMĀRTAṆḌA* ON *RASĀYANA*

Approximately one-hundred years after Vācaspati, i.e., around 1040 CE,[16] king Bhoja of Mālava composed a commentary exclusively on the *sūtra* part of the *Pātañjalayogaśāstra* with the title *Rājamārtaṇḍa*.[17] This commentary is indebted to the *bhāṣya* part of the *Pātañjalayogaśāstra* to such a degree that it can hardly count as an independent work in its own right. In some instances, however, Bhoja's commentary expands the *bhāṣya*. This is also the case in the *Rājamārtaṇḍa* on *Yoga Sūtra* 4.1. There, Bhoja provides the following explanations how "herbs" (*oṣadhi*) function as a source of superpowers:

15 *Kaṭha Upaniṣad* 1.24 f. (ed. and tr. Olivelle 1998: 378 f.): एतत्तुल्यं यदि मन्यसे वरं वृणीष्व वित्तं चिरजीविकां च। महाभूमौ नचिकेतस्त्वमेधि कामानां त्वा कामभाजं करोमि॥ २४॥ ये ये कामा दुर्लभा मर्त्यलोके सर्वान्कामांश्छन्दतः प्रार्थयस्व। इमा रामाः सरथाः सतूर्या न हीदृशा लम्भनीया मनुष्यैः।

16 For Bhoja's date, see Pingree 1970–1994: A4, 337.

17 Bhoja did not consider the *sūtra* part of the *Pātañjalayogaśāstra* a work in its own right, see Maas 2013: 61.

> Superpowers from herbs" are those caused by the application of *rasāyana* and so on that involves mercury and so on.[18]

In this succinct explanation, Bhoja explains the word "herbs" in agreement with the *bhāṣya* as a reference to *rasāyana*. Bhoja replaces, however, Patañjali's obscure reference to the mansions of Asuras with a reference to mercury (*pārada*). This explanation is at odds with *sūtra* 4.1, because mercury cannot count as an herbal ingredient. Bhoja's explanation is nevertheless informative. It indicates that he, in contrast to Patañjali and Vācaspati, identified *rasāyana* as an alchemical practice.[19] In this regard, his commentary is committed to the intellectual climate of his own time rather than to that of the composition of the *Pātañjalayogaśāstra*, from which no literary references to alchemical practices in South Asia exist.[20]

3. ŚAṄKARA'S *PĀTAÑJALAYOGAŚĀSTRAVIVARAṆA* ON *RASĀYANA*

Probably the earliest, but definitely the most informative commentary on the *Pātañjalayogaśāstra*, the *Pātañjalayogaśāstravivaraṇa* (8th century?) by a certain Śaṅkara, provides a further interesting explanation of the passage under discussion:[21]

> [Superpowers generated] "by herbs" [means] from *rasāyana* in the mansions of Asuras by eating [plants] like *soma* and *āmalaka*, without abandoning a previous body.[22]

Śaṅkara did not consider it necessary to specify which superpower(s) *rasāyana* brings about, because he apparently took this knowledge for granted among

18 *Rājamārtaṇḍa* on *Yoga Sūtra* 4.1 (Āgāśe 1904: second pagination 48, l. 8): औषधिसिद्धयो यथा –पारदादिरसायनाद्युपयोगात्।

19 Mercury plays a central role in alchemical practices. The earliest known instance of an ayurvedic recipe containing mercury occurs in the ca. seventh-century *Aṣṭāṅgahṛdayasaṃhitā* and *Aṣṭāṅgasaṃgraha*, but mercury never plays a central role in medical *rasāyana*; see Dagmar Wujastyk 2017: 20 (in this volume).

20 The oldest alchemical work that has survived to the present date is the *Rasahṛdayatantra*, which, according to David G. White (1996: 146), can probably be dated to the tenth or eleventh century.

21 Whether Śaṅkara, the author of the *Pātañjalayogaśāstravivaraṇa*, is identical with the author of the *Brahmasūtrabhāṣya* with the same name is still under scholarly discussion. It is, however, probable that the *Vivaraṇa* is an early commentary on the *Pātañjalayogaśāstra*, because it comments upon an archaic text version of the *Pātañjalayogaśāstra*, and because the seventh-century philosopher "Kumārila is the latest author explicitly referred to" in the *Vivaraṇa* (Halbfass 1991: 221).

22 *Vivaraṇa* 4.1 (Rama Sastri and Krishnamurthi Sastri 1952: 317 f.): ओषधिभिरसुरभवनेषु रसायनेन सोमामलकादिभक्षणेन पूर्वदेहानपनयेनैव।

his readers. He confined himself to stating that the acquisition of superpowers from herbs does not require abandoning a previous body. In this regard, *rasāyana*-induced paranormal powers differ from innate superpowers, which result from a rebirth as a specifically powerful divine or semi-divine being, which obviously presupposes that a previous body was abandoned. In addition, Śaṅkara mentions that *rasāyana* involves the consumption of two plants, i.e., *soma* and *āmalaka*. This specification indicates that Śaṅkara interpreted the word *rasāyana* in *Pātañjalayogaśāstra* 4.1 as a reference to Ayurveda, since the two plants *soma* and *āmalaka* are frequently mentioned as ingredients of *rasāyana* treatments already in the early ayurvedic Sanskrit compendia.

As will be shown in more detail below, Śaṅkara's view, according to which ayurvedic *rasāyana* is a means to paranormal abilities, agrees with the evidence from the *rasāyana* sections in the compendia of Caraka and Suśruta. Quite obviously, Śaṅkara was well acquainted with the concept of ayurvedic *rasāyana* as it appears in earlier sources.[23] Although Śaṅkara was definitely a learned commentator, who was well acquainted with the different *śāstra*s that were current at his time, he had nothing to relate about the mansions of Asuras as the place of *rasāyana* treatment.[24]

AYURVEDIC *RASĀYANA* AND SUPERPOWERS

The *Carakasaṃhitā*, which was probably composed in the first century CE,[25] repeatedly mentions *āmalaka* in its account of *rasāyana* in *Cikitsāsthāna* 1. This plant is usually identified with the Indian gooseberry (*Emblica officinalis* Gaertn.). The *Suśrutasaṃhitā*, which may be dated to the second century CE,[26] contains a quite comprehensive account of the application of *rasāyana* treatments based on *soma*. Any identification of this plant is unclear and maybe impossible, because several unidentifiable plants were called *soma* in South Asian religions from the earliest times onwards.[27]

23 According to Dagmar Wujastyk (2017: 13, in this volume): "[l]ater medical works no longer describe the use of soma and divine herbs in *rasāyana* and generally describe less spectacular effects of treatment." Śaṅkara's reference to superpowers as a result of ayurvedic *rasāyana* based on *soma* and *āmalaka* indicates that the commentator was well acquainted with the *earlier* works of Ayurveda.

24 For more detail, see section 4, p. 79 below.

25 Meulenbeld 1999–2002: IA, 114 dates the *Carakasaṃhitā*, which has a quite diverse redactorial and transmissional history (on which see Maas 2010), to the time span of 100 BCE–200 CE. It appears, however, that a date in the middle of the first century is the best educated guess.

26 For different dates assigned to the *Suśrutasaṃhitā*, see Meulenbeld 1999–2002: IA, 342–44.

27 See Wezler 2001: 198.

The main benefit of ayurvedic *rasāyana* according to the *Carakasaṃhitā* and the *Suśrutasasaṃhitā* is the same as the one mentioned in *Pātañjalayogaśāstra* 3.51, namely the generation of longevity and anti-aging. In addition, the ancient compendia mention the generation of health, cognitive powers, virility, and superpowers as purposes of *rasāyana*.[28] Suśruta, for example, explicitly refers to eight superpowers (*aiśvarya*) that are generated in the course of a *rasāyana* treatment according to his *Cikitsāsthāna* 29.13.[29] The twelfth-century commentator Ḍalhana identifies these extraordinary capacities with the eight *aiśvarya*s mentioned in *Pātañjalayogaśāstra* 3.45 as resulting from yogic absorption. In an alternative gloss, Ḍalhana explains the word *aiśvarya* to refer to the set of eight paranormal capacities mentioned in *Carakasaṃhitā*, *Śārīrasthāna* 1.[30]

In the subsequent section of his work, Suśruta concluded his account of *rasāyana* involving the use of *soma* by stating that,

> [t]he visionary man who makes use of the king of plants, Soma, … truly knows all sacred knowledge, … . He moves like a god through the whole world, with infallible willpower.[31]

The application of a *soma*-related *rasāyana* leads to the extraordinary mental capacity of possessing all sacred knowledge and to the physical superpower to roam the whole world like a god with "infallible willpower." This effect of *rasāyana* is identical with the result of ascetic practices mentioned in *Pātañjalayogaśāstra* 4.1, namely "the superpower of reaching whatever one wants" (*saṃkalpasiddhi*).[32]

28 See Dagmar Wujastyk 2017: 7 f. (in this volume).

29 *Suśrutasaṃhitā*, *Cikitsāsthāna* 29.13 (Ācārya and Acharya 2003: 504, line 2, tr. Dominik Wujastyk 2003: 129): "Using these two [kinds of *soma*], man achieves eightfold lordship." तावुपयुज्याष्टगुणमैश्वर्यमवाप्य …।

30 [*Carakasaṃhitā*, *Śārīrasthāna* 1.140 a–141b] (*Nibandhasaṃgraha* on *Suśrutasaṃhitā*, *Cikitsāsthāna* 29.13 (Ācārya and Acharya 2003: 504ab): "Eightfold power" [means] minuteness, levitation, extension, irresistible will, greatness, sovereignty, mastery and the inevitable fulfillment of desires. This eightfold power may either be obtained by yoga or from a *rasāyana* involving *soma*. The *Carakasaṃhitā*, however, explains [the eightfold power] differently: "Entering the mind of other persons, knowledge of objects, acting according to one's will, vision, hearing, mindfulness, beauty and invisibility according to one's wish, this is the eightfold power, the capacity of yogis" (अष्टविधैश्वर्यं यथा — अणिमा लघिमा प्राप्ति प्राकाम्यं महिमा तथा। ईशित्वं च वशित्वं च तथा कामावसायिता इति, एतदष्टगुणमैश्वर्यं योगलभ्यमपि सोमरसायनाल्लभ्यते चरके पुनरन्यथोक्तम् — आवेशश्चेतसो ज्ञानमर्थानां छन्दतः क्रिया॥ दृष्टिः श्रोत्रं स्मृतिः कान्तिरिष्टतश्चाप्यदर्शनम्। इत्यष्टविधमाख्यातं योगिनां बलमैश्वरम्।)

31 *Suśrutasaṃhitā*, *Cikitsāsthāna* 29.14–19 (Ācārya and Acharya 2003: 504b, lines 9–20, tr. Dominik Wujastyk 2003: 130): ओषधीनां पतिं सोममुपयुज्य विचक्षणः। … निखिलान्वेदान्विन्दति तत्त्वतः। चरत्यमोघसङ्कल्पो देववच्चाखिलं जगत्॥ See also Dagmar Wujastyk 2017: 13 (in this volume).

32 See above, note 5.

The acquisition of paranormal powers by means of *rasāyana* is not only prominently mentioned in the *Suśrutasasaṃhitā*. It also occurs in two stanzas that are part of the *rasāyana* section of the *Carakasaṃhitā*. From there, the famous Ayurveda author Vāgbhaṭa incorporated the stanzas into his seventh-century *Aṣṭāṅgahṛdayasaṃhitā*.[33] The stanza also occurs in the *Aṣṭāṅgasaṃgraha, Uttarasthāna* 49.2.[34] In Caraka's compendium, this early and very prominent account of the effects of *rasāyana* has the following wording:

> दीर्घमायुः स्मृतिं मेधामारोग्यं तरुणं वयः।
> प्रभावर्णस्वरौदार्यं देहेन्द्रियबलं परम्॥७॥
> वाक्सिद्धिं प्रणतिं कान्तिं लभते ना रसायनात्।
> लाभोपायो हि शस्तानां रसादीनां रसायनम्॥८॥[35]

Most of the assets of *rasāyana* that Caraka mentioned in *Cikitsāsthāna* 1.1.7–8, i.e., mindfulness (*smṛti*), intelligence (*medhā*), health (*ārogya*), youthfulness (*taruṇaṃ vayas*), excellence of strength, complexion and voice (*prabhāvarṇasvaraudāryaṃ*) as well as respect (*praṇati*) and beauty (*kānti*), are desirable mental or physical qualities that almost entirely lack any paranormal connotation. The case is less clear for one of the last mentioned assets, i.e., "perfection of speech" (*vāksiddhi*), which may either consist in the ordinary human ability to speak in a perfect way, as for example, in a debate, or in the specifically yogic superpower of being able to determine the course of any future event by merely mentioning its outcome. Cakrapāṇidatta evidently interpreted *vāksiddhi* in the latter way when he provided the explanation that,

> "the superpower of speech" [means] whatever one says, necessarily comes about.[36]

The first-mentioned and most important result of *rasāyana*, i.e., a "long life," may or may not refer to a paranormal phenomenon, depending on the interpretation of the words *dīrgham āyus*. This expression may either refer to the fulfillment of the normal life expectancy, which according to Ayurveda is one hundred years, or it may refer to paranormal longevity. The account of *brāhmarasāyana* in the *Carakasaṃhitā* clearly indicates that Caraka at least in this special context had the second alternative in mind, when he related that several groups of ascetics

33 Meulenbeld 1999–2002: IA, 391–474.

34 For a list of further occurrences of the stanza in ayurvedic and alchemical literature, see Dagmar Wujastyk 2017: 6, n. 13 (in this volume).

35 *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.7–8 (Ācārya 1941: 376b).

36 *Āyurvedadīpikā* on *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.7 (Ācārya 1941: 376b): वाक्सिद्धिः यदुच्यते तदवश्यं भवतीति. See also Dagmar Wujastyk 2015: 57.

acquired an "immeasurably long life" (*amitāyus*) after rejuvenating their bodies by consuming a *rasāyana*.[37]

THE MEANING OF *RASĀYANA* IN AYURVEDA

The final two *pāda*s of the stanza *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.8 contain an etymological explanation of the word *rasāyana* that already in pre-modern South Asia was interpreted in various ways.[38] The different interpretations agree in taking the first word of stanza 8a *lābhopāya*, i.e., "a means to obtain", to be a paraphrase of the second part of the compound *rasāyana*, i.e., "way" (*ayana*). *Rasāyana* is thus a way or a means to obtain a *rasa*. The specific meaning of the semantically multivalent term *rasa* within the compound *rasāyana* is, however, unclear.[39] A clue to determining its meaning is the paraphrase of *rasa* as *śastānāṃ rasādīnāṃ* "the proclaimed *rasa* and so on." The usage of the word *ādi* "and so on" suggests that the word *rasa* in *rasāyana* is not a single item, but the first item in a list of several others.

Several pre-modern commentators identified these items in different ways. Aruṇadatta, for example, in his commentary on *Aṣṭāṅgahṛdayasaṃhitā*, *Uttarasthāna* 39.2, explained *rasādi* in the late twelfth century, i.e., more than a thousand years after Caraka and ca. six-hundred years after Dṛḍhabala's final redaction of the *Carakasaṃhitā*, as follows:[40]

> Because it is a means to obtain the best [bodily elements] chyle, blood and so on, it is called *rasāyana*.[41]

Aruṇadatta identified *rasa* in *rasāyana* with the initial item chyle of the well-known list of the seven bodily elements (*dhātu*) of (1) chyle (*rasa*), (2) blood, (3)

37 *Carakasaṃhitā*, *Cikitsāsthāna* 1.54–56 (Ācārya 1941: 378b): "The Vaikhānasas, the Vālakhilyas and also other great ascetics consumed this *rasāyana* and acquired an immeasurable life span. They gave up their old bodies and obtained an excellent young age, no longer sighed from exhaustion and weariness, were healthy and composed. These great ascetics, furnished with intelligence, mindfulness and power, practiced foremost asceticism and chastity for the sake of the highest state." (वैखानसा वालखिल्यास्तथा चान्ये तपोधनाः। रसायनमिदं प्राश्य बभूवुरमितायुषः॥ मुक्त्वा जीर्णं वपुश्चाग्र्यमवापुस्तरुणं वयः। वीततन्द्राक्लमश्वासा निरातङ्काः समाहिताः॥ मेधास्मृतिबलोपेताश्चिररात्रं तपोधनाः। ब्राह्मं तपो ब्रह्मचर्यं चेरुश्चात्यन्तनिष्ठया॥) For further references to supranormal longevity in ayurvedic accounts of *rasāyana*, see Dagmar Wujastyk 2017: 8 (in this volume).

38 For a summary of modern scholarly interpretations of the term *rasāyana*, see Dagmar Wujastyk 2017: 1, (in this volume).

39 Gode, Karve, et al. (1957–1959: 1331) records thirty-three different meanings for the noun *rasa*.

40 See Meulenbeld 1999–2002: 1A, 663.

41 *Sarvāṅgasundarā* on *Aṣṭāṅgahṛdayasaṃhitā*, *Uttarasthāna* 39.2 (Kuṃṭe, Navare, and Parādkar 1939: 923a): यस्मात् श्रेष्ठाणां रसरुधिरादीनां यो लाभोपायः, स रसायनमुच्यते।

flesh, (4) fat, (5) bones, (6) marrow, and (7) semen. This list figures prominently in ayurvedic sources from early medieval times onwards, i.e., after Vāgbhaṭa had composed his *Aṣṭāṅgahṛdayasaṃhitā* in the seventh century.[42] In the earlier compendia of Caraka and Suśruta, various lists of elements figure side by side in different medical contexts. The *Carakasaṃhitā*, for example, contains twelve different lists of bodily constituents that are expressively labeled as *dhātu*, only two of which are headed by *rasa*.[43] Since a standardized list of bodily elements did not yet exist at Carakas's time, Aruṇadatta's etymological explanation of *rasāyana* cannot be accepted as a historically plausible interpretation of the stanza *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.8. Rather than being a historical etymology of *rasāyana*, the explanation of *rasādi* as meaning "chyle and so on" is a creative innovation for promoting the integration of *rasāyana* into Ayurveda.[44]

A further problematic aspect of the identification of *rasa* in *rasāyana* with "bodily elements" is that it does not fit well with the attribute *śasta* "proclaimed" in the expression *śastānāṃ rasādīnāṃ* of *pāda* 8ab. How should *rasāyana* be a means to obtain "proclaimed" or "praised" bodily elements? To which act of proclamation or praise could the attribute *śasta* refer? Aruṇadatta, who was apparently aware of this semantic problem, evaded it by silently replacing the word *śasta* "proclaimed" from his base text with *śreṣṭha* "best" in his commentary. A similar strategy was applied by an unknown scribe of the *Aṣṭāṅgahṛdayasaṃhitā* who changed the original *śastānāṃ* to *saptānāṃ* "seven" in order to emphatically suggest a reference to *seven* bodily elements.[45]

42 Maas 2008: 142.

43 See Maas 2008: 136 f.

44 On the basis of his analysis of textual material from the *Suśrutasaṃhitā*, Hellwig (2008: 39) arrived at the conclusion that the commentator Ḍalhana also shows the tendency to integrate *rasāyana* into the standard set of ayurvedic remedies. In the same article, Hellwig also argued that in the *Carakasaṃhitā*, *rasāyana* is closely related to the classical theory of *dhātu*s. This argument is based on an analysis of two text passages. The first one is the above quoted passage *Cikitsāsthāna* 1.1.7–8, which Hellwig interprets according to Aruṇadatta's anachronistic explanation. The second passage is *Cikitsāsthāna* 1.2.3, which refers to the body parts muscle flesh (*māṃsa*), joints (*sandhi*), blood (*rakta*), fat (*medas*), marrow (*majjan*), semen (*śukra*) and strength (*ojas*) (but not *rasa*) that are not labeled as *dhātu*s. The passage also does not explicitly mention any invigorating effect of *rasāyana* on these bodily constituents. Therefore, *Cikitsāsthāna* 1.2.3 cannot be quoted in support of Aruṇadatta's interpretation of the word *rasādi* in *Cikitsāsthāna* 1.1.8, according to which *rasādi* refers to the classical *dhātu*-theory of seven bodily constituents headed by *rasa*. Rather than reflecting a close conceptual connection between *rasāyana* and Ayurveda, *Cikitsāsthāna* 1.2.3 mirrors the process of integration of *rasāyana* into Ayurveda that at the time of the composition of the *Carakasaṃhitā* may still have been a comparatively recent process.

45 See note 4 in *Aṣṭāṅgahṛdayasaṃhitā*, *Uttarasthāna* 39.2 (Kuṃṭe, Navare, and Parādkar 1939: 923a).

Ḍalhana, the commentator of the *Suśrutasaṃhitā*, who flourished approximately at the same time as Aruṇadatta, provided various etymological explanations of the term *rasāyana* in his *Nibandhasaṅgraha*:

> *Rasāyana* [means] the progress, i.e., the thriving, of the bodily elements chyle and so on. Alternatively, *rasāyana* is the way, i.e., the means, for the medication-based obtainment of the tastes (*rasa*), potencies, post digestive flavors, and specific actions that lead to the firmness of power and manliness throughout the life span and prolong a youthful age. Or, it means their increase, stabilization, or generation.[46]

Ḍalhana's first explanation of the term *rasāyana* is basically identical with the etymological analysis of the term by Aruṇadatta, whereas his second explanation draws upon a different list of terms that is also headed by the word *rasa*. This is the general pharmacological concept of Ayurveda, according to which the tastes (*rasa*), potency, post digestive flavors, and specific actions of food (and medicinal substances) influence the ratio of humours or *doṣa*s in the human body. A suitable ratio of humours leads to health, an unsuitable one to disease.

If Ḍalhana's alternative explanation were correct, i.e., if the pharmacological concepts of Ayurveda were the key to unravelling Caraka's etymological analysis of the word *rasāyana*, then *rasa* in *rasāyana* would mean "tastes." Ḍalhana's explanation is, however, unconvincing, not only because here again the attribute *śasta* "proclaimed" would not fit, but also because his interpretation does not refer to any peculiar characteristic of *rasāyana*. The pharmacological concept of tastes (*rasa*), potency, etc., are of fundamental importance in several branches of Ayurveda, especially in internal medicine (*kāyacikitsā*).[47] They do not receive any particular attention in the context of *rasāyana*. Therefore, Ḍalhana's attempt to relate the ayurvedic pharmacology to the special effects of *rasāyana*, i.e., to longevity, empowerment, etc. is forced. Apparently, the commentator was as much at a loss to provide a convincing etymological analysis of the term *rasāyana* as his colleague Aruṇadatta. In order to solve their explanatory problem, both commentators took refuge to *ad hoc* explanations by drawing upon well-known technical ayurvedic meanings of the word *rasa*.

46 *Nibandhasaṅgraha* on *Suśrutasaṃhitā, Cikitsāsthāna* 27.1 (Ācārya and Acharya 2003: 498b): रसादिधातूनामयनमाप्यायनम्, अथवा भेषजाश्रितानां रसवीर्यविपाकप्रभावाणामायुर्बलवीर्यदार्ढ्यानां वयःस्थैर्यकराणामयनं लाभोपाय रसायनम्; वर्धकं स्थापकमप्राप्तप्रापकं वेत्यर्थः।

47 *Carakasaṃhitā, Vimānasthāna* 1.1.4–8 provides a general outline of the relationship between tastes (*rasa*) and humours (*doṣa*).

In contrast to this approach, the eleventh-century medical author and commentator Cakrapāṇidatta provided a surprisingly elegant and simple interpretation of *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.8 that is much more convincing than the solutions presented so far. Cakrapāṇidatta simply explains that,

> by using the expression "*rasa* and so on" [Caraka] refers also to "mindfulness and so on."[48]

This brief comment reveals that the commentator understood the compound *rasādi* as a reference to the listed assets of *rasāyana*. The first part of the compound *rasādi*, i.e., *rasa*, refers to the first item in the list of assets, i.e., to *dīrgham āyuḥ* "a long life." Accordingly, Cakrapāṇidatta did not take the word *rasa* in *rasāyana* to designate any technical ayurvedic term, but the "principal" of the listed items, or, in other words, the most important result of *rasāyana*, i.e., "a long life." This understanding is historically unproblematic and in agreement with the well-recorded meaning of the word *rasa* as "the essence, best part" of something.[49] Moreover, it solves the previously mentioned problem of the meaning of the attribute *śasta* "proclaimed." By interpreting *rasa* to mean the "principle asset" of *rasāyana*, the referent of *śasta* does not have to be sought anywhere in the *Carakasaṃhitā* but in the stanzas *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.7a–8b that list the desirable assets of *rasāyana*.

On the basis of this interpretation, the two stanzas *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.7–8 can be translated as follows:

> Through *rasāyana* a man obtains a long life, mindfulness, intelligence, health, youthfulness, excellence of strength, complexion and voice, the greatest capacity of body and senses, perfection of speech, respect and beauty. *Rasāyana* is well-known to be the means for obtaining the proclaimed "principle asset" (*rasa* i.e., longevity) and so on.

Taking seriously into account the elegance of Cakrapāṇidatta's explanation as well as the forced nature of the previously-discussed interpretations of the word *rasādi*, it is highly unlikely that word *rasa* in *rasāyana* originally, i.e., before the time of Aruṇadatta, meant "chyle" (*rasa*) as the initial item listed in the collocation of bodily elements or "taste" (*rasa*) as an important ayurvedic pharmacological concept before Ḍalhana. Already Caraka was unable to explain the word *rasāyana* by providing convenient synonyms for the two word stems of which the compound seems to consist. Apparently, the word *rasāyana* defies any easy

48 *Āyurvedadīpikā* on *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.8 (Ācārya 1941: 376b): रसादिग्रहणेन स्मृत्यादयोऽपि गृह्यन्ते।

49 See Gode, Karve, et al. 1957–1959: 1331a, s.v. *rasa*.

etymological explanation. It may even be possible that *rasāyana* originally was not at all a compound consisting of *rasa-* and *-ayana*, but a cultural loanword into Sanskrit, the original source of which remains to be determined.

4. THE MANSIONS OF THE ASURAS

PATAÑJALI'S REFERENCE TO ASURA MANSIONS in *Pātañjalayogaśāstra* 4.1 was apparently enigmatic for his pre-modern commentators, and it continues to be obscure for modern academic scholars. Albrecht Wezler, however, saw Patañjali's reference to Asura mansions as a result of "mythological logic:"

> The idea that the elixir-of-life is available "in their palaces" [i.e., in the palaces of Asuras] may be derived from their alleged capacity for outwitting "the gods by recuperating and even reviving themselves after being wounded or slain by the gods" (see E. Washburn Hopkins, *Epic Mythology*, Strasburg, 1915, 49; and J. Bruce Long, "Life Out of Death," in *Hinduism*, ed. Bardwell L. Smith, Leiden 1952, 184). But it is but mythologically logical that the mansions of the demons are regarded as the place where human beings can get one of the elixirs-of-life, because the true ambrosia (produced among other goods by the churning of the milk ocean) was appropriated by the gods.[50]

Wezler's guess that the Asuras' possession of *rasāyaṇa* may result from a mythological demand for a balance of powers between the gods and the Asuras, the so-called anti-gods, appears plausible. Nevertheless, it is quite surprising that not a single literary account of *rasāyana* in Asura mansions besides the *Pātañjalayogaśāstra* and its commentaries appears to have survived in pre-modern South Asian literature. However, references to an Asura mansion that do not mention *rasāyana* are not entirely absent. In contradiction to what may be expected, these references do not occur in brahmanical Sanskrit sources but in Buddhist literature. There, the Asuras inhabit a region of the cosmos located at the bottom of mount Sineru (Skt. Meru) that is called *asurabhavana*. This region became the habitat of the Asuras after the god Indra banned them from mount Sineru on account of their excessive consumption of alcoholic beverages (*sura*).[51]

Asuras and their mansions also figure in Jain cosmology, where they belong to a class of gods called *bhavanavāsin* (i.e., those who live in palaces).[52] In view of these two quite prominent conceptions of Asuras and their palaces, it may appear tempting to speculate that Patañjali used the term *asurabhavana* in *Pātañjalayogaśāstra* 4.1 with a Buddhist or Jain cosmological concept in mind. However,

50 Wezler 2001: 217, note 105.

51 Malalasekara 1960: v. 1, 1002, s.v. *Tāvatiṃsa*.

52 See Kirfel 1920: 261.

neither the Jain literature, nor the Buddhist Pāli canon contains, as far as I can see, a single reference to *rasāyana*-practicing Asuras. Moreover, the grammatical number of the word *asurabhavana* in *Pātañjalayogaśāstra* 4.1 is plural, which indicates that Patañjali was rather thinking of a plurality of mansions than of a single cosmological region as the typical place for the usage of *rasāyana*. And finally, Patañjali's own comprehensive account of the different regions of the universe in *Pātañjalayogaśāstra* 3.26 does not contain a region called *asurabhavana*, which makes it at least doubtful whether Patañjali was at all acquainted with a cosmological region with this name.

It therefore appears that Patañjali's conceptions of *rasāyana* and its application in different realms of the cosmos is indeterminable at the present stage of research.[53]

5. CONCLUSION

In the *PĀTAÑJALAYOGAŚĀSTRA*, *rasāyana* is mentioned as an exemplification of the concept that herbs may generate superpowers. *Rasāyana* is thus an unspecified elixir of life prepared from herbal ingredients. In order to specify what *rasāyana* actually is about, Patañjali referred his readers to the application of this elixir in special buildings called "the mansions of Asuras" (*asurabhavana*). This reference is obscure. Already Patañjali's medieval commentators were apparently at a loss to explain the role of Asuras' buildings for *rasāyana*. Śaṅkara, the author of the most informative commentary on the *Pātañjalayogaśāstra*, evaded the problem and supplemented Patañjali's sparse account by relating it to Ayurveda. He took, however, a road that Patañjali had avoided, although the yoga author was clearly acquainted with an early form of Ayurveda.[54] A closer look at ayurvedic *rasāyana* reveals that Śaṅkara's explanation was nevertheless obvious, since obtaining longevity and other superpowers definitely emerges as an important goal of early ayurvedic *rasāyana* accounts involving herbal ingredients. However, *rasāyana* is problematic also in its early ayurvedic coinage. Although this discipline features it as one of the eight established branches of Ayurveda, *rasāyana* appears to be based on theoretical foundations that are at odds with mainstream classical Ayurveda. This tension was clearly felt among pre-modern

53 Dominik Wujastyk suggested a possible connection between a hut (*kuṭi*) built for ayurvedic *rasāyana* treatments and Patañjali's *asurabhavana*s (Dominik Wujastyk 2014). In view of the semantic difference between the words *kuṭi* "hut" and *bhavana* "mansion, palace" and due to the lack of any reference to Asuras in ayurvedic *rasāyana* sources, I doubt that Patañjali referred to ayurvedic *rasāyana* when he used the word *asurabhavana*.

54 See Maas 2008: 152 f.

specialists at least until the twelfth century, when the commentators Ḍalhana and Aruṇadatta tried to fully integrate *rasāyana* into Ayurveda by establishing a relationship between the theories of bodily elements and tastes and the discipline of *rasāyana*. This integration is reflected in the widely accepted etymological derivation of *rasāyana* as a way (*ayana*) of invigorating etymology is based on an anachronistic interpretation of the ancient definition of *rasāyana* in *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.7–8. A historically valid etymological derivation of the word *rasāyana*, which possibly is a cultural loanword into Sanskrit, remains to be established.

REFERENCES

Ācārya, Yādavaśarman Trivikrama, ed. (1941). महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृडबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता = *The Charakasaṃhitā by Agniveśa Revised by Charaka and Dṛidhabala with the Āyurveda-Dīpikā Commentary of Chakrapāṇidatta*. 3rd ed. Mumbayyāṃ: Nirnaya Sagara Press. URL: https://archive.org/details/Caraka1941 (on 1 Jan. 2018).

Ācārya, Yādavaśarman Trivikrama and Narayan Ram Acharya, eds. (2003). सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता...आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा...संशोधिता = *The Suśrutasaṃhitā of Suśruta with the Nibandhasaṅgrahā commentary of Śrī Dalhaṇāchārya and the Nyāyacandrikā Pañjikā of Śrī Gayadāschārya on Nīdanasthāna*. Chaukhamba Ayurvijnan Granthamala 42. Varanasi: Chaukhamba Surbharati Prakashan. Reprint of Bombay 1938 edition.

Āgāśe, Ve. Śā. Rā. Rā. Kāśīnātha Śāstrī, ed. (1904). वाचस्पतिमिश्रविरचितटीकासंवलितव्यासभाष्यसमेतानि पातञ्जलयोगसूत्राणि तथा भोजदेवविरचितराजमार्तण्डाभिधवृत्तिसमेतानि पातञ्जलयोगसूत्राणि. Ānandāśramasaṃskṛtagranthāvaliḥ 47. Puṇyākhyapattana: Ānandāśramamudraṇālaya. URL: https://archive.org/details/YogasutraAgashe (on 3 Mar. 2018).

Gode, P. K., C. G. Karve, et al., eds. (1957–1959). *Revised and Enlarged Edition of Prin. V. S. Apte's the Practical Sanskrit-English Dictionary*. 3 vols. Poona: Prasad Prakashan. URL: https://archive.org/details/ThePracticalSanskritEnglishDictionaryPart1P.K.Gode (on 20 Oct. 2017). See also pt. II and pt. III.

Halbfass, Wilhelm (1991). "Śaṅkara, the Yoga of Patañjali, and the So-called Yogasūtrabhāṣyavivaraṇa". In: *Tradition and Reflection, Explorations in Indian Thought*. 1st ed. Albany, N.Y.: SUNY Press. Chap. 6, pp. 205–242. ISBN: 0791403629.

Hellwig, Oliver (2008). "*Rasāyana* und die āyurvedische Krankheitskunde". In: *Traditional South Asian Medicine* 8, pp. 32–64. URL: https://www.academia.edu/35623137/Rasayana_und_die_ayurvedische_Krankheitskunde (on 3 Mar. 2018).

Jacobsen, Knut A. (2012). *Yoga Powers: Extraordinary Capacities Attained through Meditation and Concentration*. Brill's Indological Library 37. Leiden: Brill. ISBN: 9789004212145.

Kirfel, Willibald (1920). *Die Kosmographie der Inder. Nach Quellen dargestellt*. Bonn und Leipzig: Schröder.

Kuṃṭe, Aṇṇā Moreśvara, Kṛṣṇaśāstrī Navare, and Hariśāstrī Parādkar, eds. (1939). श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमदरुणदत्तविरचितया 'सर्वाङ्गसुन्दर्याख्या'

व्याख्यया हेमाद्रिप्रणीतया 'आयुर्वेदरसायनाह्वया' टीकया च समुल्लसितम् = *The Astāngahṛidaya. A Compendium of the Ayurvedic System Composed by Vāgbhaṭa with the Commentaries (Sarvāngasundarā) of Arunadatta and (Āyurvedarasāyana) of Hemādri*. 6th ed. Bombay: Nirnaya Sagara Press. URL: https://archive.org/details/Ashtanga.Hridaya.of.Vagbhata (on 4 June 2017).

Maas, Philipp A. (2008). "The Concepts of the Human Body and Disease in Classical Yoga and Āyurveda". In: *Wiener Zeitschrift für die Kunde Südasiens = Vienna Journal of South Asian Studies* 51, pp. 125–62. DOI: 10.1553/wzkslis123.

— (2010). "On What Became of the Carakasaṃhitā After Dṛḍhabala's Revision". In: *eJournal of Indian Medicine* 3, pp. 1–22. URL: https://ugp.rug.nl/eJIM/article/view/24728 (on 3 Mar. 2018).

— (2013). "A Concise Historiography of Classical Yoga Philosophy". In: *Historiography and Periodization of Indian Philosophy*. Ed. by Eli Franco. Publications of the De Nobili Research Library 37. Vienna: Sammlung de Nobili, pp. 53–90. URL: http://www.academia.edu/3520571/ (on 27 May 2016).

— (2014). "Der Yogi und sein Heilsweg im Yoga des Patañjali". In: *Wege zum Heil(igen)? Sakralität und Sakralisierung in hinduistischen Traditionen*. Ed. by Karin Steiner. Wiesbaden: Harrassowitz, pp. 65–89. ISBN: 0195124359. URL: https://www.academia.edu/7054657/ (on 3 Mar. 2018).

Malalasekara, G. P. (1960). *A Dictionary of Pāli Proper Names*. 2 vols. Indian Texts Series. London: Luzac & Co. URL: https://archive.org/details/PaliProperNamesVolIADh (on 27 Feb. 2018). Vol. 2: https://archive.org/details/PaliProperNamesVolIINH.

Meulenbeld, Gerrit Jan (1999–2002). *A History of Indian Medical Literature*. 5 vols. Groningen: E. Forsten. ISBN: 9069801248.

Olivelle, Patrick (1998). *The Early Upaniṣads. Annotated Text and Translation*. South Asia Research. New York, Oxford: Oxford University Press. ISBN: 9780195124354.

Pingree, David E. (1970–1994). *A Census of the Exact Sciences in Sanskrit*. 5 vols. Philadelphia: American Philosophical Society. URL: https://archive.org/details/PingreeCESS (on 3 Mar. 2018).

Rama Sastri and S. R. Krishnamurthi Sastri, eds. (1952). पातञ्जलयोगसूत्रभाष्यविवरणम्। (शङ्करभगवत्पादप्रणीतम्) = *Pātnjala[sic]-yogasūtra-bhāṣya Vivaraṇam of Śaṅkara-Bhagavatpāda. Critically Edited with Introduction*. Madras Government Oriental Series 94. Madras: Government Oriental Manuscripts Library. URL: https://archive.org/details/Patanjala-yogasutra-bhasyaVivaranamOfSankara-bhagavatpada (on 20 Oct. 2017).

Shee, Monika (1986). *Tapas und tapasvin in den erzählenden Partien des Mahābhārata*. German. Studien zur Indologie und Iranistik Dissertationen 1. Reinbek: I. Wezler Verlag für Orientalische Fachpublikationen.

Sukthankar, Sitaram Vishnu, Shripad Krishna Belvalkar, et al., eds. (1933–1959). *The Mahābhārata*. 19 vols. Poona: Bhandarkar Oriental Research Institute.

Utgikar, N. B. (1923). "The Story of the Ṛṣi Aṇī-Māṇḍavya in its Sanskrit and Buddhistic Sources". In: *Proceedings and Transaction of the Second Oriental Conference Calcutta January 28th to February 1st, 1922*. Calcutta: Calcutta University, pp. 221–38. URL: https://archive.org/details/ProceedingsAndTransactionsOfTheSecondOrientalConference (on 3 Mar. 2018).

Wezler, Albrecht (1997). "The Story of Aṇī-Māṇḍavya as Told in the Mahābhārata: Its Significance for Indian Legal and Religious History". In: *Beyond Orientalism. The Work of Wilhelm Halbfass and its Impact on Indian and Cross-Cultural Studies*. Ed. by E. Franco and K. Preisendanz. Poznań Studies in the Philosophy of Sciences and the Humanities 59. Amsterdam: Brill Rodopi, pp. 533–55. ISBN: 9789042002470.

— (2001). "'Psychedelic' Drugs as Means to Mystical Experience: Aldous Huxley Versus Indian 'Reality'". In: *Aldous Huxley Between East and West*. Ed. by C. C. Barfoot. Textxet: Studies in Comparative Literature 37. Amsterdam: Rodopi, pp. 199–220. ISBN: 9789042013476.

White, David Gordon (1996). *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago: University of Chicago Press. ISBN: 0226894975.

Wujastyk, Dagmar (2015). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: *AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Capitoli per una Storia dell'Alchimia nell'Antica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino* XXXVII, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 16 Aug. 2017).

— (2017). "Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature". In: *History of Science in South Asia* 5.2, pp. 1–36. DOI: 10.18732/hssa.v5i2.26.

Wujastyk, Dominik (2003). *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. 3rd ed. Penguin Classics. London, New York, etc.: Penguin Group. ISBN: 0140448241.

— (July 9, 2014). *Kuṭipraveśam rasāyanam*. Cikitsā blog. URL: https://cikitsa.blogspot.ca/2014/07/kutipravesam-rasayanam.html (on 23 Dec. 2017).

Please write to ⟨wujastyk@ualberta.ca⟩ to file bugs/problem reports, feature requests and to get involved.
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Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia

Edited by Dagmar Wujastyk, Suzanne Newcombe, and Christèle Barois

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Yogis, Ayurveda and Kayakalpa – The Rejuvenation of Pandit Malaviya

Suzanne Newcombe

Inform based a the London School of Economics and Political Science, and the Open University

This article considers a significant incident of rejuvenation therapy which was advertised as *kāyakalpa* (body transformation or rejuvenation) in 1938. Although widely publicised at the time, it has largely been occluded from the narratives of yoga and Ayurveda in the second half of the twentieth century. This article will argue that, despite this cultural amnesia, the impact of this event may have still been influential in shifting the presentation of Ayurveda in the post-war period. The rejuvenation of Pandit Malaviya presented the figure of the yogi as spectacular healer and rejuvenator, popularly and visibly uniting yoga with ayurvedic traditions and the advancement of the Indian nation. Moreover, the emphasis on the methods of rejuvenation can be seen in retrospect as the beginning of a shift in public discussions around the value of Ayurveda. In the late colonial period, public discussions on indigenous medicine tended to focus on comparing methods of diagnosis and treatment between Ayurveda and "Western" biomedicine. In the second half of the twentieth century, ayurvedic methods of promoting health and longevity were given greater prominence in public presentations of Ayurveda, particularly in the English language. The 1938 rejuvenation of Pandit Malaviya can be seen as a pivot point in this narrative of transformation.

Today a close association between Ayurveda and yoga seems axiomatic. Swami Ramdev is perhaps the best-known face of this association, promoting his own brand of "Patañjali Ayur-ved" pharmaceuticals (established in 2006) with *swadeshi* authenticity.[1] Ramdev's line of Patañjali products, in which ayurvedic pharmaceuticals hold a prominent place, is particularly successful

1 Newcombe (forthcoming). *Swadeshi* refers to Indian-made or produced materials and the term was closely associated with the non-violent agitation for Indian self-rule lead by Gandhi. Swami Ramdev more specifically uses this association to protest the power of neoliberal, global capitalist firms on the Indian economy.

financially and has been called "India's fastest-growing consumer products brand".[2] Prior to Ramdev, a close association between yoga and Ayurveda has also been promoted by the Maharishi Mahesh Yogi (1918–2008) as "Maharishi Ayur-Ved" from the late 1970s onward. Sri Sri Ravi Shankar (b. 1956) more recently introduced a line of "Sri Sri Ayurveda/Sri Sri Tattva" products in 2003, a trend being echoed by a number of less well known guru-led organisations.[3] Maya Warrier has noted in the early twenty-first century the "mushrooming of ayurvedic luxury resorts, spas and retreats across many of India's tourist destinations" which offer "expensive 'relaxation' and 'rejuvenation' therapy, yoga and meditation sessions, lifestyle advice, as well as beauty treatments, to affluent clients, mostly (though not exclusively) from overseas."[4] Contemporary Indian university syllabuses for the Bachelors in Ayurvedic Medicine and Surgery (BAMS) now require graduates to have a basic understanding of Patañjali's formulation of yoga as well as therapeutic applications of *āsana* and *prāṇāyāma*.[5]

Presentations within a tradition have distinct shifts, as well as gradual changes through time. Malaviya's rejuvenation treatment marks one such point of change in the public presentation of the ayurvedic tradition. I will argue that, when Pandit Malaviya turned to a wandering sadhu for an intense rejuvenation treatment, it can be understood as part of a growing trend towards exploring and promoting the potentials of indigenous healing systems. But it can also be seen as a nodal point for a change in association between yogis, yoga and ayurvedic medicine. Before detailing Malaviya's "health cure" and its impact on twentieth century associations between yoga and Ayurveda, the relative disassociation between yoga, yogis and Ayurveda in the first quarter of the twentieth century needs to be established.

A close association between yoga, yogis and Ayurveda is not prevalent in the known pre-modern ayurvedic record. Texts in the ayurvedic canon do not

2 Patañjali company turnover for 2015–2016 was reported to be in the region of USD $750 million, and projections for subsequent years even higher (India Infoline News Service 2016).

3 For more on Maharishi Ayur-Ved see the collection of chapters by Humes, Jeannotat and Newcombe in Dagmar Wujastyk and Smith 2008 and for Sri Sri Ravi Shankar's Art of Living Foundation, see Jacobs 2015.

4 Warrier 2011: 86. A shift previously observed by Zimmermann (1992) and Zysk (2001).

5 Central Council for Indian Medicine (2014, 2017). In contemporary BAMS programmes yoga is sometimes combined with the specifically ayurvedic recommendations for self-care and community health, e.g., "Swasthavritta & Yoga," and sometimes taught separately as an independent topic of Yoga. These current associations have also been clarified through conversations with Kalyan Gans, a student in the Jamnagar Ayurvedic University BAMS programme. For changes to ayurvedic education in modern India see also Langford 2002.

generally refer to the practices of yoga and meditation as part of their therapeutic framework before the twentieth century.[6] Kenneth Zysk has concluded that teachers and practitioners of Ayurveda continued to maintain "the relative integrity of their discipline by avoiding involvement with Yoga and other Hindu religious systems."[7] Jason Birch has recently done a survey of texts which can be considered part of the *haṭhayoga* canon. He concludes that as far as frameworks of health and healing are evident in the *haṭhayoga* manuscripts,

> yogins resorted to a more general knowledge of healing disease, which is found in earlier Tantras and Brahmanical texts, without adopting in any significant way teachings from classical Ayurveda. In some cases, it is apparent that yogins developed distinctly yogic modes of curing diseases.[8]

It appears that until very recently, the necessity of a yogi dealing with the physical body while aspiring towards *mokṣa* created specific forms of self-therapy amongst the ascetic community; in contrast, the ayurvedic tradition focused largely on a physician-led model of health and healing.

Yet there are also intriguing traces of entanglement. Some texts, i.e. the *Satkarmasaṅgraha* (c. 18th century) and the *Āyurvedasūtra* (c. 16th century), show specific and interesting points of dialogue between ayurvedic *vaidya*s (physicians) and yogic *sādhaka*s (practitioners/aspirants).[9] Another interesting text identified recently is the *Dharmaputrikā* (c. 10–11th century Nepal) which suggests a greater integration of ancient classical medicine and yogic practices at an early date than has previously been found. In particular, the *Dharmaputrikā* has a chapter named *yogacikitsā*, i.e., "therapy in the context of yoga".[10] Other texts that may better help scholars trace the history of entangled healing traditions in South Asia are likely to emerge in the coming decades. But to date, scholarly consensus holds that Ayurveda and yogic traditions are better characterised as distinctive traditions which have some shared areas of interest.

However, from the early twentieth century onwards, there are increasing overlaps between the yogic and ayurvedic traditions of conceptualising the body and healing in the textual sources. This appears to be particularly relevant when thinking about how to imagine the body, with some attempts to synthesise and

6 The *Carakasaṃhitā* does contain an interesting explanation of yoga as both spiritual liberation and the means for attaining it. However, this section is not directly related to the application of treatments for either specific complaints or increasing longevity, see Dominik Wujastyk 2011 for details on this very interesting passage.

7 Zysk 1993: 213.

8 Birch 2018.

9 See Birch 2018 and Slatoff 2017.

10 See Barois forthcoming.

visualise chakras from the yogic traditions into an ayurvedic understanding at the beginning of the twentieth century.[11] Health and healing through Indian "physical culture" techniques, which included the incorporation of postures (*āsana*) and breathing techniques (*prāṇāyāma*), was being developed in several different locations around the 1920s onwards.[12] But it is particularly difficult to gauge what India healers and *vaidya*s were doing in their daily practices until the later twentieth century.

The way medicine in this period has been understood has been framed more from the historical record of extant, printed documents, rather than through descriptions from indigenous practitioners themselves on the nature of their activities. Rachel Berger explains the situation at the turn of the twentieth century as found in official documents and most Anglophone discourses: "The experience of medical practitioners was marginalised and alienated from the greater discourse of a mythical – and fallen – ancient medical past, while pre-colonial practices and institutions were retained and reframed to fit the new model of colonial medicine."[13] Colonial efforts to control and promote medical treatment in India have been well documented by medical historians. It is generally accepted that colonial framings of the body and its relation to race and nationality had profound impact on the formation of institutions and public debates.[14] The extent to which these efforts actually resulted in fundamental changes to the practice of indigenous *vaidyas* and other healers has begun to be explored, but it's hard to get a clear descriptive picture of medical practice from the extant historical sources.

Medical historians have begun to examine vernacular literature relating to the practice of medicine in nineteenth- and early twentieth-century India. Bengali, then Hindi translations of the canonical ayurvedic texts were produced and circulated amongst the literate populations. There are also a variety of journals, dictionaries and advertisements from the late colonial period. Berger characterizes the large variety of Hindi pamphlets produced in the early twentieth century as focusing on illness, remedy, and Ayurveda more generally. These would often incorporate eclectic and local cures alongside aphorisms (*śloka*) from Sanskrit works and can be identified into particular genres:

11 See Mukharji 2016: 205–25 and Haṃsasvarūpa Mahārāja 1903?) as well as Dominik Wujastyk 2009.

12 Joseph Alter has emphasised the development of yoga and naturopathy as health care systems in India through Gandhi's initiatives, see Alter 2004, 2005a,b, 2010, 2014. Singleton (2010) provides an excellent starting place for understanding the transformations of the international physical culture movement on the presentation of *āsana* in India. For a summary of the development of yoga in contemporary India, see also Newcombe 2017.

13 Berger 2008: 58.

14 See Ramasubban 1982; Arnold 1993; Harrison 1994; Hodges 2008; Berger 2013; and Mukharji 2016.

> The first is the product targeting the power (or lack thereof) of Indian men, often having to do with the sapping of his virility through disease. The second are the ads aimed for information about babies and the family, usually through books or through enriched medical products (or food substances). The third category advertised indigenous food products for a healthy nation.[15]

Of these categories, the material targeting the virility and sexual potency of Indian men has attracted the most historical attention and has the most overlap with traditional *rasāyana* formulations.[16] A systematic study of the extent to which *rasāyana* techniques and formula were promoted in the vernacular literature in the early twentieth century has yet to be conducted.

Certain categories and techniques did appear to be emphasised in printed discourse though, and these did not emphasise *rasāyana* treatments. For example, the *Ayurvediya Kosha*, the Ayurvedic Dictionary, published by Ramjit and Daljit Sinha of Baralokpur-Itava from 1938–1940 was intended to be

> a definitive ayurvedic interpretation of pathology (*rog-vigyan*), chemistry (*rasayan-vigyan*), physics (*bhotikvigyan*), microbiology (*kadin-vigyan*), as well as to the study of deformity.[17]

Neither yoga as a treatment method, or restorative or rejuvenation treatments appear to be a significant element of the conception of this work.

An interesting document of this period which contains a large variety of first-hand accounts by ayurvedic medical practitioners is the *Usman Report* (Usman 1923) which offers an unusual snapshot of ayurvedic, Unani and Siddha practitioners' responses to a set of questions about their practices. However colonial concerns were still clearly central in the framing of the questions put to practitioners. This report was commissioned by the government of Madras, focusing on those qualified practitioners of the ayurvedic, Unani and Siddha systems of medicine. It became known by the name of its chairman Sir Mahomed Usman, K.C.S.I. (1884–1960).[18] The report was partially initiated in response to a series of colonial reports and investigations into "Indigenous Drugs" which sought to explore the possibilities of producing cheap and effective medicines on Indian soil.[19] The *Usman Report* voiced explicit concerns that such mining of indigenous ingredients, without understanding the traditional systems and compounds

15 Berger 2008: 159 f.
16 See Alter 2011 and Dagmar Wujastyk 2017: 8 (in this volume) on the connections between *rasāyana* and virility treatments (*vṛṣya*).
17 Berger 2008: 143.
18 See Usman 1923 and Dominik Wujastyk 2008.
19 For some examples of these reports see Dey and Mair 1896 and Bahdur and Avargal 1921.

in which the plants were used, amounted to "quackery" on the part of biomedical physicians.[20] The summary findings largely justify the case for further state support of these indigenous forms of medicine. It is clear that the majority of the population was more likely to have access to traditional rather than "western trained" medical professionals; in the name of promoting the general health of the Indian population, the authors argued that harnessing the power of traditional medical practitioners was vital. Pragmatic concerns were seen to be more important than creating a single mode of explanation for ill-health.

However, the written submissions betray a clear concern to clarify the theoretical assumptions which underlie what the report identified as the major traditional Indian medical practices. There were over 180 written submissions, and over forty oral reports were transcribed; these reports came from all over India and in a number of regional languages.[21] These written submissions were primarily concerned with ascertaining the key principles and treatment modalities of each of the three systems of Ayurveda, Unani and, to a lesser extent, Siddha medicine.[22] The survey responses often focus on explaining and justifying *tridoṣa-vidyā* ("knowledge of the three humours") and other categories of pathology and diagnosis. The primary challenge being addressed in this work seems to be the conceptual discord between germ-theories of disease and descriptions of imbalance as the framework for understanding illness. Indigenous practitioners were urged to keep more careful records of their efficacy in curing specific complaints in order to justify public health expenditure on promoting systems of registration and education for indigenous medical arts.[23] An idea that Ayurveda was able to promote wellness and longevity more effectively than biomedicine was certainly present in the *Usman Report*, but this was particularly in response to dealing with chronic illnesses.[24]

An appendix to the *Usman Report* summarises the syllabus of sixteen institutions of ayurvedic, Unani or Siddha medicine at this time. As discussed by Dagmar Wujastyk in this volume, *rasāyana* is an integral part of the classical ayurvedic canon and most major works devote a chapter to the subject.[25] Here, we can see that the classical works attributed to Suśruta and Caraka as well as

20 Usman 1923: 27.

21 The Ayuryog project is currently translating the submissions in Tamil, Telugu, Malayalam, Oriya and Kannada.

22 However, there is a closer association between the Siddha practitioners and yoga, although the overlap of specific yogic practices as treatment methods is not clear in the way the questions are framed and answered. For example, the Siddha submission by Swami Virudai Sivagnanayogigal Avargal, to the Usman committee (Usman 1923: part 2, 330–40), translated from Tamil for the Ayuryog project.

23 Usman 1923: part 2, 6.

24 Usman 1923: part 2, 7, 55, 79, and 80.

25 Dagmar Wujastyk 2017.

the works attributed to Vāgbhaṭa, amongst a few others are part of the standard materials covered.[26] All of these works contain chapters on the subject of *rasāyana*. Vāgbhaṭa's *Aṣṭāṅgahṛdayasaṃhitā* (early c. 7th century), which attempts to bring the *Suśrutasaṃhitā* and the *Carakasaṃhitā* into a single coherent text, was widely used in the period between 1400–1850, as Dominik Wujastyk's evaluation of manuscript collections shows, and continues to be an important resource for the practice of Ayurveda in Kerala in particular.[27] As Dagmar Wujastyk notes in this volume, both the *Suśrutasaṃhitā* and the *Carakasaṃhitā* describe different *rasāyana* recipes and procedures, although they share ideas about appropriate methods of treatment, i.e. the necessity of preliminary treatments of internal cleansing, followed by a mild diet for regaining strength, and then treatment proper with the chosen tonic over a period of time.[28] Significantly, the *Aṣṭāṅgahṛdayasaṃhitā* opens with passages on how to promote longevity before detailing the other major divisions of ayurvedic practice. In classical ayurvedic textual presentation, disease can be caused by wrong mental attitudes – an idea which mirrors contemporary presentations that blend yoga and Ayurveda more explicitly. However, *āsana* and *prāṇāyama* do not form any part of the treatment methods or longevity prescriptions in premodern ayurvedic texts. Although these texts and therefore, theoretically also *rasāyana* practices, are part of the syllabus, formal courses of study in 1923 appear to be framed in ways that mirrored the preoccupations of colonial medicine, e.g. anatomy, physiology, *materia medica*, pathology, and therapeutic prescriptions. While we cannot infer an absence of *rasāyana* from the repertoire of ayurvedic teaching and practice from the *Usman Report*, it is clear that rejuvenation was not a major focus of activity for ayurvedic practitioners at this time.

For example, nowhere in the *Usman Report* does there appear to be a mention of the more complicated methods of *rasāyana* treatment such as *kuṭipraveśa/kuṭipraveśika*, conducted "inside a hut" in contrast to the simpler *vātātapika* "in wind and sunshine" treatment as outlined in the *Carakasaṃhitā*. The *kuṭipraveśika* treatment, as will be detailed below, was costly and time-consuming and does not appear to have been commonly practiced.[29] Neither did the *Usman Report* highlight the purification and cleansing practices, which are an important prerequisite to *rasāyana* practices, as an important or distinctive feature of Ayurveda.[30] The individual testimonies in the *Usman Report* also reveal only scattered

26 *Usman Report* , Appendix III to Vol. 1 (Usman 1923: 117–34) summarises the syllabus of sixteen institutions of Ayurvedic, Unani or Siddha medicine at this time.

27 Dominik Wujastyk 2003: 193–5.

28 Dagmar Wujastyk 2017.

29 Dagmar Wujastyk 2015.

30 In modern globalized ayurvedic practice, the panchakarma (*pañcakarman)* practices are probably the most well-known

references to yoga (as either philosophy or *āsana*) or *prāṇāyāma* (breathing exercises) as an experimental technique for ayurvedic *vaidyas*.[31] While the preservation and extension of life is an essential part of the ayurvedic canon, interests of professionalization, pathology, diagnosis and treatment were clearly at the forefront of early twentieth-century presentations of Ayurveda.

Therefore, in 1938, when one of the most prominent activists for Indian advancement and independence approached a sadhu for rejuvenation treatment, it was a novel matter of national and international interest.

1. PANDIT MALAVIYA'S HEALTH CURE[32]

Madan Mohan Malaviya (1861–1946) was an Indian educationist and politician notable for his role in the Indian independence movement. He trained as a lawyer and was well-known for his activity as a newspaper publisher, becoming increasingly dedicated to nationalist and Hindu causes. He was involved with the founding of Banaras Hindu University (BHU) and served as Vice Chancellor from its establishment until 1938, then as a Rector until his death. Additionally, he was elected president of the Indian National Congress party in 1909, 1918, and 1933; he generally argued for moderate and constitutional activism.[33] He also powerfully argued for Hindu unity, re-conversion to Hinduism, and removing "untouchability" from Hinduism. Malaviya was extremely active and very much in the public spotlight. On various occasions, he publically supported or challenged Gandhi's proposals and was arrested for his agitations for independence.[34] The year before his rejuvenation treatment, Malaviya had retired from active politics due to his elderly age and failing health.[35] It is logical that such a man would feel in need of some rest and regeneration. That this high-profile individual chose a relatively unusual and intense treatment ensured global media coverage.

ayurvedic interventions. Lists of what counts as panchakarma are, however, not standardized. They often include *vamana* (emetics), *virecana* (purgatives), *basti* (enemas), *nāsya* (medicinal nasal oils) and *raktamokṣana* (blood-letting). The ayurvedic texts describe the preliminary cleansing procedures in *rasāyana* treatments, which are not referred to as *pañcakarman*, as including the use of emetics, purgatives, blood-letting and sweating therapy.

31 For example in Usman 1923: part 2, 51, a Dr Prasadhi Lal Jha of Cawnpore proposes various experimental treatments including: "Fasting cure (cf. Ayurvedic Upvas), Chromopathy (cf. Shit-Ushna Virya Rus) through the influence of the varying sun's rays, Countmattei's [sic] different electricities, Respiratory exercises (cf. Pranayam), Physical exercises (cf. the Hatyog Asana or exercises used for the development of the physical body not for worldly object alone but for Yogic purposes also)."

32 Title taken from Anon. 1938f.

33 Anon. 1946.

34 Mariau 2008.

35 Misra 2016: 283.

According to his own report, Malaviya was urged by supporters to meet an Udāsi sadhu called Tapasviji who had recently completed a successful rejuvenation treatment in Uttar Pradesh.[36] Shriman Tapasviji (c. 1770?–1955) was also known as Tapsi Baba, Bishandasji Udasi, Bishundasji, Baba Bishnu Das, Tapsi Baba Maharaj, and Swami Bishundasji (as well as other variants); he was widely reported to be much older than he looked and to have undergone radical rejuvenation three times, most recently in the early 1930s.[37] According to Malaviya, who enquired about the sadhu in the local area:

> A lot of people had seen the Tapsi Baba as a decrepit old man, the most sober estimate of his age being between 65 and 70 years, before he entered the cottage for his treatment. Others put his age much higher. But when he came out after 40 days, he looked not more than 40 years.[38]

After meeting Tapasviji on the introduction of a Swami Anand, Malaviya was impressed and became convinced that he would benefit from a similarly intense rejuvenation practice, despite his weak state of health. A friend, Pandit Harr Datt Shastri, committed to undertaking the same treatment in a nearby hut parallel to Malaviya.

According to Malaviya, the two friends entered separate huts, 50 feet apart, on January 16, 1938 and emerged forty days later on February 24, 1938.[39] As reported in *The Hindu*, Malaviya, aged 76:

> entered a dark chamber, in a bungalow on the Ganges bank, from which light and air had been practically shut off to produce conditions similar to those existing inside a mother's womb. Within a couple of days, the cycle of day and night was lost to the Pandit who now slept soundly for several hours in the day and used to sit up late in the night to meditate and study by the ghee lamp which was permitted. He lived on a diet of milk, butter, honey and "aonla" and was

36 Mooss 1938: 22–9. "Udāsi sadhu" is a common name for an initiate of the Udāsīn Akhāṛā which was founded by Śrī Cand (1494–1629), son of Guru Nanak and initially connected to Sikhism. Since the austerities of the order were not in line with Guru Nanak's teachings, Śrī Cand started a new order that later on was associated with Śaiva cults. For more on the yogic practices of *sannyāsa* in contemporary India, see Bevilacqua 2017.

37 In contemporary press reports he was most frequently referred to as Tapsi Baba. However, for the remainder of this article he will be referred to as Tapasviji, following the name used by his two hagiographers, Anantha Murthy (1968) and Sharma (1940).

38 Mooss 1938: 23.

39 Mooss 1938: 24. If these dates are correct, the time inside the huts was forty days, not forty-five as some media accounts suggest.

> not allowed to shave or bathe. In the morning and evening he was given the medicine which itself costs nothing, but its preparation in a forest 30 miles away is a long process. One "dhak" or "palas" tree and several mounds of cow dung cakes comprised the fuel for preparing one day's dose.[40]

In all accounts Tapasviji administered the treatment, but he had the assistance of two others, Krishnadas and Anandswami. Krishnadas was described by *The Illustrated Weekly of India* as responsible for preparing the medicine, "which was done in a *palas* forest, about 30 miles from Allahabad. The forest was placed at the disposal of Pandit Malaviya by one of the princes".[41] Krishnadas was a long-term devotee of Tapasviji who is described in Ananda Murthy's hagiography as a reincarnation of the Baba's long-dead son.[42]

Through comparing the various accounts, a fairly comprehensive description of the treatment can be built up. One of the newspaper accounts provides some interesting detail about the method of preparation of the medicine used for Malaviya's treatment in the forest:

> Every fourth day Tapsi goes forth into the distant jungle to supervise the preparation of medicines from rare herbs. The main ingredient is from the dhak tree. Such a tree is cut down and the bottom of the tree is hollowed to form a cup where bark and precious dried herbs are placed. The cup is covered with dried cow dung which is ignited. The fire burns all day, and by evening the medicine is ready to be taken back to Allahabad where more secret herbs are mixed in. By this time it forms a dust-like powder.[43]

The Illustrated Weekly of India identified *aonla* (also known as *amla*, "Indian Gooseberry," or emblic myrobalan) as one of the main ingredients in the

40 Anon. 1938f. As Dagmar Wujastyk (2015: 68) explains: "This may have been the recipe found in *Aṣṭāṅgahṛdayasaṃhitā*, *Uttarasthāna* 39.28–32, according to which emblic myrobalan fruits are cooked inside a Flame of the Forest (*palāśa*) log and then mixed with honey and ghee. The prescription specifies that the patients can drink as much milk as they like and that they should avoid cold water during the one-month treatment. This correlates with Pandit Malaviya's description of his diet and regimen. Tapsi Baba changed the recipe by adding four more herbal powders to it "calculated to increase the efficacy of the medicine." Dagmar Wujastyk (2015: 65) also describes another interesting rejuvenation with the *palāśa* bark in *Carakasaṃhitā*, *Cikitsāsthāna* 1.4.7.

41 Lal 1938.

42 Anantha Murthy 1968: 222–26 Krishnadas predeceased Tapasviji sometime in the early 1950s; Tapasviji's reaction to his death is recorded in Anantha Murthy 1968: 277–81.

43 Anon. 1938d.

mixture heated in the tree-*puṭi* (fire pit) and specified that the milk used must be taken fresh from black cows.[44] In another account, Tapasviji is reported to have explained that there are four main herbs, which must be gathered at particular times of the year, used to coat the *aonla* in the compounding. Malaviya reports that what he consumed twice daily was brought from the forest by railway before eight each morning and consisted of two ounces of the *aonla* medicine, two ounces of butter and "nearly" two ounces of honey, reportedly prepared according to the "method laid down in Vagbhut." Beyond the medicine itself they were only allowed to drink the fresh milk of a black cow throughout the period of treatment. Despite this diet restriction Malaviya claims to have gained nine pounds during his sojourn in the purpose-built hut (*kuṭī*).[45]

In her explorations of the history of *rasāyana* practices, Dagmar Wujastyk has noted that although the specific *kuṭīpraveśika* treatment undergone by Malaviya is found in the classic compendia of both Caraka (*Carakasamhitā*, *Cikitsāsthāna* 1.1.16–20) and Suśruta (*Suśrutasamhitā*, *Cikitsāsthāna* 29.10), later ayurvedic works no longer give full descriptions of this more complicated method. On this basis and the other experimental treatment of Vaidyaratnam P. S. Warrier described in the *All-India Ayurvedic Directory* of 1938, Wujastyk has suggested that *kuṭī-praveśika* treatment might have been preserved in ascetic communities and was not a part of the standard ayurvedic treatment modalities in the early modern period.[46]

Dagmar Wujastyk (2015) describes *kuṭīpraveśika* treatment as specified in the *Carakasaṃhitā* in detail. Significantly, prior to entering the *kuṭī*, the texts recommend an internal purification through oleation and purging the stomach and bowels, processes now associated with the five cleansing methods called "panchakarma" (*pañcakarman*). Wujastyk argues that although spectacular rejuvenation is promised by the full techniques, the practice does not appear to have been commonly undertaken. The expense in terms of both time and money for such treatments is likely to have been prohibitive.

As noted in reports surrounding Malaviya's treatment, all the medicines might be obtained without cost from the indigenous forests. However, the sum of the process involved was time-consuming and expensive. The construction of a purpose-built hut (*kuṭī)* was itself a significant undertaking, and the time away from work or providing for a family would also be costly. In Malaviya's treatment, each man procured their own volunteer for the job of attending to them daily and administering the medicine provided by Tapasviji. Malaviya reported that his son fulfilled these duties. One contemporary newspaper

44 Lal 1938.
45 Mooss 1938: 24 f.
46 Dagmar Wujastyk 2015: 74 and Mooss 1938: 29–32.

report suggested the overall cost of this treatment in 1938 could "run from $2,000–$17,000," putting it out of the reach of most individuals. Nevertheless, after Malaviya's success, newspapers reported that several offers to sponsor Gandhi's rejuvenation were forthcoming.[47]

There were strict restrictions on the activities of the two men in the hut during the course of treatment. They were not to emerge from the hut day or night, to experience neither sunlight nor open air. They were not allowed to bathe, shave or experience massage. For several hours during the day, it was arranged that pandits would sit on the veranda outside the hut and their voices could be heard reciting verses of the *"Rudrabhishek puja"* and the *Bhagavadgītā.* Personal reading material was permitted but they were advised "not to exert themselves too much in that way either." While only the attendant administering medicine was supposed to enter the hut, Malaviya reported that the two men were also permitted an occasional visitor.[48]

The effects of Malaviya's treatment were considered universally positive but less extreme than promised in the *Carakasaṃhitā*, *Suśrutasaṃhita* or Vāgbhaṭa's *Aṣṭāṅgahṛdayasaṃhitā*.[49] In his own long testimony, Malaviya explains that,

> in fairness to Tapsi Babaji, he told me beforehand that a new set of teeth will not come out, nor would the nails fall off by the treatment he was giving me. He did expect that my hair would largely become black and I would look and feel as if I was twenty years younger.[50]

Malaviya concurred with the effectiveness of the treatment and noted he felt more confident and walked more upright.

The Hindu, which did not offer photographs in its coverage of the incident, described it as "A Wonderful Change:"

> His wrinkles had practically disappeared. His gums had gone stiff. Rumours of new teeth growing, were however, discredited. His face was fleshy and cheerful. … Compare with this the bowed and emaciated figure of the old Pandit when he delivered the Convocation address of the Allahabad University on December 14. This was the last occasion when Malaviya appeared in public before the Kayakalpa treatment; and after a few introductory sentences he seated himself in a chair to deliver his address. Such was the state of his health. Today despite his white moustache he hardly looks sixty.[51]

47 Anon. 1938d.
48 Mooss 1938: 24 f.
49 For more details and translations, see Dagmar Wujastyk 2015 and Dominik Wujastyk 2003: 126–9.
50 Mooss 1938: 27.
51 Anon. 1938f.

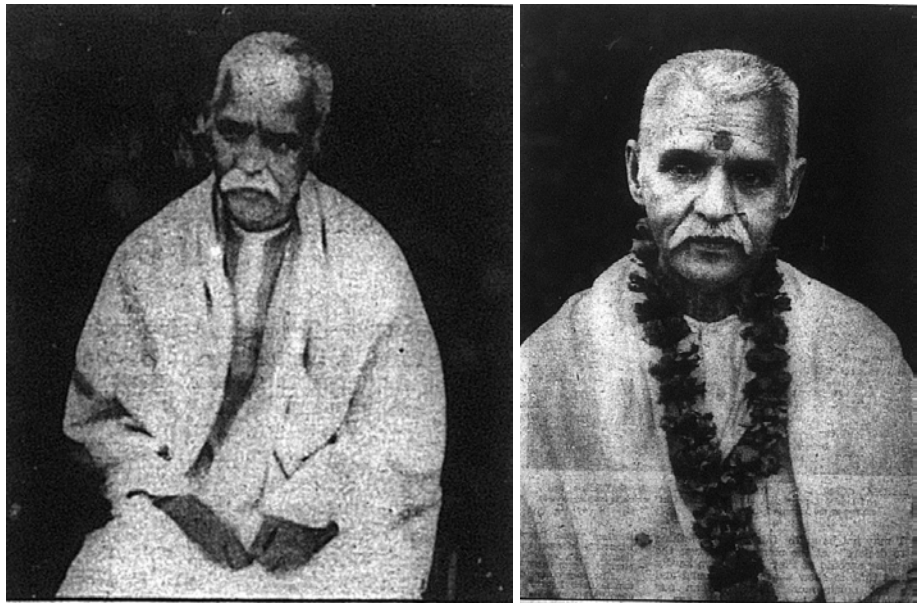

Figure 1: Before and after pictures of Pandit Malaviya as appeared in *The Illustrated Weekly of India* of 20 March 1938 (Lal 1938).

However, Malaviya did not consider the treatment an unreserved success. He was troubled by insomnia during and after the course of *kuṭīpraveśa*. Malaviya reflected that he would have benefited much more fully if he had prepared himself for the *kuṭīpraveśa* with a course of "Panch Karma," a course of ayurvedic cleansing practices recommended in ayurvedic sources, and then allowed time to regain strength before commencing the *kuṭī* treatment. He also suggested that his friend, Pandit Harr Datt Shastri achieved greater benefits by starting the process at a younger age (he was fourteen years Malaviya's junior) and in better health.[52]

Pandit Harr Datt Shastri described the treatment as psychologically hard, but ultimately very beneficial:

> For the first 2 to 3 weeks I felt at times weakness and depression, occasionally accompanied by loose motions or nausea. But just after a couple of days of my starting the treatment, I began to feel distinct improvement in my eye-sight which was very weak and defective for many years. This kept me up in that dark cellar and at the end of the course I felt immensely improved in general health. All wrinkles on

52 Mooss 1938: 26.

> my face disappeared, body became more muscular, my hair became perceptively darker and, as so many of my friends suggested, I looked younger at least by 15 years. Above all I found I could concentrate and contemplate better than before.[53]

Malaviya was somewhat embarrassed by the extent and tone of the media's interest in his treatment. Upon his exit from the hut, Malaviya commented that, "I was sorry to learn that the treatment was very much advertised and that very exaggerated hopes were created about its results".[54] The tone and interest in the treatment varied depending on context, but it was syndicated by the Associated Press as well as being attended to by a variety of "correspondents" for major global newspapers in India.

The concern Malaviya expressed about the exaggerated reports is evidenced by one found in *The Daily Telegraph*, usually considered to be a sober broadsheet. On 19 January 1938, *The Daily Telegraph* ran a short note that Malaviya:

> has entered a specially prepared chamber on the banks of the Ganges for rejuvenation treatment by Sannyasi, who is reputed to be 172 years old. … it is claimed that after 10 days treatment the pandit will look 20 years younger in every way.[55]

The "exaggerated hopes" which Malaviya spoke of are clear in this report. Malaviya's political activities were widely covered in British newspapers, his activities in this arena having direct impact on British colonial interests. This news item is focused on the extreme end of the claims being made, in what might be best described as a condescending tone. Unlike in the United States, where syndicated accounts of the report were widely reprinted in small-town papers, British papers generally did not pick up the feature as an item of interest.[56]

The Indian press on the other hand were both more thorough and circumspect in their descriptions of Malaviya's health cure. While *The Times of India* only listed a short note on the entry of Malaviya into the *kuṭī*, there were lengthy features describing the result given in *The Hindu*, *The Illustrated Weekly* and in several contemporary pamphlet publications.[57] Although not a miracle cure, the general consensus was that Malaviya did visibly benefit from the treatment.

53 Swami 1939: 26.
54 Mooss 1938: 24.
55 Anon. 1938c.
56 Searches in United States Newspapers on www.newspaper.com revealed wide coverage of Malaviya's treatment and the term "kaya kalpa" which will be considered further in the article. UK local newspapers are less easy to digitally search than those from the United States, but through multiple databases I found very few references to Malaviya's 1938 treatment.
57 Lal 1938; Anon. 1938f; Swami 1939. There were also a few classified ads for "Kayakalpa" treatment in Indian newspapers in 1938.

We will now consider the preservation of rejuvenation techniques in ascetic milieus and the extent to which this overlapped with ayurvedic practice at the time of Malaviya's treatment.

2. *KĀYAKALPA*, YOGIS AND AYURVEDA

Malaviya ends his personal account of his treatment with a warning that although sadhus may have special knowledge of *kāyakalpa* treatment, "wherever it is decided to resort to the Kayakalpa Chikitsa of either the first or the second type, it should be done in consultation with and under the guidance of the most capable and experienced Ayurvedic practitioner".[58] As mentioned in the introduction, the term "*kāyakalpa*" (body transformation) is not found in Sanskrit medical works, nor medieval Sanskrit works on yoga, and it seems to only rarely occur in Sanskrit alchemical works.[59] However it is part of rejuvenation traditions associated with yogis, ascetics and the Tamil Siddha medical tradition as *kāyakaṟpam*. Contemporary ascetics and sadhus in India use the term *kayākalpa* and it appears to be associated with a variety of rejuvenation techniques and the results of those techniques.[60] Most accounts of Tapasviji's credentials emphasise his own prior self-rejuvenation and secrets acquired in a life of ascetic wandering as the primary validation for acting as a physician. It is also possible that Tapasviji engaged more formally with ayurvedic physicians at some point.[61] According to Malaviya's account, he appears to have been familiar with Vāgbhaṭa's *Aṣṭāṅgahṛdayasaṃhitā*.[62] The extent to which Malaviya's own treatment was supervised by an ayurvedic physician (*vaidya*) is not entirely clear. In some accounts, Tapasviji is described as a *vaidya*, but in the majority he is identified as a yogi.

It is also possible that the second attendant to the processing of the medicine for Malaviya and Shastri had training in Ayurveda; this was a man called Anandswami or Anand Swami; his identity is not entirely clear. In Malaviya's own account of his treatment in the *All India Ayurvedic Yearbook*, he mentions a Mr. Anand Swami who encourages him to undergo treatment with Tapasviji – this could have been the same person photographed as the "devotee" Anandaswami after Malaviya exited his hut. In 1939, an Anand Swami who claims to have been present at Malaviya's *kāyakalpa* treatment is described as a Vaid (ayurvedic physician) in a testimonial by a K. Sanjwa Row.[63] In this year, Anand

58 Mooss 1938: 29.
59 Dagmar Wujastyk, Newcombe, and Barois 2017.
60 Personal communications with Daniela Bevilacqua and James Mallinson.
61 Sharma 1940: 9–11.
62 Mooss 1938: 24 and Dagmar Wujastyk 2015: 66; Wujastyk dates this text to around the seventh century CE.
63 Swami 1939: ii.

Figure 2: Tapasviji with his assistants for the Malaviya treatment as appeared in *The Illustrated Weekly of India* in Lal 1938.

Swami was primarily offering treatments in Colombo, Ceylon (Sri Lanka) which offered rejuvenation for more modest commitments of time and money than Malaviya's more famous example. However, the existing documents do not make it clear if Anandaswami was primarily an ascetic who later set himself up as a physician, or if he was first trained in Ayurveda, studied further rejuvenation techniques under Tapasviji, and then established his own business on the back of Malaviya's well-publicised success.[64]

The evidence suggests that particular rejuvenation treatments may have been preserved during the colonial and pre-modern periods within ascetic communities outside of mainstream lineage traditions of ayurvedic families. It is generally

64 He is not mentioned in the Murthy bibliography as being an important associate of Tapasviji, although Malaviya mentions him as providing his first face-to-face introduction with Tapasviji.

accepted that by the mid-nineteenth century, the idea of yoga and the figures of yogis were associated with a high degree of ambivalence at best.[65] Yet, there is also evidence that throughout the nineteenth century, those who renounced family life (variously known as sannyasis, fakirs and yogis) played many and varied roles in society including acting as "traders, money-lenders, mercenaries, protection guards, bandits and on occasion even diplomats".[66]It also appears that so-called fakirs were present in some early medieval and colonial princely-state courts, at times offering medical advice.[67] Shaikh Rizqullah Mushtaqui's sixteenth-century text, the *Waqiat-e-Mushtaqui* describes *fakir/bhagat* (who might be Sufi ascetics) as being popularly believed to hold secrets of transformative elixirs and offering health cures to those who could not afford more qualified medical advice.[68]

It is very likely that in colonial and pre-modern India, like today, lay people might approach particular sadhus and sannyasis for assistance with a variety of physical, psychological and life circumstance problems.[69] Sondra Hausner explains that in contemporary India, legends persist about idealised sadhus who live in isolation in the Himalayas, but know how to harness the healing powers of roots and herbs. She also notes that more prosaically, contemporary sadhus are frequently approached for medical advice or offer their own spontaneous remedies for the sufferings of those who approach them.[70] Today in India, a variety of "cures" might be offered in response to these requests, including magical rituals, mantras, *haṭhayoga* techniques, sacred ash (*vibhūti*) and/or various herbal or mercurial compounds. Moreover, spontaneous healing might be attributed to the blessing of or encounter with a saint.[71] Kirin Narayan's ethnography of a Nasik-based "Swamiji" in the 1980s reveals that he was prescribing "folk medicine" and herbal remedies to fund his pilgrimages as an "uninitiated ascetic" during the mid-twentieth century:

> [He] made a living through folk medicine, soothsaying, and astrology. His reputation spread, and he was soon earning enough to establish a new pattern of spending three months in one place and then traveling for the next three.[72]

65 White 2009 and Singleton 2010.
66 Clark 2006: 14.
67 Honigberger 1852: 92–95 and 116. Mazars (2006: 14) notes that Hakīm Ḍiyā al-Dīn Bakhshi dedicated a chapter in his *Majmū-e Ḍiyā-ī* (1336) to "the medicine of Nāgārjuna and the other yogis of India."
68 S.v. Mushtaqui in Berger 2008: 51.
69 Bhaktavatsalam and Naidu 1911 and interview with Isha Nath conducted on behalf of Ayuryog on 11 March 2017.
70 Hausner 2007: 168–70.
71 Personal communication with Daniela Bevilacqua.
72 Narayan 1989: 53.

Other anecdotal reports support this hypothesis that ascetics throughout have specific *rasāyana* recipes known as *kāyakalpa* which they might pass on within networks of sadhus.[73]

Contemporaries of Malaviya and Tapasviji also assumed that *kāyakalpa* treatments, particularly the *kuṭīpraveśa* treatment, were associated with ascetic traditions rather than ayurvedic physicians. Swami Sivananda conflates *kāyakalpa* with all the various methods yogis or ascetics (*tapasvin*) might use to extend their lives in order to achieve liberation in their lifetime. Sivananda explains in *Health and Long Life* (1945):

> The process of rejuvenation through "Kaya Kalpa" is the keeping of the great Tapasvins. Kaya-kalpa is the real elixir of life by which the Rasayanas make the body immortal. … They teach to immortalise the body first by means of Kaya-Kalpa made out of herbs, or mercury, or sulphur, Neem or Amlaka fruits, in order to achieve the goal of Yoga in this very life.[74]

Sivananda continues to enumerate other ways that yogis might achieve a "Kaya Sampat" (perfected body), suggesting that "Kaya Kalpa" is but one of many techniques available. Nothing in Sivananda's book suggests knowledge beyond that widely circulating around the time of Malaviya's cure. Sivananda follows contemporary reports of Tapasviji's recipe as relating to that found in Vāgbhaṭa's *Aṣṭāṅgahṛdayasaṃhitā*.[75]

Kāyakalpa (Tamil: *kāyakaṟpam*) treatments are associated with the *kāyasiddhars*, yogis venerated in Tamil texts as having mastered the ability to control the body, therefore to maintain eternal youth; these Siddhars/*Siddhas*/*Cittars* are also considered the founders of medicine in Tamil traditions.[76] Contemporary Tamil Siddha medical traditions make more use of mercury-based *rasāyana* remedies and make more reference to elixirs of immortality than most ayurvedic traditions.[77] Sivananda's ideas about *kayākalpa* may have been influenced by Tamil Siddha traditions, particularly as his youth and initial biomedical training took place in Madras, Tamil Nadu.[78]

73 Comment by James Mallinson on 21 May 2016 at *Yoga darśana, yoga sādhana: traditions, transmissions, transformations*, an international conference at the Jagiellonian University, Kraków, Poland, 19–21 May 2016, and further discussions with Daniela Bevilacqua. See also Mallinson 2007: 240, n. 463.

74 Sivananda 1945: 240. Sivananda's mention of mercury and sulphur in this context shows a connection to *rasaśāstra* or post-eleventh-century ayurvedic texts. See Dagmar Wujastyk 2017 (in this volume) for more details on these literatures.

75 See Dagmar Wujastyk 2015 for more details on this as well as Maridassou 1938.

76 See Kędzia 2017, in this volume, and also Maridassou 1938, Weiss 2009: 48, and White 1996.

77 Usman 1923: part 2, 325–409.

78 For a critical summary of Sivananda's biography and legacy see Strauss 2005.

Another reported example of a related rejuvenation treatment originating from a sadhu, dating from the 1970s, concerns a Madras-based judge who was given a 'rejuvenation treatment by a Siddha sadhu' in the form of a paste which he took without any preparation or adjustment to his daily routine. The result involved the peeling of skin and nails, but it is unclear what the long-term effects of this treatment might have been (and the symptoms may have been indicative of mercury poisoning).[79] The unexplored connections between northern Indian ascetics, Ayurveda and Tamil medical traditions are a vast web which merits more extended and sustained research.[80]

But returning to Malaviya's treatment, at this time, Tapasviji himself seems to be put up as the best representative of an ascetic *rasāyana* tradition known to his contemporaries. Tapasviji suggested to one journalist that "kayakalpasiddhi" is just one of 80 kinds of rejuvenation Indian yogis say they know.[81] According to another newspaper report, Tapasviji "modestly claims to know at least 35 kinds himself, but says that the necessary herbs are hard to get".[82] While some of Tapasviji's claims might be exaggerated bravado in response to the media interest, a more in-depth interview with Tapasviji does suggest that there were at least three different *kāyakalpa* treatments that Tapasviji had himself undergone.

In 1940, M. H. Rama Sharma interviewed Tapasviji and wrote a short book based on these interviews which includes some biography of Tapasviji, but is primarily focused on the potential for and varieties of *kāyakalpa* treatment.[83] Sharma took a sceptical attitude in his biography, directly asking the reader to keep an open, but critical mind. He argued that to some extent, *kāyakalpa* treatment should be judged by the example and reputation of Tapasviji himself. Sharma recommended that the reader "concentrate his attention on a study of the science of Kaya-Kalpa and of the personality of its reputed exponent, the Tapasviji."[84] Here Tapasviji's reputation as an ascetic and yogi was paramount to convincing the reader of the credibility of his reports as well as the potential for transformational rejuvenation through *kāyakalpa*.

79 Balaramiah in Zvelebil 1996: 97 f., note 102, and Horowitz, Greenberg, and Ling 2002.

80 Zimmerman 2007 and also Kędzia 2017, in this volume.

81 Anon. 1938e.

82 Anon. 1938d.

83 I have not yet been able to discover anything else about the biography of M. H. Rama Sharma, but from this publication it appears that he was not acquainted with Tapasviji prior to his well-publicised treatment of Malaviya and his short book was based on interviews with Tapasviji alone.

84 Sharma 1940: iii. This is in line with Robin Rinehart's observation that the first hagiographies tend to focus more on establishing facts, while later hagiographies place the life of the saint in the context of what can be identified with hindsight as important themes and/or historical events (Rinehart 1999: especially ch. 5: "From 'Bare Facts' to Myth: Swami Rama Tirtha as Avatār").

According to Sharma's report, Tapasviji renounced the life of a householder at approximately the age of fifty, his wife and child having died. His first practices as a sadhu were that of *bhajan* (devotional singing) and *prāṇāyāma*. Tapasviji reports that he moved to a cave north of Rishikesh and practiced exercises given to him by "a sadhu called Prem Das which included nauli, neeti, khatachakra-chedana, Ganesha kriya – and a form of kumbakha pranayama." These yoga practices listed by Sharma are associated with internal cleansing. The yogic practices of *ṣaṭkarman* (six cleansing practices) have similar functions to the *pañcakarman* (five cleansing practices) of Ayurveda, but for the ascetic population, these techniques are self-administered rather than physician-led.[85] After staying in this cave for a few years, he began traveling to various sacred locations.

Tapasviji describes that his initiation into *kāyakalpa* came in Kamaksha, in the eastern edge of Assam. Here, he reportedly became friendly with a sadhu who had twenty-one black pills the size of pigeon eggs. According to this account, two sadhus debated for two months what to do with the pills, and finally it was decided that Tapasviji should take them. At this time, Tapasviji claims to have already been an old man with wrinkles. So, reportedly, he took one pill a day for three days. Then he lost consciousness for three days, during which his associate sadhu administered four more pills. Tapasviji claimed that at the end of ten days his skin peeled off to be replaced with new, wrinkle-free skin. At the end of fifteen days Tapasviji reported that he had grown a new set of teeth and that his hair had turned from white to black. He reports that in total this treatment took three months. After he experienced such rejuvenation, his companion sadhu underwent the treatment and also experienced the same positive changes, regaining his youth and strength.[86] In this first treatment, rejuvenation occurred without Tapasviji being clear about the processes being used, but suggests that various herbal compounds were shared amongst ascetics.

After this incident, Tapasviji reports that he travelled to Burma and then was initiated into an Udāsīn Akhāṛā, after which he took up residence near Kotban in Uttar Pradesh.[87] After the Udāsī initiation, he undertook a vow of austerity (*tapasyā*) of holding one arm upright for years (*ūrdhvabāhu*). He claims that "Like

85 Birch (2018) considers this issue in some detail in the *haṭhayoga* texts. According to Birch the *ṣaṭkarman* consist of cleansing the stomach with cloth (*vastradhauti*), vomiting (*gajakaraṇī*), a water enema (*jalabasti*), cleansing the sinuses with thread (*sūtraneti*), gazing at a fixed point (*trāṭaka*), churning the abdomen (*nauli*) and rapid breathing (*kapālabhāti*). Although this list contains seven practices, it appears that *gajakaraṇī* was considered a variation of *dhauti*. The five *pañcakarman* practices are emetics (*vamana*), purgatives (*virecana*), enemas (*basti*), medicinal nasal oils (*nāsya*), and bloodletting (*raktamokṣana*).

86 Sharma 1940: 9–11.

87 See footnote 36 for the Udāsīn Akhāṛā.

this, I kept it in that position for about thirteen or fourteen years … [then] by massage and other means I brought down my uplifted hand".[88] Sometime after this period in Kotban, Tapasviji claims to have undergone a second *kāyakalpa* treatment. This treatment involved staying in a cave for a year, where he lived on "only one eighth *seer* of milk taken at noon every day" which he claims, "restored him to youth".[89] This section places austerities together with rejuvenation practices. Tapasviji presents a cycle in which both *tapas* and rejuvenation are used together on his quest for achieving liberation from the cycle of rebirths (*mokṣa*).

The final *kāyakalpa*, the one which brought him to the attention of Malaviya, is described as being undertaken under the supervision of both a *vaidya* named Kanyalal and Krishna Das. Both these individuals were still associated with Tapasviji in 1940 and Malaviya's treatment appears to have been modelled on this third *kāyakalpa*.[90] In particular the time-intensive *kuṭī* treatment may have been preserved in the ascetic communities. As Tapasviji observed,

> Kaya Kalp is most commonly performed by sadhus who live in quiet jungles and devote their lives to Bhajans [devotional chanting]. He [Tapasviji] thought it was beneficial for men of a quiet disposition [*satviki brit*]….[91]

Malaviya also reflected that:

> as Charak has laid down, every Vaidya is not fit to offer this treatment, nor is every man qualified to receive it. It is repeatedly pointed out by Charak and other medical authors that these *Kayakalpa Rasayanas* were meant primarily for the benefit of the great sages and other servants of the community and for those who are spiritually inclined.[92]

This prescription about the nature of those suited to more intense *rasāyana* treatments is found in *Carakasaṃhitā*, *Cikitsāsthāna* 1.1.16–20, and is echoed by contemporary ayurvedic physicians who have reintroduced this treatment. Although often phrased in idealistic ways, this stipulation of the character of the person undergoing *kuṭīpraveśa* in particular requires someone who is able to stay isolated for a long period of time without much stimulation.

88 Sharma 1940: 15. Tapasviji also claims that: "On account of the torture it had gone through, even now, it is relatively weaker and cannot be stretched and kept in position without the help of the other limb…."

89 Sharma 1940: 16. A *seer* was a common, but non-standardised measurement in colonial India. The amount referred to here may have been approximately one eighth of a litre in today's measurements.

90 Sharma 1940: 16–20.

91 Lal 1938.

92 Mooss 1938: 28.

Ashtavaidyan Ravi Mooss, a contemporary practitioner from a family of traditional Keralan ayurvedic physicians, offers a variety of *rasāyana* as well as *kuṭī-praveśa* treatment at his Kerala-based practice. He explained that those who were dedicated to a regular meditation practice were much more likely to complete a period of treatment inside the *kuṭī*:

> [One *kuṭī* patient] is doing meditation, so he has more time. He is – if you tell him to stay inside the room for two months, you know, he will be really happy to hear that! He can do that. Not read, not really. He can sit in meditation for hours and hours like that kind of people. So it's more easy for them to. Others are not always like that. If you ask them to sit for five minutes in the chair, then they won't. Many of them are not capable of doing such things.[93]

Mooss emphasised that many of those who approach him for rejuvenation therapies would hesitate to even spend fifteen days in the *kuṭī* and that compliance with preliminary cleansing and post-treatment diet recommendations are also important for ensuring efficacy; only a minority fully comply with his recommendations.

3. WHAT MALAVIYA'S TREATMENT INSPIRED: *PAÑCAKARMAN*, *RASĀYANA* AND YOGIC HEALTH CURE

From 1938 onwards, Ayurveda and yoga became increasingly amalgamated as healing traditions, and *rasāyana* became much more prominent in presentations of Ayurveda than during the late colonial period. Initially, there was a small flurry of treatments under the names of *kāyakalpa* and *pañcakarman*. The later were presented as both a necessarily preliminary to *kāyakalpa* and as independently efficacious rejuvenation treatments. In late 1938 and 1939, there were advertisements in Indian papers suggesting that variations of the *kāyakalpa* treatment were accessible to a wider population upon payment. One advert ran several times in *The Times of India* during 1938 in the classified section:

> KAYA KALPA TREATMENT UNDER-gone by Pandit Malaviyaji may now be practiced by anyone. Those desirous should see Vaidyaraj Parabhashanker Ratanji, Bhatkopar – 24095.[94]

Also inspired by Malaviya in 1939, Vaidya P. S. Warrier, who in 1902 had founded the Arya Vaidya Sala, a successful ayurvedic pharmaceutical company, underwent a *rasāyana* treatment of his own devising. Today, the Arya Vaidya Sala

93 Personal Interview with Ravi Mooss 28 September 2016.

94 Anon. 1938h.

Figure 3: "French Scientists Triumph Over Old Age: Rejuvenin" advertisement in *India Illustrated Weekly* Calcutta, 1938 (Anon. 1938g).

mass produces a variety of *rasāyana* compounds from its headquarters in Kottakkal.[95] Indigenous medicines were seeing something of a revival in respect or at least acknowledgement of a continued usefulness, particularly highlighted by the patronage of nationalist figures such as Malaviya.

Within India, Malaviya himself was well-known for promoting the Hinduness of India. Tapasviji was quoted in the Indian press as being willing to offer the treatment to anyone "with the good of the country [India] at heart"[96] and would be "very much gratified if through him the leaders of the country prolong their lives and live longer to serve the cause of the motherland".[97] Press coverage of the incident in the United States also drew in Malaviya's treatment with the name of Gandhi and the promotion of the Indian nationalist cause.[98] I would argue that Malaviya's health cure offers an earlier example of Swami Ramdev's highly marketable combination of yoga, Ayurveda and *swadeshi* rhetoric.

Offering *rasāyana* as a treatment made good business sense at this time, particularly in the form of more easily accessible *rasāyana* formulations. Indian newspapers were filled with advertisements of various products claiming the ability to rejuvenate the physical body. A sample from Calcutta's *India Illustrated Weekly*, which was aimed at a wealthy, English-speaking audience, include advertisements for a Dr Nixon's "Vi-Tabs" which promise "Glands Made Active

95 See Mooss 1938; Bode 2008, 2015; Dagmar Wujastyk 2015.
96 Lal 1938.
97 Anon. 1938f.
98 Anon. 1938d.

and Youthful, Vigour Restored within 24 Hours"[99] as well as the French "Rejuvenin" formula (Fig. 3).

And from *The Hindu*, an advert appeared for "NERVINUS" made with gold, an "elixir of life" which promised to help its consumer regain their "manly power".[100] In context, Tapasviji's *kāyakalpa* treatment can be seen as one of many products and treatments aimed at rejuvenation and implicit life extension. Serge Voronoff's monkey gland treatments were being held in popular acclaim in Europe, and Lyndson of America and Steinarch of Austria were also exploring new rejuvenation therapies from the context of European science.[101] To understand the popularity of these products, it is worth remembering that penicillin only widely became available after World War II; people of all classes could die relatively quickly from what might now be considered minor infections. Physical vitality was not simply a matter of vanity, it could be the difference between life and death for someone with an infection.

Anand Swami, one of the attending sadhus during Malaviya's retreat, set up his own business in Colombo, Ceylon (Sri Lanka), offering a variety of 'Kaya Kalpa' treatments. However, most of the treatments he offered were based on a simple use of *rasāyana* compounds and *pañcakarman* treatments. Malaviya was widely reported to have omitted the crucial preparatory internal cleansing before his *kuṭīpraveśa.* In a 1939 publicity pamphlet Anand Swami emphasised these "Panch Karma" above and beyond the lauded "Kuti treatment." He explained that,

> the Panch Karma, I now feel, *was more important even than the Kalpa medicines*. In the light of my experience, I would recommend to my friends to take Panch Karma, under the guidance of a very experienced Vaidya, *every two to three years*, even if it is not to be followed by a course of Kalpa.[102]

These were certainly more affordable, and less intensive than the *kuṭīpraveśika* method undertaken by Shastri and Malaviya. However, the *pañcakarman* treatments offered by Anand Swami are still rather invasive and uncomfortable – involving purgatives, induced vomiting, sweating, and enemas. Anand Swami also recommends a variety of even simpler but effective rejuvenation therapy including "Aja Kalpa," primarily drinking goat milk daily, from a black goat who is fed with specific foods and carefully cared for over a period of 80 days. Swami's

99 Anon. 1938a.
100 Anon. 1938b.
101 Sharma 1940: vi. See also Augier, Salf, and Nottet 1996 and Anon. 1927b.
102 Swami 1939: 9.

pamphlet includes a moderate endorsement by Mahadev Desi, the private secretary to Mahatma Gandhi who claims to have undergone the *pañcakarman* treatment himself "without much discomfort, and, I think, not without some benefit".[103] Although this endorsement of *pañcakarman* could perhaps have been be stronger, the association of Indian rejuvenation therapy with *pañcakarman* and support of the nationalist cause, at least for marketing purposes, was very clear.

During the war years, there appears to be largely a break in interest in *rasāyana* and *kāyakalpa* in India. The reasons why interest in time-consuming rejuvenation therapy soon became side-lined are fairly obvious. Malaviya emerged from his hut the same month Hitler marched into Austria. Britain joined the war after the invasion of Poland in September 1939, and India was preoccupied with growing home-rule demands as well as being drawn into the British war effort. Pandit Malaviya did not live forever. He died about eight years after this treatment, at the age of 85, in 1946. The immediate post-war period saw a golden age of hope in biomedical power, as well as a preoccupation with the birth of the Indian nation-state in 1947.

In the United States, coverage of Malaviya's "kaya kalpa" treatment was such that it was picked up as a marketing strategy by at least one of the swamis on what Phillip Deslippe has described as the "Swami Circuit," which characterized Early American Yoga in the first half of the twentieth century.[104] A variety of travelling "yogis", some of Indian origin, offered large lectures on India, yoga, and a variety of other topics relating to spirituality. According to Deslippe, yoga was closely associated with movements such as

> New Thought, occultism, and Spiritualism, either openly, pseudonymously or with no indication of their origin at all. Conversely, Indian-born teachers of yoga in the United States were adept at employing different elements of American metaphysical religion into their own presentations and pointed their students towards Metaphysical Asia while offering them teachings taken very close to home.[105]

The coverage of Malaviya's health treatment seemed to fit into this general agenda for some of the travelling yogis. This is exemplified by this 1939 advert from "Dr. Maneck of India" who promises that the thousands who hear his Los Angeles lectures will never grow old (Fig.4).[106] This is coupled with specific

103 Swami 1939: 23.

104 Anklesaria ca. 1930. My thanks to Phillip Deslippe for this pamphlet and the suggestion of looking for *kāyakalpa* cures as part of Early American Yoga.

105 Deslippe forthcoming.

106 Anon. 1939 and Anon. 1927a describe lectures as being given by Dr Maneck Anklesaria.

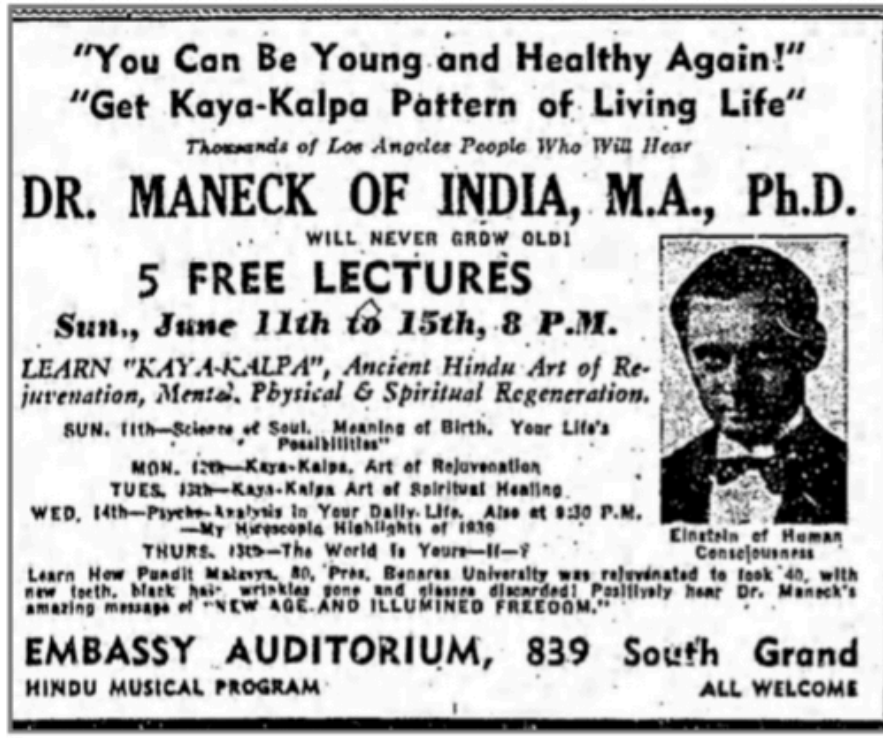
"You Can Be Young and Healthy Again!"
"Get Kaya-Kalpa Pattern of Living Life"
Thousands of Los Angeles People Who Will Hear
DR. MANECK OF INDIA, M.A., Ph.D.
WILL NEVER GROW OLD!
5 FREE LECTURES
Sun., June 11th to 15th, 8 P.M.
LEARN "KAYA-KALPA", Ancient Hindu Art of Rejuvenation, Mental, Physical & Spiritual Regeneration.
SUN. 11th—Science of Soul. Meaning of Birth. Your Life's Possibilities"
MON. 12th—Kaya-Kalpa. Art of Rejuvenation
TUES. 13th—Kaya-Kalpa Art of Spiritual Healing
WED. 14th—Psycho-Analysis in Your Daily Life. Also at 9:30 P.M. —My Horoscope Highlights of 1939
THURS. 15th—The World Is Yours—If—?
Einstein of Human Consciousness
Learn How Pandit Malaviya, 80, Pres. Benares University was rejuvenated to look 40, with new teeth, black hair, wrinkles gone and glasses discarded! Positively hear Dr. Maneck's amazing message of "NEW AGE AND ILLUMINED FREEDOM."
EMBASSY AUDITORIUM, 839 South Grand
HINDU MUSICAL PROGRAM
ALL WELCOME

Figure 4: Advertisement for "Dr. Maneck of India" offering a "Kaya-Kalpa Pattern of Living Life" from *The Los Angeles Times* in 1939.

claims that Malaviya was rejuvenated to look only forty years of age, grew new teeth and "discarded his glasses."

Equally vague claims were made in 1974 by a "yoga teacher" student of Dr Maneck, Lillian Carter, "a private instructor of yoga, hatha and raja" in an advert for a philosophy talk at Peninsula College in Washington State. Mrs. Carter claimed to have entered Samadhi under the instruction of "Guru Anklesaria" (Maneck) in 1936 and had been initiated into the "Kaya Kalpa Society" in 1938.[107]

Only in the early 1970s did the limits of biomedical models begin to get popular attention. The global exchange of people and ideas at this time accelerated to allow another revival of interest in yoga and soon after, Ayurveda.[108] The term *kāyakalpa* itself does not seem to have received a renaissance despite a few attempts at revival. In 1978, a Delhi-based luxury hotel Maurya marketed its "Kaya

107 Anon. 1974.

108 Newcombe 2012.

Kalpa Health Club" (alongside the Maya Shopping Arcade, an all-weather solar-heated pool and other amenities).[109] In 1981, there was also a short attempt to market a product called "Herbofit" as an "ayurvedic breakthrough" which "ensures the reconstitution and regeneration of the human tissues (kaya kalpa) in an easy to take capsule".[110] By this point "kayakalpa" largely seems to refer to any activity or medicinal compound which claims to rejuvenate the body. The term "kayakalpa" was also briefly revived when Deepak Chopra was gaining international attention for Ayurveda by appearing on The Oprah Winfrey Show as a representative of Maharishi Ayur-Ved; the language of *kāyakalpa* again was visible in some marketing during this period.[111]

Today, one of the few to actively market these techniques is Ram Pandeya who runs the Kayakalpa Alchemy Foundation in Glen Ellen, California, which aims "to educate, heal and enlighten today's humanity using ancient yet postmodern tools".[112] Pandeya describes his training in rejuvenation therapy as coming from a variety of sources, familial tantric traditions, academic knowledge from Allahabad University, as well as techniques gathered while travelling around India as a wandering sadhu. What he has been offering in California from 1979 under the name of "*kāyakalpa*" is an individualised rejuvenation technique, often involving *pañcakarman* cleansing practices, before the administration of specific remedies. He explains that the essence of *kāyakalpa* treatment is to purify the body, make it free from disease, and then rejuvenate. He also notes that with his *kāyakalpa* treatments he is doing 'energy work' based on *prāṇāyāma* from the *haṭhayoga* traditions, "they have to hold while they are holding the enema, they have to do certain breathing. This … technique comes from siddha." This is in contrast to simply ingesting ayurvedic or Tamil Siddha compounds which "can be taken by anybody".[113]

Although Ram Pandeya's treatment centre is unusual in its offering treatment under the term *kāyakalpa*, his emphasis on rejuvenation echoes more general global presentations of Ayurveda. The over-the-counter *rasayāna* formulations which "can be taken by anybody" such as Chyawanprash are extremely popular in contemporary India, as highlighted by Martin Bode and Francis Zimmerman's recent research in contemporary pharmaceutical presentations of Ayurveda in India.[114] When Maharishi Mahesh Yogi launched his own brand of Maharishi Ayur-Ved, it was again drawing on associations between yogis, Ayurveda and *rasāyana* products. Its flagship product in the promotion of "perfect

109 Anon. 1978.
110 Anon. 1981: Herbofit Advert.
111 Anon. 1993 and Stephenson 1994.
112 R. Pandeya and S. Pandeya 2017.
113 Personal interview with Ram Pandeya 29 July 2016.
114 Bode 2015. See also Dagmar Wujastyk 2015 and Zimmermann 2016.

health" was Maharishi Amrit Kalash, the "most important ayurvedic food supplement" which has as one of its main ingredients *amla* (Indian Gooseberry) in a multi-herbal compound.[115] Amongst the global population of upper-middle-class yoga practitioners, the milder *pañcakarman* treatments for rest and rejuvenation have come to exemplify Ayurveda in popular understanding.[116]

Yoga-*āsana* as therapy has become an accepted part of ayurvedic degree programmes in early twenty-first century India. Popular author David Frawley presents yoga and Ayurveda as a fully united system for "self-healing and self-realization".[117] Swami Ramdev, whose vision of yoga and Ayurveda is both popular and influential throughout India, lists the treatment methods of Ayurveda as consisting of *pañcakarma, rasāyana cikitsā* and *vājīkaraṇa* (treatment for infertility and virility, and aphrodisiacs), followed by a chapter devoted to "*Yoga* Therapy and *Āyurveda*".[118] A recently published guide to Ayurveda aimed at western audiences devoted substantial headed sections including:

9. Lifestyle and Behaviour Regimens in Ayurveda and in Yoga
10. Ayurvedic Therapies, *Panchakarma* and Materia Medica
11. The Cultivation of Consciousness

While the author of this book admits "it is one man's grasp of Ayurveda as a worldview and as a way of life," it is a fairly comprehensive presentation by a biomedically qualified doctor on contemporary practice of the subject.[119] This is an exposition of Ayurveda which is radically different from that presented in the early twentieth century.

CONCLUSION

This article has argued that the 1938 rejuvenation of Pandit Malaviya by the ascetic yogi Tapasviji Baba, might offer a forgotten window into how public presentations of Ayurveda were radically transformed during the twentieth century. Although undoubtedly part of the ayurvedic repertoire, *rasāyana* practice (male virility treatments excepted) was not a major feature of early twentieth century presentations of Ayurveda. By the late twentieth century, ayurvedic *rasāyana* formulations and *pañcakarman* treatments for rejuvenation were heavily advertised aspects of the ayurvedic repertoire, albeit in a somewhat gentler form than the classical texts recommend. The importance given in reports of

115 Maharishi Ayur-Ved 2004 and Newcombe 2008.
116 See Langford 2002 as well as Zimmermann 1992; Zysk 2001; Reddy 2002, 2004.
117 Frawley 1999.
118 Balkrishna 2013: xiii.
119 Ninivaggi 2010: xiii–xiv.

Malaviya's rejuvenation to *pañcakarman* as a preliminary treatment to a successful *kuṭīpraveśika* treatment, as well as the emphasis on *pañcakarman* in Anand Swami's practice may be seen as precursor to the popularity of *pañcakarman* treatments from the 1980s onwards. By the twenty-first century, yoga *āsana* and *prāṇāyāma* became incorporated into government-sanctioned ayurvedic degree programmes. Yogis and the practices of yoga became popularly and respectfully associated with both Ayurveda and promoting longevity more generally. Pandit Malaviya's 1938 "health cure" can be seen as a reifying and accelerating factor in these transformations of tradition.

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REFERENCES

Alter, Joseph S. (2004). *Yoga in Modern India: The Body between Science and Philosophy*. Princeton, N.J., and Oxford: Princeton University Press. URL: https://press.princeton.edu/titles/7886.html.

— (2005a). *Asian Medicine and Globalization*. Philadelphia: University of Pennsylvania Press. DOI: https://doi.org/10.9783/9780812205251.

— (2005b). "Modern Medical Yoga: Struggling with a History of Magic, Alchemy and Sex". In: *Asian Medicine* 1.1, pp. 119–46. DOI: https://doi.org/10.1163/157342105777996818.

— (2010). "A Therapy to Live By: Public Health, the Self and Nationalism in the Practice of a North Indian Yoga Society". In: *Medical Anthropology Quarterly* 17.4, pp. 309–35. DOI: https://doi.org/10.1080/01459740.1997.9966144.

Alter, Joseph S. (2011). *Moral Materialism: Sex and Masculinity in Modern India*. New Delhi: Penguin.

— (2014). "Shri Yogendra: Magic, Modernity and the Burden of the Middle-Class Yogi". In: ed. by Mark Singleton and Ellen Goldberg. New York: Oxford University Press, pp. 60–82. DOI: https://doi.org/10.1093/acprof:oso/9780199938704.003.0004.

Anantha Murthy, T. S. (1968). *Biography of Sreeman Tapaswiji Maharaj: a Mahatma Who Lived for 185 Years. Born 1770 AD – Maha Samadhi 1955 AD*. Bangalore: Raja Power Press.

Anklesaria, Maneck K. (ca. 1930). *'Kaya-Kalpa' Life Guidance Institute of the Initiates of Master Occultists' Presents to the American Public Their Grand President Maneck K. Anklesaria, Bsc, Ma, Phd of Bombay, India, in a Course of Twelve Lessons on Kaya-kalpa, Health Culture, Psychology, Psycho-anlaysis Mind Control, Hindu Philosophy and Alchemy of Happy Consciousness for the Individual Higher Edification in the Science of Living Conscious, Positive and Harmonious Life*. Pamphlet. Tacoma, Washington; Miami, Florida; Dallas, Texas; San Francisco, California; Spokane, Washington; and Hollywood, California.

Anon. (Feb. 4, 1927a). "All Religions to Be Made One: That is Belief of Bombay Scholar Visiting Miami for Lecture Series". In: *The Miami News*, p. 4.

— (1927b). "Voronoff's Method of Rejuvenation". In: *The Lancet* 209.5400, pp. 446–47. DOI: https://doi.org/10.1016/s0140-6736(00)72966-7.

— (Jan. 2, 1938a). "Dr. Nixon's 'Vi-Tabs'". In: *Calcutta Illustrated Weekly*, p. 77.

— (Jan. 2, 1938b). "Nervinus". In: *The Hindu*, p. 2.

— (Jan. 19, 1938c). "Rejuvenation of a Pandit". In: *The Daily Telegraph and Morning Post*, p. 10.

— (Feb. 27, 1938d). "172-Year-Old Youth Maker Wants Gandhi for Patient". In: *Monroe Morning World*, p. 1.

— (Feb. 27, 1938e). "Yogi Turns Back Years? Follower of Gandhi Reported 'Rejuvenated' by 'Ayurvedic Medicine'". In: *Arizona Republic*, p. 6.

— (Mar. 13, 1938f). "Pandit Malaviya's Health Cure". In: *The Hindu*, p. 9.

— (Mar. 20, 1938g). "French Scientists Triumph Over Old Age: Rejuvenin". In: *Calcutta Illustrated Weekly*, p. 5.

— (Aug. 27, 1938h). "Kaya Kalpa Treatment". In: *The Times of India*.

— (June 10, 1939). "You Can Be Young and Healthy Again!" In: *The Los Angeles Times*, p. 16.

— (Nov. 13, 1946). "Obituary: Pandit Malaviya – A Pioneer of Hindu Nationalism". In: *The Times*, p. 9.

— (Nov. 19, 1974). "Lillian Carter Philosophy Talk at Peninsula College". In: *The Daily News*, p. 8.

— (May 16, 1978). "The Garden Resort at the Heart of the Capital". In: *The Times of India*.

— (Nov. 24, 1981). "Herbofit". In: *The Times of India*.

— (Sept. 25, 1993). "Yogiraj Vethathiri Maharishi". In: *Arizona Daily Star*, p. 24.

Arnold, David (1993). *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India*. London: University of California Press.

Augier, F., E. Salf, and J. B. Nottet (1996). "Le Docteur Samuel Serge Voronoff (1866–1951) ou 'la quête de l'eternelle jeunesse'". In: *Histoire Des Sciences Medicales* 30.2, pp. 163–71. ISSN: 0440-8888. URL: http://www.biusante.parisdescartes.fr/sfhm/hsm/HSMx1996x030x002/HSMx1996x030x002x0163.pdf (on 19 Mar. 2018).

Bahdur, M. R. Ry. Rao and M. C. Koman Avargal (1921). *Report of the Special Committee Appointed by the Joint Board, the Dravida Vaidya Mandal and the Madras Ayurveda Sabha, in Reply to the Report on the Investigations into the Indigenous Drugs*. Srirangam: Sri Vani Vilas Press.

Balkrishna, Acharya (2013). *A Practical Approach to the Science of Ayurveda: A Comprehensive Guide for Health Living*. Haridwar: Divya Prakashan/Divya Yog Mandir Trust.

Barois, Christèle (forthcoming). "Medical Practices of Yogins in Medieval India. The Testimony of the *Dharmaputrikā*". Forthcoming.

Berger, Rachel (Jan. 15, 2008). "Ayurveda, State and Society in Colonial North India, 1895–1947". PhD thesis. Cambridge: University of Cambridge. URL: https://www.repository.cam.ac.uk/handle/1810/252066 (on 4 Mar. 2018).

— (2013). *Ayurveda Made Modern: Political Histories of Indigenous Medicine in North India, 1900-1955*. London: Palgrave Macmillan. DOI: 10.1057/9781137315908.

Bevilacqua, Daniela (2017). "Let the Sādhus Talk. Ascetic understanding of Haṭha Yoga and Yogāsanas". In: *Religions of South Asia* 11.2. ISSN: 1751-2697. URL: https://www.academia.edu/25569049 (on 4 Mar. 2018). In press.

Bhaktavatsalam, T. and N. Rajoo Naidu (1911). *The Sage of Narayanavaram: His Life, Miracles and Prophecies*. Madras: R. Vivekananda Press, Vepery. URL: https://archive.org/details/in.ernet.dli.2015.203920 (on 4 Mar. 2018).

Birch, Jason (2018). "Premodern Yoga Traditions and Ayurveda. Preliminary Remarks on Shared Terminology, Theory and Praxis". In: *History of Science in South Asia* 6. In press.

Bode, Maarten (2008). *Taking Traditional Knowledge to the Market: The Modern Image of the Ayurvedic and Unani Industry, 1980–2000*. New Perspectives in South Asian History 21. New Delhi: Orient Blackswan Pvt. Ltd. ISBN: 9788125033158. URL: https://archive.org/details/BodeTakingTraditionalKnowledgeToTheMarket.2008600dpilossy (on 6 Mar. 2018).

— (2015). "Assembling Cyavanaprāsh, Ayurveda's Best-selling Medicine". In: *Anthropology & Medicine* 22.1, pp. 23–33. DOI: 10.1080/13648470.2015.1005285.

Central Council for Indian Medicine (2014). *Syllabus for Post-Graduate Course in Ayurved*. Central Council for Indian Medicine. URL: https://www.ccimindia.org/ayurveda-syllabus.php (on 3 Mar. 2018).

— (2017). *Undergraduate Syllabus for Third Year BAMS*. Central Council for Indian Medicine. URL: https://www.ccimindia.org/downloads/3rd%20year%20syllabus.pdf (on 3 Mar. 2018).

Clark, Matthew (2006). *The Daśanāmī-Saṃnyāsīs: The Integration of Ascetic Lineages into an Order*. Leiden, The Netherlands: Brill. ISBN: 9004152113.

Deslippe, Phillip (forthcoming). "The Swami Circuit". In: *Journal of Yoga Studies* 1.1. Forthcoming.

Dey, Kanny Lall and William Mair (1896). *The Indigenous Drugs of India: Short Descriptive Notices of The Principal Medicinal Products Met with in British India*. 2nd ed. Calcutta: Thacker, Spink & Co. URL: https://archive.org/details/b21914114 (on 3 Mar. 2018).

Frawley, David (1999). *Yoga & Ayurveda: Self Healing and Self-Realization*. Twin Lakes, WI: Lotus Press. ISBN: 978-0914955818.

Haṃsasvarūpa Mahārāja (1903?). षट्चक्रनिरूपणचित्र, भाष्य समलंकृतं भाषाटीकोपेतञ्च = *Shatchakra Niroopan Chittra with Bhashya and Bhasha, Containing the Pictures of the Different Nerves and Plexuses of the Human Body with Their Full Description Showing the Easiest Method How to Practise Pranayam by the Mental Suspension of Breath through Meditation Only by Shree Swami Hansa Swaroop*. Muzaffarpur, Bihar: Trikutivilas Press. URL: https://wellcomecollection.org/works?query=hamsasvarupa (on 3 Mar. 2018).

Harrison, Mark (1994). *Public Health in British India: Anglo-Indian Preventive Medicine 1859-1914*. Cambridge: Cambridge University Press.

Hausner, Sondra L. (2007). *Wandering with Sadhus: Ascetics in the Hindu Himalayas*. Bloomington: Indiana University Press. URL: http://www.iupress.indiana.edu/product_info.php?products_id=68386.

Hodges, Sarah (2008). *Contraception, Colonialism and Commerce: Birth Control in South India, 1920–1940*. Aldershot: Ashgate. DOI: 10.4324/9781315259383.

Honigberger, John Martin (1852). *Thirty-five Years in the East: Adventures, Discoveries, Experiments and Historical Sketches Relating to the Punjab and Cashmere in Connection with Medicine, Botany, Pharmacy and Together with an Original Materia Medica and A Medical Vocabulary in Four European and Five Eastern Languages*. London, N.Y., and Calcutta: H. Baillière. URL: https://archive.org/details/thirtyfiveyearsi00honi (on 4 Mar. 2018).

Horowitz, Y., D. Greenberg, and G. Ling (2002). "Acrodynia: A Case Report of Two Siblings". In: *Archives of Disease in Childhood* 86, p. 453. DOI: https://doi.org/10.1136/adc.86.6.453.

India Infoline News Service (Feb. 6, 2016). *India Consumer: Patanjali Is Disrupting India's Consumer Space*. URL: https://www.indiainfoline.com/article/news-top-story/india-consumer-patanjali-is-disrupting-india%E2%80%99s-consumer-space-116020600292_1.html (on 3 Mar. 2018). Source: HSBC.

Jacobs, Stephen (2015). *The Art of Living Foundation: Spirituality and Wellbeing in the Global Context*. Aldershot: Ashgate. DOI: https://doi.org/10.4324/9781315612621.

Kędzia, Ilona Barbara (2017). "Mastering Deathlessness: Some Remarks on Kaṟpam Preparations in the Medico-Alchemical Literature of the Tamil Siddhas". In: *History of Science in South Asia* 5.2 (Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia).

Lal, Kanhaiya (Mar. 20, 1938). "Shut in a Sealed Chamber for Six Weeks: Pandit Malaviya's Kaya Kalp and How It Was Done". In: *The Illustrated Weekly of India*, pp. 26–7.

Langford, Jean M. (2002). *Fluent Bodies: Ayurvedic Remedies for Postcolonial Imbalance*. London: Duke University Press. DOI: https://doi.org/10.1215/9780822384113.

Maharishi Ayur-Ved (2004). *Maharishi Amrit Kalash*. Pamphlet.

Mallinson, James (2007). *The Khecarīvidyā of Ādinātha. A Critical Edition and Annotated Translation of an Early Text of Haṭhayoga*. London: Routledge. DOI: https://doi.org/10.4324/9780203938263.

Mariau, Daniel (2008). "Malaviya, Pandit Madan Mohan (1861–1964)". In: *Encyclopedia of Hinduism*. Ed. by D. Cush, C. Robinson, and M. York. London: Routledge, pp. 485–6.

Maridassou, Paramananda (1938). *Medicine traditonnelle de l'Inde: le rajeunissement par le kayacarpam*. Pondicherry, India: Impremerie Sainte Anne.

Mazars, Guy (2006). *A Concise Introduction to Indian Medicine (La Medécine indienne)*. Delhi: Montal Banarsidass.

Misra, Jagannath Prasad (2016). *Madan Mohan Malaviya and the Indian Freedom Movement*. Oxford Scholarship Online: Oxford University Press. ISBN: 9780199463756. DOI: 10.1093/acprof:oso/9780199463756.001.0001.

Mooss, N. S. Vayaskara (1938). *The All India Ayurvedic Directory 1938. Second Year of Issue*. Vol. 2. Kottayam: Vaidya Sarathy. URL: https://archive.org/stream/AIADVolume11937/AIAD%20volume%202%201938 (on 4 Mar. 2018).

Mukharji, Projit Bihari (2016). *Doctoring Traditions: Ayurveda, Small Technologies and Braided Sciences*. Chicago: Chicago University Press. DOI: https://doi.org/10.7208/chicago/9780226381824.001.0001.

Narayan, Kirin (1989). *Storytellers, Saints, and Scoundrels: Folk Narrative in Hindu Religious Teaching*. Contemporary Ethnography Series. Philadelphia: University of Pennsylvania Press. URL: https://www.degruyter.com/view/product/454153.

Newcombe, Suzanne (forthcoming). "Yoga in Modern India". In: *Religion and Medicine in Asia*. Ed. by Pierce Salguero and Michael Stanley-Baker. Manchester: Manchester University Press. Forthcoming.

— (2008). "Ayurvedic Medicine in Britain and the Epistemology of Practicing Medicine in "Good Faith"". In: *Modern and Global Ayurveda: Pluralism and Paradigms*. Ed. by Dagmar Wujastyk and Fredrick M. Smith. Albany, NY: SUNY Press, pp. 257–284.

— (2012). "Global Hybrids? 'Eastern Traditions' of Health and Wellness in the West". In: *The Gaze of the West and Framings of the East*. Ed. by Shanta Nair-Venugopal. New York: Palgrave Macmillan. Chap. 13, pp. 202–217. DOI: 10.1057/9781137009289_13.

— (2017). "The Revival of Yoga in Contemporary India". In: *Oxford Research Encyclopaedia*. DOI: 10.1093/acrefore/9780199340378.013.253.

Ninivaggi, Frank John (2010). *A Comprehensive Guide to Traditional Indian Medicine for the West*. New York: Rowman & Littlefield Publishers, Inc. ISBN: 978-1442207097.

Pandeya, Ram and Sophie Pandeya (2017). *About Us*. URL: http://www.kaya-kalpa.org/about-us/ (on 10 Jan. 2018).

Ramasubban, Radhika (1982). *Public Health and Medical Research in India: Their Origins under the Impact of British Colonial Policy*. SAREC Report 1982: 4. Stockholm: Swedish Agency for Research Cooperation with Developing Countries.

Reddy, Sita (2002). "Asian Medicine in America: The Ayurvedic Case". In: *Annals of the American Academy of Political and Social Science* 583, pp. 97–121. DOI: https://doi.org/10.1177/0002716202583001007.

— (2004). "The Politics and Poetics of 'Magazine Medicine': New Age Ayurveda in the Print Media". In: *The Politics of Healing: Histories of Alternative Medicine in Twentieth-Century North America*. Ed. by Robert D. Johnston. London: Routledge, pp. 207–30.

Rinehart, Robin (1999). *One Lifetime, Many Lives: The Experience of Modern Hindu Hagiography*. Atlanta, Georgia: Scholars Press.

Sharma, M. H. Rama (1940). *The Life and Experiences of Tapasviji Maharaj of Kotban*. Bangalore: Saraswathi Power Press.

Singleton, Mark (2010). *Yoga Body: The Origins of Modern Posture Practice*. Oxford: Oxford University Press. ISBN: 9780195395358. DOI: 10.1093/acprof:oso/9780195395358.001.0001.

Sivananda, Swami (1945). *Health & Life*. Rishikesh, India: Swami Chitananda - Divine Life Society Trust.

Slatoff, Zoë (Oct. 3, 2017). *Seeds of Modern Yoga: the Confluence of Yoga and Ayurveda in the Āyurvedasūtra*. URL: http://www.ayuryog.org/blog/seeds-modern-yoga-confluence-yoga-and-ayurveda-%C4%81yurvedas%C5%ABtra (on 3 Mar. 2018).

Stephenson, Mary (Aug. 24, 1994). "Healers Offer Ancient Healing". In: *The Taos News*, p. 24.

Strauss, Sarah (2005). *Positioning Yoga: Balancing Acts Across Cultures*. Oxford: Berg. ISBN: 9781859737347. DOI: 10.5040/9781474215374.

Swami, Anand (1939). *Kayakalpa*. Colombo, Ceylon.

Usman, Mahomed (1923). *The Report of the Committee on the Indigenous Systems of Medicine, Madras [1921–1923]*. Tech. rep. Madras: Government of Madras, Ministry of Local Self-Government, Committee on the Indigenous Systems of Medicine. 2v.

Warrier, Maya (2011). "Modern Ayurveda in Transnational Context". In: *Religion Compass* 5.3, pp. 80–93.

Weiss, Richard S. (2009). *Recipes for Immortality: Medicine, Religion and Community in South India*. New York: Oxford University Press. ISBN: 9780195335231. DOI: 10.1093/acprof:oso/9780195335231.001.0001.

White, David Gordon (1996). *The Alchemical Body: Siddha Traditions in Medieval India*. London: University of Chicago Press. ISBN: 9780226149349.

— (2009). *Sinister Yogis*. Chicago: University of Chicago Press. ISBN: 9780226895130. DOI: doi.org/10.7208/chicago/9780226895154.001.0001.

Wujastyk, Dagmar (2015). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature." In: *Aion* xxxvii, pp. 55–77. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 3 Mar. 2018).

— (2017). "Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature". In: *History of Science in South Asia* 5.2, pp. 1–36. URL: http://hssa-journal.org.

Wujastyk, Dagmar, Suzanne Newcombe, and Christèle Barois (2017). "Introduction". In: *History of Science in South Asia* 5.1 (Transmutations: Rejuvenation, Longevity, and Immortality Practices in South and Inner Asia), pp. i–xvii.

Wujastyk, Dagmar and Fredrick M. Smith (2008). *Modern and Global Ayurveda: Pluralism and Paradigms*. Albany, NY: SUNY Press. ISBN: 978-0-7914-7489-1.

Wujastyk, Dominik (2003). *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. 3rd ed. London: Penguin. ISBN: 0-140-44824-1.

— (2008). "The Evolution of Indian Government Policy on Ayurveda in the Twentieth Century". In: *Modern and Global Ayurveda: Pluralism and Paradigms*. Ed. by Dagmar Wujastyk and Fredrick M. Smith. New York: SUNY Press, pp. 43–76. ISBN: 978-0-7914-7489-1. URL: https://www.academia.edu/492294/ (on 3 Mar. 2018).

— (2009). "Interpreting the Image of the Human Body in Premodern India". In: *International Journal of Hindu Studies* 13.2, pp. 189–228. ISSN: 1022-4556. DOI: 10.1007/s11407-009-9077-0.

Wujastyk, Dominik (2011). "The Path to Liberation through Yogic Mindfulness in Early Ayurveda". In: *Yoga in Practice*. Ed. by David G. White. Princeton, NJ: Princeton University Press, pp. 31–42.

Zimmerman, Marion (2007). *A Short Introduction: The Tamil Siddhas and the Siddha Medicine of Tamil Nadu*. München.

Zimmermann, Francis (1992). "Gentle Purge: The Flower Power of Ayurveda". In: *Paths to Asian Medical Knowledge: A Comparative Study*. Ed. by Charles Leslie and Allen Young. Delhi: Munshiram Manohaial, pp. 209–223. ISBN: 9780520073173. DOI: 10.1525/california/9780520073173.001.0001.

— (2016). "Rasāyana Today on the Market of Proprietary Medicines. Paper presented at the AyurYog workshop "Rejuvenation, longevity, immortality. Perspectives on rasāyana, kāyakalpa and bcud len practices"".

Zvelebil, Kamil (1996). *The Siddha Quest for Immortality*. Oxford: Madrake Press. ISBN: 1-869928-43-1.

Zysk, Kenneth (1993). "The Science of Respiration and the Doctrine of Bodily Winds in Ancient India". In: *Journal of the American Oriental Society* 113.2, pp. 198–213. DOI: 10.2307/603025. URL: http://www.jstor.org/stable/603025.

— (2001). "New Age Āyurveda or What Happens to Indian Medicine When It Comes to America". In: *Traditional South Asian Medicine* 6, pp. 10–26.

Please write to ⟨wujastyk@ualberta.ca⟩ to file bugs/problem reports, feature requests and to get involved.
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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Mastering Deathlessness: Some Remarks on Kaṟpam Preparations in the Medico-Alchemical Literature of the Tamil Siddhas

Ilona Barbara Kędzia

Jagiellonian University

This paper aims at presenting remarks about the practices oriented towards rejuvenation, longevity and even immortality described in Tamil Siddha medico-alchemical literature.[1] Those medico-alchemical practices relate mainly to the use of certain substances and preparations for internal and external application called *kaṟpam*.[2] This essay describes and exmines several selected substances and procedures, such as the use of black herbs (*karumūlikai*), the "triple salt" (*muppu*), the "tied salt" (*kaṭṭuppu*), mercury (*iracam*) and urine (*amuri*) related to *kaṟpam* therapy, along with the effects ascribed to the *kaṟpam* preparations in Tamil Siddha literature. As observed in the examined passages, *kaṟpam* therapies seem to be closely connected with the discipline of yoga in medico-alchemical texts. The affinity between the purpose of medico-alchemical preparations on the one side, and of yogic practices on the other, such as the stabilisation and preservation of the physical body, as well as the synergy of the methods of both disciplines stated by the medico-alchemical Tamil Siddha literature suggest a close relation between Siddha medicine, alchemy and yoga.

The chronology of Tamil Siddha medico-alchemical literature remains uncertain, due to the lack of critical and comprehensive studies done so far. Often scholars date texts that are traditionally accepted as authoritative works of Tamil

1 The medico-alchemical stream of Tamil Siddha literature is one of the few categories of Siddha texts recognized by scholars. On the classification of the Tamil Siddhas and their literature see, e.g., Venkatraman 1990; Ganapathy 1993: 22–24; Zvelebil 1993: 17–19, 2003: 19–20. On the content of non-medical Tamil Siddha literature see, e.g., Buck 1976; Venkatraman 1990; Zvelebil 1993; Meenakshi 1996.

2 The term *kaṟpam* is the Tamilized version of the Sanskrit word *kalpa*, "proceeding", "rule", "treatment", "medicinal compound."

Siddha medico-alchemical literature to the period starting from the 15th–16th century onwards. However, the material contained in them most probably derives from earlier centuries.[3] At the same time, it is also probable that the texts include large interpolations of recent origin. It is estimated that the number of Tamil Siddha medico-alchemical texts encompasses hundreds of works preserved on palm-leaf manuscripts, only some of which have been printed so far. The texts are scattered and unorganized and it is assumed that the vast amount of manuscripts still remains in private hands.[4]

1. SOURCES

This essay is based on the reading of selected Tamil Siddha medico-alchemical texts. The text most widely cited here is the *Pōkar Kaṟpaviti* (PKV)[5] by Siddha Pōkar.[6] It is almost entirely dedicated to prescriptions for drugs called *kaṟpam*. It consists of 342 stanzas divided into ninety-four small subsections, each of which deals with a particular topic, often with a particular prescription. The text in major part contains practical recipes for preparations with herbal, animal, mineral and metallic ingredients. Prescriptions usually provide lists of ingredients and a general description for the method of preparation, some of them also list the diseases against which the preparation can be used, as well as other effects

3 See, e.g., Scharfe 1999: 609–612; Weiss 2009: 48–50; Zysk 2013: 182–183.

4 See Venkatraman 1990: 15; Zvelebil 2003: 139. Recently, a project entitled "Conservation, Documentation and Preservation of the Knowledge of Siddha Medicine" headed by Brigitte Sébastia and supported by the British Library, was carried out at the French Institute of Pondicherry (IFP) in order to preserve, catalogue and digitise extant Siddha manuscripts. One of the aims of the project was to put the digitised manuscripts online on the website of the British Library (see the project website, Sébastia 2015–2017).

5 I have used the edition of the text with the commentary edited by Citta maruttuva ilakkiya ārāycci āvaṇattuṟai, citta maruttuva maiya ārāycci nilaiyam in Chennai on the basis of the palm leaf manuscripts collected at the Maharaja Serfoji's Saraswati Mahal Library in Thanjavur.

6 In scholarly publications other transcriptions of the Tamil name "Pōkar" are also used, such as "Pōgar", "Bōgar" or "Bhōgar." "Pōkar" is a Tamil name which derives from the Sanskrit noun *bhoga*, "enjoyment", "eating", "pleasure", "wealth." The Siddha called Pōkar, considered to be the author of the text, is a highly-esteemed figure among traditional Siddha practitioners. However, it is possible that among Tamil Siddhas there were several authors with the name "Pōkar" (see Venkatraman 1990: 65). The most famous one probably could be regarded the author of the monumental work *Captakāṇṭam* ("*Seven Chapters*"), in which marvellous, and sometimes phantasmagorical, journeys undertaken by the author with the use of mercurial pills are described. On the biography and works of Siddha Pōkar see, e.g., Ganapathy 2003; Little 2006; Natarajan 2009; Kędzia 2017.

of the drugs. In this essay, I also refer to the works of other Siddhas that elaborate on the subjects relevant for the present study that are not discussed adequately in the text of Pōkar. Those texts include two works ascribed to Siddha Akastiyar,[7] namely the *Kuru Nūl Muppu 50* (KNM), consisting of 49 stanzas, and the *Kaṟpa Muppu Kuru Nūl 100* (KMKN), consisting of 103 stanzas. Both texts deal mostly with "triple salt" (*muppu*), and they provide recipes for some *kaṟpam* preparations as well. Yet another Siddha whose works have been used for the present research is Yākōpu alias Irāmatēvar,[8] the prolific author of at least seventeen works,[9] which are highly esteemed and used as manuals by contemporary Siddha doctors, especially with regard to metallic preparations.[10] Cita-

7 Akastiyar is traditionally considered to be the founder of the Tamil Siddha medical system. He is claimed to be the author of more than two hundred texts in Tamil (see Zvelebil 1993: 32). According to the common view, he is credited with founding the first Sangam and with composing the first grammar of the Tamil Language (Sivaraja Pillai 1930: 36–38). However, it has been indicated by T. P. Meenakshisundaran that the language of the medical writings of Akastiyar cannot be older than the fifteenth century (T. P. Meenakshisundaran, quoted by Zvelebil 2003: 71). It is also highly dubious that a single person composed all of the works ascribed to Akastiyar. According to Zvelebil, in the medieval and modern Tamil tradition, several authors of the same name (with some variants, such as "Agastya", "Akattiyaṉ", "Akattiyar") have been merged into one single personage credited with some supernatural characteristics (see Zvelebil 1992: 235–261.). The name "Akastiyar" is a Tamil version of Sanskrit "Agastya", the name of the revered Vedic sage, whose figure is well attested in the Sanskrit literature, starting from the *Ṛgveda*. See "Agastya" in Macdonell and Keith 1912: 6–7.

8 Siddha Yākōpu probably lived between the fifteenth and seventeenth centuries (Natarajan 2004: 257). However, Venkatraman places his works in the later period, i.e., between the seventeenth and the eighteenth century (Venkatraman 1990: 63). The author introduces himself as a person originally called "Irāmatēvar" in several passages in his texts, and provides a story about the origin of his family, which belongs to a lineage of warriors. According to autobiographical accounts contained in his texts, Irāmatēvar travelled to Mecca in search of alchemical knowledge. There he converted to Islam, underwent circumcision and received the Muslim name "Yākōpu." On the life of Yākōpu, see Natarajan 2004; Venkatraman 1990: 63–64; Kędzia 2017.

9 Yākōpu is credited with seventeen texts, claimed to be composed after his conversion to Islam. The list of his texts, provided by Ji. Irāmacāmik Kōṉ, the general publisher of Yākōpu's works, includes the following titles: *Vaittiya Cintāmaṇi Eḷunūṟu, Kurunūl Aimpatti Aintu, Cuṇṇakkāṇṭam Aṟunūṟu, Cuṇṇam Munnūṟu, Centūra Cūsti[ram] Nūṟṟu Aimpatu, Cūstiram Aimpatti Aintu, Vakārak Kaḷaṅku Munnūṟu, Pañcamittiram Munnūṟu, Taṇṭakam Nūṟṟu Pattu, Cūstiram Aimpatti Aintu, Iṭaipākam Patiṉāṟu, Ceypākam Patiṉāṟu, Vaitya Vātacūstiram Nāṉūṟu, Vaittiyam Munnūṟu*. To this list the text entitled *Kallāṭam*, traditionally ascribed to Yākōpu, is also added (see VaiCin: 2). Moreover, before his travel to Mecca, Irāmatēvar may have also composed a few texts, for example *Civayōkam Irunūṟu* (see Natarajan 2004: 258).

10 Personal communication from Dr Kaviarasu Balakrishnan, traditional Siddha practitioner. According to Dr Balakrishnan, Yākōpu's works are the prominent works on alchemy of the Tamil Siddha tradition.

tions from the *Cuṇṇakkaṇṭam 600* (CuṇKaṇ),[11] consisting of 605 stanzas, which provide many recipes related to *cuṇṇam*[12] preparations, as well as from the *Vaittiya Kallāṭam* (VK),[13] which is especially interesting with regard to its language as it contains manifold riddles, were the most relevant for the present paper. The *Ñāṉakaṟpam* 222 (ÑK) of Siddha Pulastiyar has also been referred to.[14] As indicated by the title, the text consists of 222 stanzas, and concerns subjects related to medicine, alchemy and yoga. I will also refer to an important older text that is usually not included among the medico-alchemical literature of the Tamil Siddhas, namely the *Tirumantiram* by Tirumūlar[15] (twelfth century)[16]. The *Tirumantiram* is often regarded as a foundational text of Tamil Siddha literature, including the medico-alchemical stream. The text consists of nine chapters called *tantiram* that comprise over 3000 verses, and it deals with a number of subjects, primarily yoga and Śaiva philosophy.

The content of the literature of the medico-alchemical stream of the Tamil Siddha tradition covers a wide spectrum of subjects, including medicine, alchemy, yoga, magic, etc. The number and choice of themes can vary significantly from one text to another. The texts often have the form of practical manuals, especially for certain medical and alchemical preparations. However, the prescriptions are frequently not provided with details necessary for the procedure and

11 I have used the printed edition provided with the modern commentary.

12 *cuṇṇam/cuṉṉam* is a variety of drug prepared from metals, white in colour and possessing qualities similar to calcium. It is regarded as very potent. It is obtained with the use of *ceyanīr* (a pungent liquid prepared by exposing the mixture of minerals to night dew), fuller's earth and acids. See *cuṉṉam* in Sambasivam Pillai 1931–1994.

13 The *Vaittiya Kallāṭam* consists of three parts, dealing with medicine, alchemy and yoga, respectively. The first and the longest medical part, which has been used for the present study, contains 53 stanzas that provide recipes for medical preparations against various diseases, and is accompanied by an explanatory commentary.

14 In contrast to the above-mentioned Siddhas, no information about the life of Siddha Pulastiyar has been found in the available sources.

15 The twelfth-century text *Tiruttoṇṭarpurāṇam* recounts a story about the author of the *Tirumantiram*. According to the tale, the author was a yogi who travelled to South India from the north. On his way, the yogi saw a herd of cows weeping over the body of a cowherd called Mūlan, who had died suddenly from a snake bite. The yogi secured his own body in a safe place and, having migrated into the corpse of the deceased cowherd, he led the cows to their home. Remaining in the cowherd's body, the yogi attained "real knowledge" (*meyñāṉam*). Then he sat down in meditation for three thousand years, composing the three thousand verses of the *Tirumantiram* at the rate of one verse per year. See Venkatraman 1990: 46–47.

16 The date of the *Tirumantiram* remains uncertain. However, as demonstrated by Goodall on the grounds of the conceptual content of the text, most probably it cannot be earlier than the twelfth century. See Goodall 1998: xxxvii-xxxix, n. 85; Goodall 2000: 213, n. 27.

are sometimes hardly understandable without a commentary, because of the peculiar esoteric language, which contains colloquial Tamil forms, cryptic symbolic expressions and ambiguous technical terms of the traditional lore. The use of the symbolic and equivocal "twilight language" (Tamil: *cūṉiya-campāṣaṉai*, "discourse on the void") is considered to be a common feature of the Siddha texts, also beyond the Tamil tradition. Such language, among other possible purposes, may serve to protect the great truths of the Siddha doctrine from profanation by uninitiated persons. Through the use of colloquial expressions, it may allow persons outside the literary elite to access Siddha teachings. Symbolic expressions may also be used to convey mystical experiences, expression of which remains beyond the abilities of ordinary language.[17] Interestingly, in Tamil Siddha medico-alchemical literature, even simple recipes against common diseases may be intentionally presented in a highly perplexing way. In some texts, information necessary for the preparation, such as names of crucial ingredients, instruments or doses, have been hidden in rebuses and riddles, the solving of which is frequently impossible without a commentary. The riddles are often based on word-play with the use of synonymous words. For example, the solution of the riddle "join the mother to the beginning of lead"[18] is "clove" (*ilavaṅkam*), because when the synonymous words of the word "mother" (*avvai*), i.e., *ila*,[19] is added to the beginning of the word "lead" (*vaṅkam*), the word *ilavaṅkam* ("clove") will be obtained. Another example is based on the simily between Tamil letters and numbers: "add the mother (*tāy*) to the eighty (*eṇpatu*)".[20] In the Tamil system of writing, the numerals "8" and "0" of number "80" have a very similar shape to the letters "a" and "ya." If we add yet another synonymous word for "mother", i.e., *kāntai* ("wife", "woman") to the cluster "a+ya", we obtain the word *ayakkāntai*, which is almost identical with *ayakkāntam*, i.e., the Tamil Siddha term for lodestone.[21] The use of such an enigmatic language is also found in esoteric yogic texts which contain passages concerning spiritual practices aimed at obtaining liberation. One remarkable example of such esoteric passages is the whole seventeenth chapter of the ninth section (*tantiram*) of the *Tirumantiram* entitled *cūṉiya-campāṣaṉai* ("Discourse on the void") or *maṟaiporuṭ kūṟṟu* ("Speech

17 See Ganapathy 2004: 3–6.

18 VK: 32:3 […]*vaṅkamuta lavvaic cērttuc* […].

19 The word used in ancient times in addressing a woman in a familiar manner. See *ila* in the University of Madras's *Tamil Lexicon* (1924–1936).

20 VK: 49: […] *eṇpatoṭu tāyai cērttu* […]

21 This method of encoding, based on the similarity between the visual form of the Tamil numerals and the letters is more common in the Tamil Siddha tradition, also beyond the medico-alchemical stream. One remarkable example is number "82" which has an important meaning for the Tamil Siddhars. Numbers "8" and "2" look very similar to Tamil letters "a" and "u", so the number "82" is used to denote the sacred syllable "*aum*."

on secret sense"). The chapter consists of seventy stanzas composed in symbolic and highly ambiguous language and it concerns yogic practices which aim at liberation.[22]

The view that rejuvenation and long life can be achieved through certain practices is well-attested in Tamil Siddha medico-alchemical literature. Moreover, in some texts it is also suggested that some preparations and therapies may even bestow immortality.[23] Nonetheless, the concept of immortality is not elaborated in the consulted medico-alchemical texts. From the context, it may be inferred that immortality, as conceived by the medico-alchemical Siddha writers, is related to the preservation of a prosperous, youthful and handsome physical body, which is often suggested to be the result of the application of the described preparations. In the consulted texts, it is not explicitly stated what the aim of the attainment of such a body is. The pursuit of an immortal body found in medico-alchemical texts may indicate a link between yoga and medicine within the Tamil Siddha tradition. Bodily immortality and the preservation of youthfulness are repeatedly stated to be a result of yogic practices in the *Tirumantiram*. The author claims that both the body and the soul are equally important and interdependent entities, and the body is considered to be indispensable for achieving "true knowledge" (*meyñāṉam*) leading to liberation.[24] This view, although not explicitly stated in medico-alchemical texts, may underlie the practices described in them as well.

2. RECIPES FOR REJUVENATION, LONGEVITY AND IMMORTALITY

In medico-alchemical literature, it is *kaṟpam* therapy that is widely recommended to achieve rejuvenation, longevity and the power to remain deathless:

> I have told [you] about the *kaṟpam* preparations which have the power to [keep a person] alive without dying.[25]

22 TM: 2826–2895.

23 See e.g., VK: 53; PKV: 328.

24 TM: 704–705 "If the owner of a body perishes, then the owner of the soul will perish [too]. He will not achieve real knowledge with certainty. Having learnt the means for cultivating the body, I have cultivated the body and [therefore] indeed I have cultivated [my] soul. Previously I considered the body to be inferior [to the soul]. [Then] in the body I saw the wealth. Knowing that God set [his] temple in this body, I am protecting the body".
uṭampār aḻiyil uyirār aḻivar
tiṭampaṭa meynāṉan cēravu māṭṭār
uṭampai vaḷarkkum upāyam aṟintē
uṭampai vaḷarttēṉ uyirvaḷarttēṉē
uṭampiṉai muṉṉam iḻukkeṉ ṟiruntēṉ
uṭampiṉuk kuḷḷē yuṟuporuḷ kaṇṭēṉ
uṭampuḷē uttamaṉ kōyilkoṇ ṭāṉeṉṟu
uṭampiṉai yāṉirun tōmpukiṉ ṟēṉē.

25 PKV: 328:1 *māḷātē irukkavallō kaṟpañ coṉṉēṉ*

Recipes for *kaṟpam* drugs are found in numerous medico-alchemical texts. However, as indicated by A. Shanmuga Velan, none of the texts presents the complete line of the treatment.[26] Some passages suggest that certain herbs alone may serve as a powerful *kaṟpam*.[27] Siddha texts frequently mention extraordinary rejuvenating powers of *kaṟpam* plants. It is often repeated that *kaṟpam* herbs possess not only rejuvenating and healing properties, but that they are also powerful catalysts in alchemical operations, effecting "binding" (*kaṭṭu*) operations on many metals.[28] Pōkar enumerates forty-five *kaṟpam* herbs that are credited with alchemical powers, including effecting *kaṭṭu* on sixty-four substances.[29] It is also said that those herbs provide support for yogic practices, bestow rejuvenation and immortality upon the human body, and allow one to walk in the sky.[30]

The majority of *kaṟpam* preparations are recommended to be taken internally. However, there are also preparations prescribed to be applied externally, for example as an anal ointment, eye ointment, or in the bath.[31] The range of *kaṟpam* recipes encompass both very simple preparations[32] as well as extremely complicated prescriptions, fulfilment of which requires repeated operations with the use of special apparatuses and numerous ingredients from plant, animal, mineral and metal kingdoms.

26 See Velan 1992: 55–56.

27 For example, passage PKV: 204–6 ascribes certain herbs to particular Siddhas. It states that the Siddhas have lived for aeons only due to the application of those herbs.

28 *Kaṭṭu* ("bond") is an important alchemical operation, frequently mentioned in the texts. The operation aims at consolidating the substances and rendering them heat-resistant (see *kaṭṭu* in Sambasivam Pillai 1931–1994). Substances subjected to *kaṭṭu* often mentioned in Pōkar's text are mercury, metals, salt and sulphur. *Kaṭṭu* seems to be the art of rendering the substances stable, dense, resistant and solid. Materials recommended to be used for effecting the "bond" on the substances are usually herbals which are also used as *kaṟpam* medicines. A counterpart of *kaṭṭu* can also be found in Sanskrit alchemical literature. Among operations aimed at perfecting mercury (*saṃskāra*) the operation of "binding" (*bandhana*) mercury is also listed. The goal of the operation is the fixation of the mercury with the use of one of the 25 or 26 alchemical "bonds" (*bandha*). Each of the bonds may also be used in medicine (see White 1996: 266–67).

29 PKV: 190–94.

30 In Indian alchemical traditions, the ability to walk in the sky is regarded as a skill acquired by the alchemist due to the specially prepared mercurial pill kept in the mouth. See White 1996: 211–12. Stories about the Siddhas travelling around the world due to the powers of mercurial pills are also found in Tamil Siddha literature, see e.g. works of Siddha Yākōpu, such as VāVai: 4, Cuṇ: 153–156, CuṇKaṇ: 287.

31 PKV: 8; 9–10; 5.

32 For example, *miḷaku kaṟpam* (black pepper *kaṟpam*) consists of just one ingredient (black pepper). Initially 5 peppercorns per day should be taken with urine. Every following day the dose should be increased by 5 peppercorns until it reaches the amount of 100 peppercorns per day. Subsequently, the dose should be reduced by 5 peppercorns each day (see PKV: 37).

The most common operation in metallic *kaṟpam* preparations described in the texts seems to be roasting the drug in the *puṭam*, i.e., a capsule constructed with the two identical earthen plates. The usual sequence of actions in the *puṭam* operation starts with the repeated grinding of the metals in the mortar with the juice of certain *kaṟpam* herbs, the choice of which depends on the metal used. Ingredients should subsequently be put inside the capsule, after which a special lute, usually made with herbal leaves, is applied. Then, the capsule should be placed into a fire of a determined number of burning cow dung patties and roasted. Usually, the whole sequence of the above-mentioned operations should be repeated several times. The products of metal processing are named after the form they obtain at the end of the *puṭam* operation, the most common drugs being: *centūram*,[33] *paṟpam*[34] and *cuṉṉam/cuṇṇam*.[35] All three preparations are considered to be highly assimilable metallic compounds.

Among materials used by the Siddhas in *kaṟpam* therapy, some items belonging to herbal, animal, mineral and metal domains are credited with particularly powerful rejuvenating and life prolonging properties:

BLACK HERBS

Among herbal recipes, Pōkar mentions certain *kaṟpam* preparations which require the use of black varieties (*karumūlikai*) of some common medical plants, for example *karantai* (fragrant basil) or *nelli* (*amla*).[36] Those plants are credited with medical properties even in their common form, but according to the Siddha, their black variants possess particular rejuvenating powers. Pōkar provides instruction for cultivating such herbs.[37] The preparation of a special soil appears to be crucial for their cultivation. According to the text, one should fill half of a box with a dark alluvium soil and tamp it down. The remaining volume of the box should be packed with marking nuts (*cēṅkoṭṭai*). Then, the soil should be watered for six months, if whole nuts were used, or for three months, if the nuts were previously halved. When the nuts decompose, the soil should be left to dry. Next, on the soil prepared in the described way, one sows the seeds of the medical herbs. When the crop ripens, the new seeds should be collected and the whole operation should be repeated three times. Pōkar claims that the fourth crop will be black in colour. The text states that cultivated black herbs rejuvenate the body, and remove wrinkles and grey hair. To test the efficacy of the black

33 *centūram* – red calcined oxides. For the varieties of *centūram* type of drugs see *centūram* in Sambasivam Pillai 1931–1994.

34 *paṟpam* – calcined oxides, white in colour. For the varieties of *paṟpam* see *paṟpam* in Sambasivam Pillai 1931–1994.

35 See *supra* note 12. *Cuṉṉam* may look similar to *paṟpam*, but it is regarded as more potent. See *cuṉṉam* in Sambasivam Pillai 1931–1994.

36 *karantai*: PKV: 62–63, *nelli*: PKV: 128.

37 PKV: 198–203.

herbs, one should take a feather of a crane and smear it three times with the black herb juice. The feather, having dried in the sun, should become as black as the feather of a crow.[38]

Apart from the black herbs, plants collected in mountain regions are believed to be of better quality than herbs growing elsewhere.[39] This belief prevails among contemporary traditional Siddha doctors.[40]

"TRIPLE SALT" (*MUPPU*)

Muppu is one of the most mysterious items mentioned in the literature of the Tamil Siddhas. The term *muppu* may be translated literally as "triple salt" (*mu-uppu*)[41]. In a great number of medical texts, it is suggested that *muppu* should be understood as a compound of the three material substances. According to the text *Kar̲pa muppu kuru nūl* ascribed to Siddha Akastiyar, the essential ingredient of *muppu* is obtained from soil found in desert-like places devoid of plants and grass:

> Indeed, in the place where grass does not grow, [there] will be [the substance, white like] garlic […].[42]

On soil with white foam-like salty efflorescence, one should look for stones resembling skulls or eggshells:

> What [kind of] soil [is it]? It is a brackish soil with consolidated foam, it [is] a beautiful white salty substance. […] What [is its] form? Learn [it], it [would appear] to you in such a way [as if it was] an eggshell [or] a skull.[43]

38 PKV: 203.

39 Passage PKV: 184–9 relates that one mountain herb even transformed a cow who consumed it into the mythical wish-fulfilling cow (*kāmatēn̲u*).

40 In order to find the best quality herbs, yet another special plant called "grass of light" (*jōti pul, ar̲ukampul*, i.e., *hariyali* grass) is used. The blade of the grass, when wet with water and held in two fingers, starts to spin. In order to test a plant the spinning blade should be held above it. When the grass spins clockwise it should be interpreted that the herb being tested possesses beneficial properties. See my video demonstration, Kędzia 2016.

41 According to yet another interpretation, the original term should be spelled with a long *-ū* as a final vowel (it should be kept in mind that spelling mistakes and inconsistencies are not uncommon in Tamil Siddha literature). In that case, the term *mup-pū* could mean "triple blossoms", understood as a mixture of three bodily secretions. In Tamil a word "blossom" (*pū*) means also "menstruation", and, by extension, *mup-pū* may be interpreted as the three bodily fluids: menstrual blood, semen and urine. See Zvelebil 2003: 98.

42 KMKN: 11: 4: *pullaṭā muḷaiyāta viṭattilētān̲ /pūṇṭirukkum* […]

43 KMKN: 12: 1–2, 4: […] *pūmiyen̲n̲a / poṅkinin̲r̲a uvaruppu yiramaveḷḷai/karuven̲n̲a itu uruven̲n̲a terintukoḷḷu un̲akkuttān̲um/ oṭen̲r̲u maṇṭaiyen̲r̲u muraikkalāccē* [….]

It is often claimed by scholars that this essential ingredient of triple salt should be interpreted as a salty substance obtained from the water collected from fuller's earth (*pūnīr*, "a water of earth").[44] It is stated in the Siddha texts that *pūnīr* should be collected only during three months of the Tamil year, i.e., *Māci*, *Paṅkuṉi* and *Cittarai* (mid-February to mid-May).[45] Another two ingredients of *muppu* are often enlisted as *aṇṭakkal* ("egg-stone"), considered to be white stones found in the sites of fuller's earth and *kalluppu* ("rock-salt").[46] The last ingredient remains the most obscure, since it may signify a salt mined from rocks, sea salt, or an artificially prepared salt. According to some Siddha texts, *kalluppu* is insoluble in water and it melts in fire. Some texts also list *veṭiyuppu* ("explosive salt", potassium nitrate) among the ingredients of triple salt.[47] Siddha Yākōpu provides the following recipe for the preparation of triple salt (*cavukkāram*, another term for triple salt in Siddha literature):

> Look, dear, in merciful *Paṅkuṉi*, the month [appropriate] to collect *puṉīṟu*,[48] collect [it] and listen. […] Dear, measure four units (*paṭi*) of [*puṉīṟu*], add one unit (*paṭi*) of the well-formed limestone (*kaṟcuṇṇam*). Indeed, dear, add one unit (*paṭi*) of rock-salt (*kalluppu*). Listen still with esteem, [there] is one method [of preparation]. […] Dear, I have spoken about the processed urine (*amuri*) in the 700 [verses], study [that]!
>
> Take eight units of [processed] urine (*amuri*), about which has been [previously] spoken, and add [it to the mixture]. In the well-known way, leave it for three days. Kindly collect the liquid on the fourth day, put it in the oven [and] heat it in the firm fire. Having noticed the change [in consistency] into a thick liquid, like molasses, orderly add [to the mixture] half a unit of sesame oil . […]
>
> Pour [the liquid into the vessel] and cook [it] in order to coagulate. After it becomes beautifully ripened, praise God at the proper time [and] according to [my] wholesome words, expose the ground to the width of nine inches and spread the ashes on it. Listen! In an affectionate manner, place [on the ashes] two [layers] of cloth, apportion the [cooked] thick liquid with the ladle and pour [it on the first layer of the cloth] in order to sink in. Listen!
>
> Then with tenderness leave the liquid [prepared in the described manner] with *punīru*, which has been taken and poured with the

44 See, e.g., Jappār 2014.
45 Jappār 2014: 5.
46 Jappār 2014: 12–13 and 20–22.
47 See Velan 1992: 66 .
48 In Yākōpu's work the variants *punīru* and *puṉīṟu* are used interchangeably for *pūnīr*.

> ladle without failure. On the top, just like before, orderly spread the [second layer of] the cloth, on [the cloth] vigorously shed the ashes. As [you will be] watching for the liquid on the top, it will appear softly. Carefully, without error, remove the upper cloth and watch.
>
> Having removed [the upper cloth you will see that] the ash placed on the ground will absorb the liquid contained in the *puṉīru* [preparation]. For an auspicious fate, take [the remainder] and form it in [the shape of] a ball. Humbly, make a ball [of a size] similar to the fruit of a wood-apple. Carefully place it in the sunlight for eighteen days, place it on the ground. [Then] take [it]. […][49]

The triple salt is said to be an essential substance in the process of the calcination of metals:

> The one who knows the methods of calcining will become a doctor. Regard the one who calcines as an alchemist who immobilizes [substances]. [In order to calcine metals] it is necessary to know the *muppū*[50] which has been spoken about.[51]
>
> Listen about the killing [i.e., calcination] of metals. The powder of *muppū* which is called "the power" is necessary [for the process].[52]

It is also considered to be a powerful catalytic in *kaṟpam* drug preparation as well as an enhancer of the potency of life-prolonging mercurial preparations.[53] The

49 CuṇKaṇ: 11–15: *kāṇappā puṉīṟu yeṭukkamātam karuṇaipeṟap paṅkuṉiyi leṭuttukkēḷu vāṇappā paṭināḷu aḷantuviṭṭu vaṭivāṉa kaṟcuṇṇam paṭitāṉpōṭu tāṉappā kalluppup paṭitāṉpōṭu takaimaiyā yiṉṉumoru taṉmaikēḷu pāṇappā yeḻunūṟṟi lamuritaṉṉaip pakkkuvamāy muṟikkavē coṉṉēṉpārē coṉṉatoru amuripaṭi yeṭṭuttāṉum curutiyāyp pōṭṭumē tirināḷvaittu naṉṉayamāy nālānāḷ teḷivaivāṅki nalamāka aṭuppilvaittu yerinērpākam kaṉṉalpōṟ kuḷampāka varutalkaṇṭu kaṇakkākap paṭiyarainal leṇṇeyviṭṭu […] vārttiṭṭut tiraḷavē kāyccinīyum vaṭivākap pakkuvamā yāṉapiṉpu ēttiṭṭup paruvamuṭaṉ cāmpalataṉṉai itamāka aṭitaṉilē cāṇuṇīḷam kāttiṭṭup parappiyē atiṉmēṟkēḷu kaṉivāka yiruṇṭumē cūlaiyiṭṭu pāttiyiṭṭu akappaitiṉāṟ kuḷamputaṉṉaip patiyavē yeṭuttūttip piṉpukēḷē piṉputāṉ akappaiyiṉāl moṇṭuūttap picākamal puṉīri lirukkumnīrai aṉpāka uṇṭuviṭṭum mēlētāṉum aṭaivāka muṉpōlē tuṇiparappi teṉpākac cāmpalaittāṉ mēlēkoṭṭit tiṟamākap pārkkamēl nīraittāṉum vaṉpāka uṇṭuviṭu mellattāṉum vaḻuvillā mēṟṟuṇiyai nīkkippārē nīkkiyē puṉīrilirunta nīrai nilaiyākac cāmpalatu kuṭittuppōṭum pākkiyamā yeṭuttumē uṇṭaipaṇṇip pativākaviḷāṅkāypō luṇṭaiceytu nōkkiyē katirilvaittut tirināḷāṟu nilaiyāka vaittumē yeṭuttukkoḷḷu vākkilē nilaittumē collakkēḷu vaṭivākap pākattai vaḻuttakkēḷē.

50 The author of the *Kuru Nūl Muppu* uses the variants *muppu* and *muppū* interchangeably as a name of the same substance. See note 41.

51 KNM: 5: 1–2: *nīṟṟuvakai yaṟintavaṉ vayittiyaṉākum/ nilaittatoru vātiyeṉṟāl nīṟṟuvāṉpār cāṟṟukiṉṟa muppūvai yaṟiyavēṇum […]*

52 KNM: 4: 1–2: *[…] lōkamāraṇattaik kēḷu/ uṟutiyeṉṟa muppūviṉ cuṇṇam vēṇum […]*

53 Velan 1992: 64–65; Anandan 2008: viii–x.

final portion of *Kaṟpaviti* enumerates the benefits bestowed by the "salt" (*muppu*). The salt is especially credited with beneficial properties in the fields of yoga and alchemy:

> Study with delight – all the successes [are bestowed] by the salt. Study! The above-mentioned bodily powers [are bestowed] by the salt, all the flying pills [are bestowed] by the salt, all the alchemical [operations] which were explained in order [are enabled] by the salt, the [yogic] exercises in breathing [are supported] by the salt, all the *puṭam* operations [are enabled] by the salt, accelerated ripening of gold [is enabled] by the salt, rare eight-limbed [yoga] [is supported] by the salt. Everything [is bestowed] by the excellent salt![54]

Yet another passage suggests that one cannot become a "fulfilled one", i.e., a Siddha (*cittaṉ*) without *vaḷalai*, which is another synonymous term for *muppu*:

> Would [one] become fulfilled without the fundamental *vaḷalai*?[55]

"TIED SALT" (*KAṬṬUPPU*)

Another salt important for the *kaṟpam* practices is *kaṭṭuppu* ("tied salt"), described in the texts as a processed edible salt used in place of common kitchen salt during *kaṟpam* therapy.[56] According to Pōkar, in order to prepare *kaṭṭuppu* rock salt should first be ground with juices of medical herbs such as *kuppaimēṉi* (*Acalypha indica* L.)[57] and *kalluruvi* (*Ammannia vesicatoria*), and with lemon juice. The mixture should be left to dry. Then mineral ingredients, such as borax, cinnabar and red arsenic should be added and pounded with the two herbal juices and mixed into the salt. Then, the mixture should be roasted as part of the *puṭam* operation. Subsequently, the whole procedure should be repeated. The obtained substance should be pulverized and eaten with food in place of common salt. It is said that "tied salt" makes the body "like an iron pillar" (*uṭampu irumput tūṇām*), and that it is not evacuated with the urine. It is also stated that if one eats an ordinary non-tied salt, all his "flourishing powers" (*vāyttirunta cittiyellām*) will "become dust" (*maṇṇāy pōmē*).[58] The "powers" (*citti*, a Tamilized version of the Sanskrit term *siddhi*) refer to the powers acquired during yogic practices.

54 PKV: 328: 4–329: [...] *vaḷappamellām uppālē makiḻntu pārē pāreṉṟa kāyacitti uppi ṉālē/ paṟantōṭuṅ kuḷikaiyellā muppi ṉālē vāreṉṟa vātamellā muppi ṉālē/ vāciyuḷḷē āṭuvatum uppi ṉālē pūreṉṟa puṭaceyamum uppi ṉālē/ poṉṉōṭip paḻuttatuvum uppi ṉālē āreṉṟa aṣṭāṅkam uppi ṉālē/ atītamā muppālē ellā māccē.*

55 PKV: 335: 3: [...] *atiyāṉa vaḷalaiviṭṭāl citta ṉāmō.*

56 According to Siddha Yākōpu, in order to achieve efficacy in alchemy it is absolutely essential to learn how to prepare the triple salt and the tied salt. See CuṇKaṇ: 5.

57 See *kuppaimēṉi* in Pandanus Database of Indian Plants (Charles University 1998–2009).

58 PKV: 207–10.

MERCURY AND THE "NINE POISONS" (*NAVA-PĀṢĀṆAM*)

It is often claimed that mercury plays a central role in the Siddha system of medicine.[59] Pōkar states that there is no death for the one who has mastered the operation of "binding" (*kaṭṭu*, i.e., consolidating) of mercury, which is considered to be the semen of the god Śiva:

> Indeed, the truth [is, that] there will never be death for the one who has bound the semen of Śiva [i.e., mercury].[60]

Mercury and its compounds are widely used in recipes for *kaṟpam* preparations in the consulted texts. Three mercurial compounds, namely *vīram* (corrosive sublimate), *pūram* (subchloride of mercury) and *iliṅkam* (vermillion), are included in one of the traditional categories of the fundamental materials used by Siddhas in medicinal preparations, called "the nine poisons" (*navapāṣāṇam*).[61] Mercury, as well as the poisons, should be subjected to operations which remove their toxicity. However, the consulted texts do not contain systematic descriptions of such operations.

An especially powerful form of mercury described in Tamil Siddha literature is called *rasamaṇi*, "the mercurial jewel." There is a saying among the Siddhas that *kaṟpam* therapy consists of the three elements, namely *mantiram, maṇi* and *maruntu*, i.e., "mantras, the [mercurial] jewel and medicines".[62] Generally *rasamaṇi* is consolidated mercury rendered fire-resistant and formed into a bead. Various methods of *maṇi* preparation are described in Siddha literature. Usually it is stated that the liquid consistency of mercury should be first turned into a butter-like state during the repeated operation of *curukku*, i.e., adding herbal juices to liquid metals.[63] According to one recipe, mercury should be placed in an iron ladle and the juice of a certain *kaṟpam* herb (*veṇkarantai*, white Indian globe thistle[64]) should be applied for twelve hours:

> Having taken and squeezed white *karantai*, take more than the unit of one *palam* of its juice. Clean an iron ladle and put the purified

59 See Velan 1992: 69–73.

60 PKV: 60: 4: *[…] civaviṉtaik kaṭṭi ṉōrkku/ orukālum cāvillai uṇmai tāṉē.*

61 The whole list of the nine poisons encompasses *vīram* (corrosive sublimate), *pūram* (subchloride of mercury), *iliṅkam* (vermilion), *māṉōcilai* (realgar), *tāḷakam* (yellow orpiment), *kauri* (golden coloured arsenic), *veḷḷai* (white arsenic), *elipāṣāṇam* (arsenic oxide), *kārmukil* (dark prepared arsenic). See *navapāṣāṇam* in Sambasivam Pillai 1931–1994.

62 Personal communication with anonymous informant.

63 See e.g., PKV: 28–32; 50–55; 57–61.

64 Other passages recommend different herbs for the *curukku* operation, such as aloe, gall-nut (PKV: 28–32), or *civakkarantai* (PKV: 57–61).

> mercury in it. For twelve hours apply the *curukku* operation. [The mixture] will beneficially become like butter, collect [it].[65]

Afterwards the butter-like mixture of metal and herbal juice should be formed into lumps and roasted in burning camphor. Next the lumps should be again roasted in a *puṭam* capsule sealed with the leaves of the *ārai* plant (*Marsilea minuta coromandelica*). Another *puṭam* should then be applied, and this time, mercurial balls should be inserted into the shells of Datura. Then, the lumps should be roasted in a *puṭam* capsule sealed with the ground leaves of the abovementioned *veṇkarantai* plant yet another three times. The text states that the consolidated mercury, when melted, would appear like gold and when crushed, would look like a diamond.

> Form [the mixture] into lumps, roast [the lumps] in the fire of the flawless camphor, roast [the mixture] in the [capsule sealed with] the leaves of *ārai* plant, roast [the mixture] in the Datura shells. Prepare [the capsule sealed with] *karantai* plant, apply the *puṭam* three times. Look, when melted it will appear like gold! Look, when crushed into pieces, it will shine like a diamond![66]

After consolidation, the mercurial bead may be worn as an amulet. Some passages of the *Kaṟpaviti* state that the jewels can also be worn as a necklace and that, if an adept wears a necklace made of 108 mercurial pills and repeats the mantras in mind, then lord Śiva with his consort shall come to him and bestow upon him supernatural powers, including the power of preserving the body (*kāyacitti*):

> Having put on 108 [mercurial] jewels as a necklace, repeating the proper mantras consisting of five and six letters, if [you] look with your internal [eye], indeed lord Śiva with the Goddess will come and will bestow [upon you] great power in yoga and the power [to preserve] the body. If you desire wealth, he will give [you] the power [associated with] alchemy. If your mind is firm, all the powers will become [yours].[67]

65 PKV: 57: 2–4: […] *veṇkarantai koṇṭu vantu/ atikamām paṭiccāṟu piḻintuvaittu […] ayakkaraṇṭi cutti paṇṇi/ cuttitta cūtattai atilē viṭṭu […] nālcāmam curukkup pōṭu/ nalamāka veṇṇeyām vaḻintu vāṅkē.*

66 PKV: 58: *vāṅkiyē kiḻipōlak kaṭṭik koṇṭu/ mācaṟṟa cūṭaṉatu tīyil vāṭṭu āṅkiyē āraiyilaik kuḷḷē vāṭṭu/ atikamā mattaṅkāyk kuḷḷē vāṭṭu mūṅkiyē muṉ karantaik kavacaṅkaṭṭu/ mūṉṟu puṭam pōṭṭeṭuttu urukkippāru tāṅkiyē taṅkampōl uruki yāṭun/takarttuṭaittāl vayirampōl taḷukkām pārē.*

67 PKV: 259: 2–4: *[…] nūṟṟu yeṭṭumaṇi tāvaṭamāyk kōttu/iyalpāṉa aintelluttu āṟeḻuttu mōta maṉampārttu tēviyoṭu civaṉtāṉ vantu/ makattāṉa yōkacitti kāyacitti īyvār taṉampārttu vātamoṭu cittai īvār/ cāṅkamāy maṉamuṟaittāl citti yāmē.*

It is believed that the jewel possesses healing properties, protects its owner from aging and witchcraft, and supports meditative practices. The bead can also be processed further in order to obtain edible forms, such as *centūram*.[68] Preparing digestible forms of the jewel requires roasting it with addition of other metals (e.g., gold and lead) and certain "poisons" (e.g., cinnabar, arsenics), pounding it with the juice of other *kaṟpam* herbs and subjecting it to fire.[69] Some passages also mention mercury consolidated in the form of a "pill" (*kuḷikai*). The distinction between a pill (*kuḷikai*) and a jewel (*maṇi*) requires further research. However, some passages suggest that both the terms might be used interchangeably.[70] In some Siddha texts, a pill is often mentioned in connection with the power of walking in the sky, which it is said to bestow upon the one who keeps it in their mouth.[71] Pōkar's text suggests that the pill could be furthermore subjected to the empowering operation called *cāraṇai*,[72] however the description of the operation is not provided by the texts.[73] It is stated that the empowered *kuḷikai* enables its user to perform some extraordinary actions, such as going to the moon and back with great speed. It is also suggested that the pill turned into an edible drug (*centūram*) and taken with honey for forty days would rejuvenate the body by shedding its external cover.

> If [you] perform *cāraṇai* operation on hardened mercury, [you will] go to the moon and back with high speed! If you prepare *centūram* [you will reach] mountain peaks in thousands! Prepare *centūram* as [described] before, in order [to gain] the power! With attention eat [*centūram*] for forty days in honey, having shed the external skin [the body] will become reddish.[74]

URINE (*AMURI*)

According to the *Tamil Lexicon*, the term *amuri* can designate "urine", as well as the "nectar believed to be generated in the body by yōgic practice".[75] The term

68 PKV: 60–61

69 See PKV: 53–54.

70 See, e.g., PKV: 249–262.

71 See, e.g., CuṇKaṇ: 287; Cuṇ: 153–155; PKV: 278–285.

72 *cāraṇai* is the Tamilized form of the Sanskrit word *cāraṇa*. In Sanskrit alchemical literature (*rasaśāstra*), this term has a technical meaning. It is one of the sequenced operations for perfecting mercury before its internal application (see White 1996: 268). The processing of mercury in perfecting operations is also described in Sanskrit medical literature starting from the ninth century and becoming more prominent after the thirteenth century (see Wujastyk 2013).

73 PKV: 262.

74 PKV: 180: 1–3: *kaṭṭiyāñ cūtattil cāraṇaiyō ceytāl/ kaṭuvēka matiyaḷavu kaṇṭu mīḷum oṭṭiṉāl centūram āyirattiṟ kōṭum/ uṟutiyāy muṉpōlē centūram paṇṇu tiṭṭiyāy maṇṭalantāṉ tēṉi luṇṇu/ ciṟitākac caṭṭaikakkic civappu mākum*.

75 See *amuri* in *Tamil Lexicon* (1924–1936).

might be used in both senses in Siddha literature, which contributes to the ambiguities in the interpretations.[76] Nonetheless, there are numerous passages in which the term may be most certainly interpreted as urine. Urine is an important vehicle for numerous herbal *kaṟpam* recommended in the texts. Besides, in some *kaṟpam* recipes, urine is listed as the main ingredient. For example, the following passage from the text *Ñāṉakaṟpam* 222 ascribed to Siddha Pulastiyar, provides a recipe for a preparation in which the urine of young boys fed with sweets is the main ingredient:

> Properly take sixteen measures of the urine of young boys fed with sweets. In a harmonious manner, put the water of the body [i.e., urine] [in the vessel], similarly take eighteen measures of slaked lime and dissolve it without hesitation in the urine. Keep it in separation for three days [exposed] to the sun. [Then put it] in a secret place unknown to the people, away from dew, sun, wind and the shadow of women, for four days. Collect the bright liquid [accumulated] in the

76 A prominent example of the ambiguities concerning the interpretation of the term *amuri* is found in the *Tirumantiram.* The chapter *kāyacitti upāyam* ("Means of [attaining] bodily powers") describes the practice called *amuri taraṇai* ("preservation of *amuri*", TM: 825–30). This cryptic passage deals with the drinkable fluid (*kuṭiṉīr*) contained in the body and called *amuri* ("urine", "nectar"). It is said that one should keep control over the flow of *amuri*. Drinking the fluid is presented as a therapy which prevents and cures diseases, stabilises breath and mind, and changes the body into gold (TM: 826: *teḷitarum intac civanīr parukil/oḷitaru mōrāṇṭil ūṉamoṉ ṟillai/vaḷiyuṟum eṭṭiṉ maṉamum oṭuṅkum/kaḷitaruṅ kāyaṅ kaṉakama tāmē;* "If one drinks this water of Śiva which bestows clarity, in one year [he] will receive the light, there will be no defect [in him], the breath will stabilise in eight [years], the mind too will be restrained, the body, granting delights, will indeed become gold"). It is also stated that the liquid removes grey hair and wrinkles and vanquishes death (TM: 828:4: *naṟaitiṟai māṟu namaṉumaṅ killaiyē* ; "Grey hair and wrinkles will change and there will be no death"). One passage recommends drinking *amuri* mixed with black pepper, as well as externally using the mixture on the crown of the head. It is suggested that the preparation is the best of all medicines and that it eliminates grey hair (TM: 827 *nūṟu miḷaku nukaruñ civattiṉīr/ māṟum itaṟku maruntillai māntarkaḷ/tēṟil itaṉait teḷiyucci kappiṭiṉ/māṟum itaṟku maṟumayi rāmē*; "The water of Śiva consumed [with] one hundred black pepper grains – there is no medicine for human equal to [it]! If you accept it and apply it on the grey crown of the head, it [the head] will be transformed, the [grey] hair will change"). The last portion of the section contains a recipe for a preparation in which the fluid and some common Indian medical herbs, i.e., black pepper, amla, turmeric and neem, are used. It is stated that the mixture rejuvenates the body and changes grey hair into black (TM: 829:2–4: *kaḷavu kāyaṅ kalantain nīrilē/miḷaku nelliyum mañcaḷum vēmpiṭil/iḷakum mēṉi iruḷuṅ kapālamē;* "If one places black pepper, amla, turmeric, and neem in this water contained in the body, the body will grow tender and the [hair on] the head will darken").

pit of the vessel. Now leave it alone in the vessel. Accordingly to the prescription, place it on the fire place. Keep it on a moderate fire.[77]

When taken during yogic practices, this preparation is expected to turn the human body into a diamantine body.[78]

3. ANALOGIES

From the presentation above, the question arises what the relation between the mentioned items and rejuvenation, longevity and immortality is. In the case of the black herbs, the black colour of the plants may be easily associated with the black pigment in hair of the person who has not aged yet, and therefore, by extension, with youthfulness and vitality. Moreover, the recurring theme in the discourse on the abovementioned substances is their immobilization, especially with regard to mercury, which in the form of a bound, resistant and consolidated jewel is expected to bestow immortality. Such immobilization associates medical and alchemical preparations with yogic practices, aimed at the stabilisation of mind, breath and semen. Yet another mentioned instance refers to the binding of the salt into *kaṭṭuppu*, which is stated to have the power to stabilize the body, so that it resembles an iron pillar. The stabilization and retention of the movement and changeability is associated with resistance to the passing of time and ageing. *Kaṟpam* substances, such as herbs and triple salt are also believed to effect the operation of "binding" (*kaṭṭu*) on the physical substances manipulated by the Siddha doctor-alchemist, which justifies their use in the stabilisation and preservation of the body. Moreover, the special status of triple salt among the substances may be also connected with the symbology of the number three. In the Siddha tradition, various triplets of concepts are recognized, among which the three phonemes of the syllable *aum* are especially important. The triadic character of the salt may suggest correspondences between the mantra seen as the transformative agent during spiritual practices and the salt used to transform physical substances and the human body.[79] Drinking urine is also stated to stabilise the body and it may be further related to yogic practices in which the bodily secretions are applied on the body of the practitioner. As pointed out by Mallinson, numerous haṭhayogic texts contain references to practices

77 ÑK: 73: *iṉiyapattiyamān ciṟivarkaḷ/muriyīreṭṭu paṭiyatukaṇakkāy icaivatāy pāṇṭamiṉṉīrviṭṭataṉi/ liṇaiyilāk kalcuṉṉanīṟu paṉiyeṭṭuppaṭikoṇṭa muriyiltākkic/caṅkaiyillāmalum karaittu taṉiyavaittataṉai mūṉṟunāḷraviyil/ taraṇimāṉiṭarkaḷu maṟiyā paṉiravikāṟṟum vaṉitaiyarniḻalum/paṭāmalum rakaciyamākap pākamāycaturnāḷ pāṇṭamāṉcillu/pativatāy teḷintanīrvāṅki iṉiyorupāṇṭamē taṉiṉiṟṟeḷivai/viparamāy viṭṭuṭaṉaṭuppil […] /mitamatāyt tīyerintiṭumē.*

78 See Venkatraman 1990: 110.

79 See Zvelebil 2003: 27–31; 98–99.

associated with massaging the body with various bodily secretions, including urine. In certain passages, human urine is also credited with the power of transmutation of copper into gold as well.[80] Drinking urine is also part of the yogic technique called *amarolī*.[81] In addition, the ambiguous Tamil term *amuri* suggests connotations between urine and the concept of immortalizing nectar believed to be the effect of yogic practices.

Passages on *kaṟpam* drugs repeatedly advise to practice yoga during therapy with *kaṟpam*.[82] The text *Pōkar Kaṟpaviti* also states that during *kaṟpam* therapy, some side effects may occur, such as a burning sensation in the body. The experience of excessive heat in the body is often regarded as a characteristic symptom of the awakening of the *kuṇḍalinī* energy during practices of yoga, which also may suggest a further connection between yoga and *kaṟpam* therapy. Pōkar's text prescribes herbal *kaṟpam* to fight such heat.[83] Connections between medicine, alchemy and yoga are apparent in regard to the effects ascribed to the *kaṟpam* preparations contained in medico-alchemical literature. The most often mentioned effects of *kaṟpam* therapy in Siddha texts are rejuvenation and strengthening of the body. The purifying properties of the preparations are also frequently mentioned, especially with regard to phlegm,[84] which is considered to be a serious obstacle in yogic practices, as it is believed to obstruct the oozing of the yogic nectar to the throat of the practitioner.[85] In Siddha literature, it is repeatedly stated that *kaṟpam* preparations support yogic practices, for example by facilitating control of the breath, and by supporting and opening the central channel (*cuḻumuṉai*).[86] Yet another frequently mentioned effect of eating *kaṟpam* is the visible transformation of the body, which becomes healthy, beautiful and youthful.[87] It is claimed that due to *kaṟpam* therapy the body becomes as beautiful as the one of the love-god,[88] or like gold,[89] and that it is consolidated like a diamond.[90] As already mentioned, the consolidation of the body is associated also with yogic practices connected with the stabilisation of breath, mind and semen. Finally, it is claimed that *kaṟpam* substances provide immortality.[91]

80 See Mallinson 2007: 220, n. 328.
81 Mallinson 2007: 221, n. 333.
82 See, e.g., PKV: 68, PKV: 97, PKV: 166.
83 PKV: 111–112.
84 See, e.g., PKV: 7.
85 See Velan 1992: 82 .
86 See, e.g., ÑK: 11–76; PKV: 12; PKV: 73. See Venkatraman 1990: 109–110.
87 In *Kaṟpaviti,* it is even claimed that certain preparations may rejuvenate a ripened banana, which after administering the drug through the cut in the skin would become green within a few hours. See PKV: 158.
88 See, e.g., PKV: 78: 4: […] *mataṉpō lākum.*
89 PKV: 128: 3: […] *taṅkampōl mēṉiyellān taḷukkuk kāṇum.*
90 PKV: 90: 1: […] *vayiram pōliṟukum tēkam.*
91 PKV: 90: 4: […] *orukālum cāvillai uṇmai tānē.*

4. CONCLUSION

To conclude, the application of *kaṟpam* drugs seems to be closely associated with yogic practices in Tamil Siddha medico-alchemical literature. On the one hand, it is repeatedly stated that *kaṟpam* preparations support yogic practices, such as meditation and breath control, they remove phlegm seen as an obstacle in the process of yogic perfection, open internal channels and so on. On the other hand, it is also claimed that yoga supports the efficacy of the *kaṟpam* therapy. Additionally, the two disciplines are also related with alchemy, references to which are widely present in the consulted texts. Looking from the broader perspective, some parallels with *kaṟpam* therapy can also be found within alchemical and medical Sanskrit texts, which refer to certain preparations (*rasāyana*) connected with attaining the special powers, such as extending life span far beyond the ordinary length or rendering the body imperishable.[92]

The conviction that the body and soul are equivalent and interdependent and that the body is necessary to achieve the final aim of liberation, directly expressed in the *Tirumantiram,* legitimizes *kaṟpam* practices aiming at the preservation of the physical body, which are described in the later texts. This conviction, which underlies the practices described by Tirumūlar, although not explicitly stated, resonates strongly in Tamil Siddha medico-alchemical literature. The conception that the human being is an inseparable connection of the material body and soul, authorizes the synthesis of the disciplines of medicine, yoga and alchemy which refer to both material and spiritual domains. The three disciplines might be regarded as the three integral parts of a wider Siddha system of knowledge, oriented towards achieving immortality and liberation.

TEXT EDITIONS

Cuṇ — Ta. Kuppucāmi Nāyuṭu, ed. (1952). *Yākōpu Tiruvāymalarntaruḷiya Cuṇṇam 300*. Maturai: Śri Rāmaccantira Vilācam Piras.

CuṇKaṇ — Ār. Ci. Mōkaṉ, ed. (2014a). *Yākōpu Cuṇṇak Kāṇṭam 600*. Ceṉṉai: Tāmarai Nūlakam. First published 2002.

KMKN — "Kaṟpa Muppu Kuru Nūl 100" (2014b). In: *Akastiya Muṉivar Aruḷiya Muppu Cūttiraṅkaḷ*. Ed. by Ār. Ci. Mōkaṉ. Ceṉṉai: Tāmarai Nūlakam.

KNM — "Kuru Nūl Muppu 50" (2014c). In: *Akastiya Muṉivar Aruḷiya Muppu Cūttiraṅkaḷ*. Ed. by Ār. Ci. Mōkaṉ. Ceṉṉai: Tāmarai Nūlakam.

ÑK — *Pulastiyar Viḷakkiya Ñāṉakaṟpam-222* (1936). Ceṉṉai: Cakkaravartti piras.

92 On the special powers associated with *rasāyana* preparations in medical and alchemical Sanskrit texts see Wujastyk forthcoming.

PKV "Pōkar Kaṟpaviti" (2004). In: *Cittar Kāyakaṟpam*. Ed. by citta maruttuva maiya āraycci nilaiyam Citta maruttuva ilakkiya ārāycci āvaṇatturai and citta maruttuva maiya ārāycci nilaiyam Citta maruttuva ilakkiya ārāycci āvaṇatturai. Ceṉṉai: Citta maruttuva ilakkiya ārāycci āvaṇatturai, citta maruttuva maiya āraycci nilaiyam.

TM P. Irāmaṉāta Piḷḷai, ed. (2007). *Tirumantiram Mūvāyiram*. 2 vols. Tirunelvēli: Teṉṉintiya caiva cittānta nūṟpatippuk kaḷakam. First published 1942, 1957.

VaiCin Ta. Kuppucāmi Nāyuṭu, ed. (1960). *Yākōpu Aruḷic Ceyta Vaittiya Cintāmaṇi 700, Kurulūl 55 Cērttatu*. Maturai: Śri Rāmaccantira Vilācam Piras.

VāVai Ta. Kuppucāmi Nāyuṭu, ed. (1955). *Yākōpu Vakārak Kaḷaṅku Eṉṉum Vātavaittiyam 300*. Maturai: Śri Rāmaccantira Vilācam Piras.

VK Ji. Irāmacāmikkōṉ, ed. (1963). *Vaittiya Kallāṭam*. Maturai: Śri Rāmaccantira Vilācam Piras.

SECONDARY LITERATURE

Anandan, Anaivaari R., ed. (2008). *Siddha Materia Medica*. Chennai: Department of Indian Medicine and Homeopathy.

Buck, David C. (1976). *Dance, Snake! Dance! A Translation with Comments of the Song of Pāmpāṭṭi-Cittar*. Calcutta: A Writers Workshop Publication.

Charles University (1998–2009). *Pandanus Database of Indian Plants*. Seminar of Indian Studies, Faculty of Arts, Charles University, Prague, Czech Republic. URL: http://iu.ff.cuni.cz/pandanus/ (on 8 Jan. 2018).

Ganapathy, T.N. (1993). *The Philosophy of the Tamil Siddhas*. New Delhi: Indian Council of Philosophical Research. ISBN: 9788185636030.

— (2003). *The Yoga of Siddha Bhōganāthar*. Vol. 1. Quebec: Babaji's Kriya Yoga and Publications, Inc. ISBN: 9781895383195.

— (2004). *The Yoga of the Eighteen Siddhars: An Anthology*. Quebec: Babaji's Kriya Yoga and Publications, Inc. ISBN: 9781895383249.

Goodall, Dominic (1998). *Bhaṭṭa Rāmakaṇṭṭha's Commentary on the Kiraṇatantra*. Vol. 1. Pondicherry: Institut Français de Pondichéry, École française d'Extrême-Orient. ISBN: 9788184700862.

— (July 2000). "Problems of Name and Lineage: Relationships between South Indian Authors of the Śaiva Siddhānta". In: *Journal of the Royal Asiatic Society* 10.2, pp. 205–16.

Jappār, A. Aptul (2014). *Muppu Eṉum Kaṟpa Maruntu*. Ceṉṉai: Tāmarai Nūlakam.

Kędzia, Ilona (2016). *Video Recording of "mastering Deathlessness - Some Remarks about Immortality Teachings from Selected Tamil Siddha Texts"*. Ayuryog Project Workshop, University of Vienna. URL: https://youtu.be/ALqn5yOJqxM?t=

14m47s (on 8 Jan. 2018). Video recording of lecture. Conference URL: https://goo.gl/mgxycr.

— (2017). "Global Trajectories of a Local Lore: Some Remarks about Medico-Alchemical Literature of the Two Tamil Siddha Cosmopolites". In: *Cracow Indological Studies* XVIII, pp. 93–118.

Little, Layne Ross (2006). "Bowl Full of Sky: Story-making and the Many Lives of the Siddha Bhogar". PhD. Berkeley: University of California.

Macdonell, Arthur Anthony and Arthur Berriedale Keith (1912). *Vedic Index of Names and Subjects*. Vol. 1. London: John Murray.

Mallinson, James (2007). *The Khecarīvidyā of Ādinathā*. London: Routledge. ISBN: 9780415586139.

Meenakshi, K. (1996). "The Siddhas of Tamil Nadu: A Voice of Dissent". In: *Tradition, Dissent and Ideology*. Ed. by R. Champakalakshmi and S. Gopal. Delhi: Oxford University Press.

Natarajan, Kanchana (2004). "'Divine Semen' and the Alchemical Conversion of Iramatevar". In: *The Medieval History Journal* 7.2, pp. 255–278.

— (2009). "'Entering the Universe of Fire and Light' The Life and Philosophy of Pokar from Pokar Elayiram". In: *Studies in Humanities and Social Sciences* 12.1-2, pp. 147–164.

Sambasivam Pillai, T. V. (1931–1994). *Tamil-English Dictionary of Medicine, Chemistry, Botany and Allied Sciences*. 5 vols. Madras: Government Central Press.

Scharfe, Hartmut (1999). "The Doctrine of the Three Humors in the Traditional Indian Medicine and the Alleged Antiquity of Tamil Siddha Medicine". In: *Journal of the American Oriental Society* 119.4, pp. 609–629. DOI: 10.2307/604837.

Sébastia, Brigitte (2015–2017). *Conservation, Documentation and Preservation of the Knowledge of Siddha Medicine*. Header text Institut Français de Pondichéry. URL: http://www.ifpindia.org/content/conservation-documentation-and-preservation-knowledge-siddha-medicine (on 9 Jan. 2018).

Sivaraja Pillai, K. N. (1930). *Agastya in the Tamil Land*. Madras: University of Madras.

Tamil Lexicon (1924–1936). University of Madras. URL: http://dsal.uchicago.edu/dictionaries/tamil-lex/ (on 9 Jan. 2018).

Velan, A. Shanmuga (1992). *Longevity and Kalpa Medicine of India*. Madras: Directorate of Indian Medicine and Homeopathy.

Venkatraman, R. (1990). *A History of the Tamil Siddha Cult*. Madurai: Ennes Publications.

Weiss, Richard S. (2009). *Recipes for Immortality: Medicine, Religion and Community in South India*. New York: Oxford University Press. ISBN: 9780195335231.

White, David Gordon (1996). *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago and London: The University of Chicago Press. ISBN: 9780226894997.

Wujastyk, Dagmar (forthcoming). "On Attaining Special Powers through Rasāyana Therapies in Sanskrit Medical and Alchemical Literature". In: *Religious Medicine*. Ed. by Michael Stanley–Baker and Pierce Salguero. Manchester: Manchester University Press. Forthcoming.

— (Sept. 2013). "Perfect Medicine. Mercury in Sanskrit Medical Literature". In: *Asian Medicine: Tradition & Modernity* 8.1, pp. 15–40. DOI: 10.1163/15734218-12341278.

Zvelebil, Kamil V. (1992). *Companion Studies to the History of Tamil Literature*. Leiden: Brill.

— (1993). *The Poets of the Powers: Magic, Freedom, and Renewal*. 2nd ed. Lower Lake: Integral Publishing. ISBN: 9780941255325. First published in 1973.

— (2003). *The Siddha Quest for Immortality*. Oxford: Mandrake of Oxford. ISBN: 9781869928438.

Zysk, Kenneth G. (2013). "An Indologist Looks at Siddha Medicine in Tamilnadu". In: *Medical Texts and Manuscripts in Indian Cultural History*. Ed. by Dominik Wujastyk, Anthony Cerulli, and Karin Preisendanz. New Delhi: Manohar, pp. 181–194.

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Tibetan Bonpo *Mendrup*: the Precious Formula's Transmission

Anna Sehnalova

Charles University, Prague and Oxford University

1. INTRODUCTION

The present issue of *History of Science in South Asia* is dedicated to longevity and rejuvenation practices in South and Inner Asian medical, alchemical and yogic traditions, with a particular focus on their mutual relatedness and interconnectedness. This study presents the emic textual history of the Bonpo *mendrup* (Wylie: *sman sgrub*)[1] ritual, a Tibetan practice of presumably Indian origin[2] embodying and intertwining all these spheres of knowledge and their principles.

The Tibetan religious tradition "Bon" in its current monastic form heavily draws on Buddhist doctrine and practice, and hence can stand as one of the schools of Tibetan Buddhism. The *mendrup* ritual epitomises this milieu. Nevertheless, the designation "Bon" can be in certain instances viewed also in contrast to Buddhism, when it is understood in relation to Tibetan pre-Buddhist cults (i.e., predating the seventh century CE), or to the non-Buddhist elements of both historical and contemporary Tibetan culture, especially Tibetan popular religion.[3] Some of the contrasting elements may be best understood as deliberate inversions of Buddhist categories in a process of establishing a unique and cultur-

1 For names, I have used the recognised Tibetan phonetic transcription with the exception of a few established forms: Bonpo (instead of Bönpo), Tashi Menri (instead of Trashi Menri), Triten Norbutse (Triten Norbutsé), and Menri Trindzin (Menri Tridzin). The phonetic transcription is followed by the Wylie transliteration in brackets. In some cases, I have added Sanskrit terms commonly used, or referred to, by Tibetan practitioners.

2 See Cantwell 2015 and Cantwell 2017 (in this volume) and Garrett 2009, 2010.

3 For discussion of the term "Bon," see Kværne 1995 and van Schaik 2013.

ally effective interpretation.[4] Contemporary Bonpos, monks of Bonpo monasteries and their lay communities, adopt many Buddhist precepts, often expressed with original variations, while maintaining a great deal of Tibetan non-Buddhist ideas. Currently, Bonpos are found all across cultural Tibet and the Himalayas. The largest communities exist in Eastern Tibet (Sichuan, Gansu, and Qinghai provinces of China) and in the Nepali Himalayas (the regions of Mustang and Dolpo, the Kathmandu valley).[5] Significant Bonpo centres have recently also been established in the West, in Europe (mainly France), the USA and Mexico.

The Bonpo *mendrup* ritual is a tantric meditative practice (Sanskrit: *sādhana*) and consecration rite of transforming substances into a most effective healing mixture. *Sādhana* implies the basic tantric exercises of visualising and self-identifying with a tantric deity in order to achieve meditative accomplishment.[6] *Mendrup* practice lets an adept attain such an inner transformation and spiritual progress, while also transforming material ingredients into empowered and consecrated substances. Such substances are then believed to hold special virtues, powers, and qualities of awakening (Tibetan *byang chub*, Sanskrit *bodhi*).[7] Both the *mendrup* ritual process and the produced "medicine," *men* (*sman*), are considered extremely efficacious for healing, rejuvenation, and longevity, as well as for promoting spiritual progress. As such, the ritual is similar to other *mendrup* rituals and practices in Tibet, as well as to *chülen* (*bcud len*), *mani rilbu* (*ma ṇi ril bu*), precious pills' (*rin chen ril bu*) processing, etc.[8] The appellation "*mendrup*" is a compound of two words: 1. *men* (*sman*), denoting "medicine," a healing substance or in general something beneficial,[9] and 2. *drup* (*sgrub*) meaning "to achieve, attain, accomplish," which is also a term for the yogic and tantric practice of *sādhana*. The name of the ritual can thus be translated as "medicinal accomplishment," or "achievement of medicine," "medicinal

4 For instance, the right-hand circumambulation in the Tibetan Buddhist context has a left-hand alternation in the Bonpo context. Similarly, the colours associated with individual cardinal points of a mandala have switched locations for the Bonpos, as will be shown below.

5 See Karmay and Nagano 2003.

6 On the meditative and spiritual element of *mendrup* in the Nyingma context see Cantwell 2015 and Cantwell 2017 (in this volume) and Garrett 2009, 2010.

7 Bentor 1996, 1997.

8 On *mendrup*, see Cantwell 2015 and Cantwell 2017 (in this volume); Donden and Hopkins 1997; Bstan-'dzin-rgya-mtsho et al. 2007; Garrett 2009, 2010; Craig 2011, 2012; Blaikie 2013, 2014; Blaikie et al. 2015. On *chülen* (*bcud len*), see Gerke 2013; Parfionovitch, Dorje, and Meyer 1992: I, 119–22 and II, 275–78; Oliphant 2015, 2016: 205 f. (for a *chülen* close to the *mendrup* described here). On *mani rilbu* (*ma ṇi ril bu*), see Kohn 1988. On the processing of precious pills (*rin chen ril bu*), see Aschoff and Tashigang 2001, 2004; Gerke 2012; Czaja 2013; Gerke 2013; Blaikie 2015; Czaja 2015; Gerke 2017 (in this volume) and Millard unpublished. On these and other comparable practices, see Samuel 2010 and Schaeffer 2002.

9 Cf. Das 1902.

practice," "practice of medicine," or "medicinal *sādhana*".[10] Within its immense complexity, the Bonpo *mendrup* ritual combines Indian tantrism, Buddhism and its soteriological ideas, the Tibetan medical tradition (*Sowa rigpa*, *gso ba rig pa*), alchemy and Tibetan indigenous religious notions. The ritual is centred on the inner-personal transformation through meditation upon tantric deities, accompanied by the production and consumption of the specially empowered substance. The substance is called "medicine" and is compounded following rules of Tibetan medicinal drugs and ritual knowledge. The medicine created in this context acquires such epithets as "the nectar of immortality" (*'chi med bdud rtsi*), "the medicine overcoming poison" (*dug 'joms pa'i sman*), "the precious nectar" (*bdud rtsi rin po che*), "the great nectar" (*bdud rtsi chen po*), "the secret nectar" (*bdud rtsi gsang ba*), "the nectar of wisdom" (*ye shes bdud rtsi*), etc.[11]

In general, in both Tibetan Buddhism and Bon, the performance of the *mendrup* ritual can vary from being a small yearly rite for the enhancement of drug efficacy in medical clinics or other institutions producing medicines, further as an irregular village event, or as an extended monastic celebration, as the one presented later in this article.[12] The Bonpo *mendrup* when performed on a large scale, represents one of the most elaborate healing rituals of the present Tibetan realm. It is also probably one of the rarest, special, most demanding and expensive Tibetan rituals. The Bonpo community believe it to be extremely powerful, an event one should witness at least once in a lifetime.

2. THE BONPO *MENDRUP* RITUAL PRACTICE

Historically, the practice of the extended Bonpo *mendrup* ritual in the monastic setting used to be restricted to a single performance in the life of each abbot of Tashi Menri monastery (bKra shis sman ri, founded in 1405) in Central Tibet, the leading monastery of Bon (Figure 1). The interval between performances is said to have averaged around sixty years. Nowadays, the practice is much more frequent due to increasing (and global) sponsorship and facilitated

10 For a broader etymological excursus on the term, see Garrett 2009.

11 MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*); dKar ru Grub dbang sprul sku bstan pa'i nyi ma 1998a: v. 168, text 1, 1998b: v. 230, text 22; dPon slob Rin po che tshangs pa bstan 'dzin et al. 2014. For a discussion of the expression and concept of "nectar" in Buddhist *mendrup* contexts, see Garrett 2009, 2010.

12 On *mendrup* as a small yearly rite for the enhancement of drug efficacy in medical clinics, see Craig 2011, 2012; in other institutions producing medicines, see Blaikie 2013, 2014; Blaikie et al. 2015. Kind (2002) provides an example of *mendrup* as an irregular village event from Dolpo, Nepal. And see Cantwell 2015 and Cantwell 2017 (in this volume) for *mendrup* as an extended monastic celebration.

Figure 1: Tashi Menri monastery in Central Tibet.

logistics for the purchase of the required medicinal ingredients and substances. It particularly flourishes in the exile, in the substitute Tashi Menri monastery (founded 1969) in Himachal Pradesh, India, and the second most prominent exile monastery, Triten Norbutse (Khri brtan nor bu rtse, initiated in 1986, founded 1992) in Kathmandu, Nepal (Figure 2).[13]

All Bonpo *mendrup* rituals are dedicated to a specific tutelary deity, *yidam*, (Tibetan (Wylie): *yi dam/ yi dam gyi lha*, Sanskrit: *iṣṭa-devatā*) and the deity's specific cycle of teachings. Different teaching lineages[14] of the Bonpos have their own *mendrup* rituals of different *yidam* deities, i.e., of particular and often individually attributed tantric deities to be meditated upon in order to guide the adepts to awakening. For the prevailing Bonpo Dru (Bru, also spelled Gru, 'Bru, 'Gru) lineage,[15] inherently tied to the Menri monastery, the two main *yidam*s for a *mendrup* ritual are the deities Trowo Tsochok Khagying (Khro bo gtso mchog

13 The ritual in Menri was mentioned by Cech (1988), and in Triten Norbutse by Tsetan (1998).

14 The liturgic and teaching lineages of the Bonpos originated from hereditary family father-son transmission lineages. Only a small number of the original six main lines have survived, and had to adapt to the monastic system. On the lineages see Karmay 1998, 2007 and rMe'u tsha bstan 'dzin rnam rgyal 2014.

15 See Karmay 2007 and rMe'u tsha bstan 'dzin rnam rgyal 2014.

Figure 2: Triten Norbutse monastery in Kathmandu, Nepal, during the *mendrup* ceremony in December 2012.

mkha' 'gying), "Wrathful One, Supreme Lord Towering the Sky",[16] and Purwa (*Phur ba*, Sanskrit: *kīla*), "Dagger." Medicinal empowerment (*sman dbang*) of the peaceful and wrathful deities (*zhi tro*, *zhi khro*), specifically connected to one of the respective wrathful *yidam*s in each case, is integral for the practice. The *mendrup* particularly examined in this article is the one dedicated to Trowo Tsochok Khagying, called "the light-swirled *mendrup*" (*sman sgrub 'od zer 'khyil ba*).

Within the Bonpo tradition, the big monastic performances of *mendrup* have become synonymous with the designation *drupchen* (*sgrub chen*), which generally denotes "a Major Practice session or intensive communal tantric practice focused on attaining realisation, held over a number of days, and typically requiring a large team of lamas[17] and ritualists as the principal practitioners."[18] The *drupchen* practice can function without a *mendrup*,[19] but for the main monasteries of Bon,

16 Kværne 1995: 75–77 and 88–90. "The Supreme Lord Poised with Majestic Splendor in Space" translation of Triten Norbutse (Yungdrung 2012).

17 *Lama* (*bla ma*) is an honorary title for esteemed Tibetan monks.

18 Cantwell 2015: 90.

19 Cantwell (2015, 2017: in this volume) observed that for the Nyingma school, *drupchen* principally exists without *mendrup*, and the latter is a possible addition to the former.

the two have become conflated to a certain extent. The word *drupchen* is thus, and especially in colloquial expression for the Bonpos, usually understood to refer to elaborate *mendrup* monastic celebrations, and differentiates them from minor *mendrup* rites conducted yearly or at another higher frequency,[20] or in village settings.[21]

The following descriptions of the contemporary execution of *mendrup* are primarily based on the last exile performance in Triten Norbutse monastery in Kathmandu in 2012, supplemented by the ritual's scriptures and other sources.[22] The event represented "the light-swirled *mendrup*" of the deity Trowo Tsochok Khagying. The *mendrup* ceremony is very complicated and is divided into three main phases by the Bonpos:

1. Preliminary activities (s*ngon 'gro*) of purifications, enhancing auspiciousness and creating suitable conditions for the major practice, gathering the prescribed substances, which count over a hundred, and compounding the *mendrup* medicine;
2. The central activities of accomplishing and empowering the medicine, and attaining spiritual accomplishments in a meditational state upon Trowo Tsochok Khagying and the peaceful and wrathful deities;
3. The final medicinal empowerment (*sman dbang*), along with an empowerment for long life (*tshe sgrub gyi dbang*) and the *mendrup* medicine distribution.

The *mendrup* act itself is constituted of the middle and longest part and the concluding empowerments. This second section lasts no less than fifteen days, during which chanting cannot cease and the main *mendrup* "medicinal mantra," *mendzap* (*sman 'dzab*), resonates many times. Various other mantras, special invocations, dances, hand gestures, and music and melodies accompany the extensive texts' recitations. Twenty-four selected monks receive exclusive training prior to each enactment to enable its performance.

The focus and material centre of the whole ritual is the medicine. It is placed in nine vessels (*bum pa, ga'u*) and bags on and around the mandala (Tibetan: *dkyil 'khor*, Sanskrit: *maṇḍala*) of the ritual, enclosed and firmly sealed by cloth. The

20 Such a ritual conducted in Menri, India, in 1985 was briefly described by Cech (1987: 272 f).

21 As the one studied by Kind (2002).

22 MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*); dKar ru Grub dbang sprul sku bstan pa'i nyi ma 1998a: v. 168, text 1, 1998b: v. 230, text 22; dPon slob Rin po che tshangs pa bstan 'dzin et al. 2014. More details in Sehnalova 2013, 2015, In press.

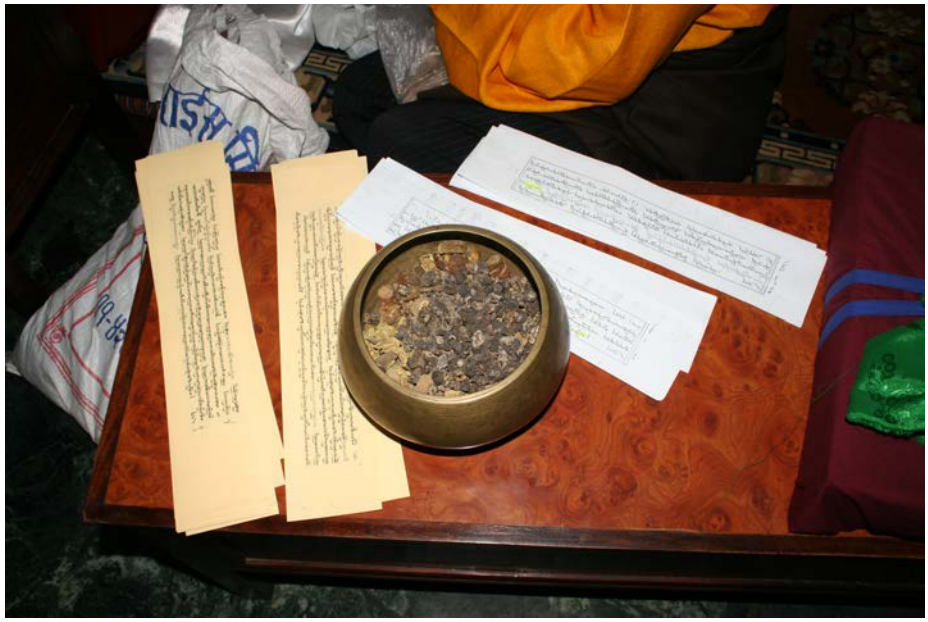

Figure 3: Assembling the medicines in the respective vessels strictly follows the ritual text's prescription.

nine vessels, one in the centre, four in the main and four in the intermediate cardinal points of the mandala, are prescribed to contain specially assorted medicines of specific properties. Their compounding follows a precise recipe in the ritual's texts, for which a person knowledgeable in medical pharmaceutics (following the Tibetan *Sowa rigpa* medical tradition) has to be put in charge (Figures 3, 4). The ritual requires that mixed raw ingredients undergo the first half of the second phase (number 2. above) of the ritual, before being ground to pursue the next stage of bestowing accomplishments (the second half of the second phase). For the sake of time and easier production, almost all of the *mendrup* medicine is nowadays powdered mechanically well in advance, and only a part of the medicinal vessels on the mandala contain unprocessed ingredients at the beginning of the ritual. These are ground manually by pestle and mortar at the given middle phase of the celebration. At this moment, the ground and unground ingredients are carefully mixed. Afterwards, the medicine is returned onto and around the mandala, and the ritual continues.

The central medicinal container is on the mandala, accompanied by the medicinal yeast *papta* (*phabs gta'*, also *sman phabs*), the "fermenting agent" of the whole ritual and its medicine.[23] It is also a medicinal mixture believed to come from

23 For a discussion of this substance and its appellation see Sehnalova (forthcoming).

Figure 4: The monastery's practitioner of traditional Tibetan medicine, helped by monks, prepares the vessels of medicine in the five cardinal points' colours to be placed on the mandala of the ritual.

deities and old masters, bringing their powers and assuring the efficacy of the ritual. From the centre of the mandala, a "spell cord" (*byang thag, gzungs thag*, Figure 5)[24] leads to the elevated seats of the two presiding monks, bound to the Bonpo ritual sceptre (*chag shing*).[25] The thread helps to concentrate and navigate the powers of the deities on the mandala and the medicine. The produced medicine is considered extraordinarily efficacious. Up to one thousand people arrived at Triten Norbutse to receive the medicine and the final empowerment. The compound is taken orally, and various rules apply to its consumption and preservation. It is kept in monasteries and families for decades as a unique blessing helping to achieve awakening, and a drug for any disease, illness or disorder. It is perceived to work for all beings and the environment.

TRANSMISSION AND CONTINUATION OF THE BONPO *MENDRUP* RITUAL

According to contemporary Bonpos' narratives, the *mendrup* of Trowo Tsochok Khagying originates with the Primordial Buddha, Küntu zangpo (Kun tu bz-

24 The etymological explanation might be as follows: *Thag* means "rope, cord," *byang* denotes "to purify," and *gzungs* "a spell." The literal translation would thus be a "purificatory cord" or a "spell cord."

25 Alternative, less correct spellings: *'chag shing, phyag shing*.

Figure 5: The arrangement of the mandala with the nine medicinal vessels and various offerings placed on its top. The vessels carry the colours of the given directions: white in the centre, yellow in the East, green in the North, red in the West, and blue in the South. Yellow also stands for the four intermediate points. The threads of corresponding colours are led upwards to eventually compose the spell cord. The mandala is sealed and closed for most of the duration of the ritual.

ang po, Sanskrit: Samantabhadra). He is believed to have bestowed the ritual's practice and expertise to the deity Shenlha Ökar (gShen lha 'od dkar), who then taught it to the famous Bonpo master Drenpa Namkha (Dran pa nam mkha', eighth century).[26] Drenpa Namkha is understood to have concealed the text (along with many others) during a time of persecution of Bon, as a treasure (*gter ma*) to be rediscovered in more favourable times. During the eleventh and twelfth centuries, the treasure revealers Shenchen Luga (gShen chen klu dga', 996–1035), and also Rindzin Chenpo Gyermi Nyiö (Rig 'dzin chen po gyer mi nyi 'od, eleventh–twelfth century) or Matön Sindzin (rMa ston srin 'dzin, aka Matön Söldzin, rMa ston srol 'dzin, b. 1092) unearthed the *mendrup* texts as well as the essential "fermenting agent" *papta*, considered the medicinal core of the *mendrup*.[27] Thus, both the ritual's text and its old medicine are perceived as treas-

26 Dating according to Karmay (2007: 213).

27 Dates based on Kværne 1971. The accounts of the discovery differ. According to Kværne (1971: 230), Gyermi Nyiö and Matön Sindzin found the treasure together in 1108. Millard and Yungdrung (un-

Figure 6: The mandala being hidden behind cloth in its special structure. White bags of additional medicine placed around are clearly visible. The ritual's practitioners, pilgrims and visitors would circumambulate the whole construction anticlockwise, as well as prostrate to its sacred content, while reciting the *mendrup*'s mantra called *mendzap*.

Figure 7: At a certain stage of the ritual, the nine medicinal vessels and the rest of the *mendrup* medicine are ceremoniously circumambulated in the Bonpo anticlockwise direction around the temple of the mandala as the centre of the *mendrup* ritual action.

ures of divine origin.[28]

Upon its discovery, this particular *mendrup* is said to have been practiced in Yéru Wensaka (g.Yas ru dben sa kha), the first Bonpo monastery established in 1072 and from the early fifteenth century in its successor Tashi Menri monastery. *Mendrup* was also adopted by the nearby Yungdrung Ling monastery (g.Yung drung gling, founded in 1834). The practice continues in both institutions, the most recent performance took place in 2013 at Yungdrung Ling.[29]

With the flight of Tibetan refugees since the 1950s, their rituals travelled with them in their memories and in textual form on their backs. In exile, *mendrup* was reinstituted in 1988, first in Menri, and later, in 1998, in Triten Norbutse.[30] Further performances of the ritual were conducted in 2009 (Menri) and 2012 (Triten Norbutse). The individual enactments varied according to the particular *yidam* and the deity's textual corpus. *Mendrup* was often scheduled to mark important events requiring powerful ritual action, such as the celebration of the 25th anniversary of the founding of Triten Norbutse monastery in 2012, or the *mendrup* planned for the 90th birthday of Menri Trindzin, the highest authority of contemporary Bon, for April 2018. Sadly, His Holiness Menri Trindzin, aka Lungtok Tenpai Nyima, passed away in September 2017.[31] The *mendrup* ceremony also expresses the prestige, political power and economic significance of the leading monasteries of Bon.

3. THE BONPO MENDRUP RITUAL IN BONPO HISTORICAL SOURCES

Let us turn to examining Bonpo textual evidence of the *mendrup* ritual. In the historical textual corpus, various kinds of documents feature: myths and rituals, recordings of visions, accounts on the origin of Bonpo teachings (*bstan*

published) describe a transmission of the former's discovery to the latter. This version accords with Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan 2017: p. 17, f. 42; p. 72, fol. 234. A third narrative states that Matön Sindzin made the discovery upon Gyermi Nyiö's prophecy (dPon slob Rin po che tshangs pa bstan 'dzin et al. 2014: 2). A more detailed lineage of transmission is given by Millard and Yungdrung (unpublished). Gyermi Nyiö's bibliography by sKyang 'phags does not contain an explicit mention of the discovery (sKyang 'phags 1998: v. 200, text 1). Cf. Martin 2017.

28 This paragraph intends to demonstrate the commonly transmitted oral knowledge on "the light-swirled *mendrup*." For written historical evidence, see the discussion below.

29 A dpal bzang 2013a,b.

30 These big *mendrup* performances in 1985 in Menri were preceded by a smaller *mendrup*, the first ever conducted in the new Bonpo exile monastic community. See Cech 1987: 272 f.

31 In January 2018, the Menri monastery in India had not decided whether to carry out a *mendrup* in the near future or not.

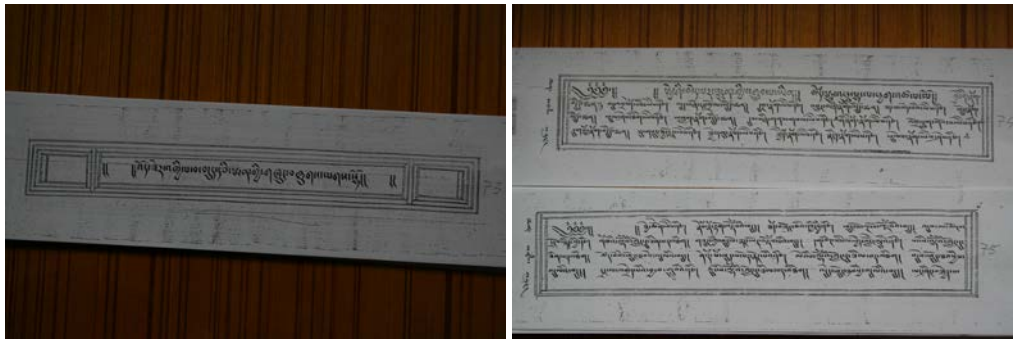

Figure 8: Opening pages of the principal text of the *mendrup* of the deity Trowo Tsochok Khagying, *The Main Text of the Light-Swirled Nectar Medicine*.

'byung),[32] prophecies (*lung bstan*), biographies and hagiographies (*rnam thar*). Some dates can be established on the basis of chronological works (*bstan rtsis*).[33]

SOURCES FROM THE ELEVENTH TO THIRTEENTH CENTURIES

The Bonpos themselves believe that the authoritative scripture for the *mendrup* ritual of Trowo Tsochok Khagying, *The Main Text of the Light-Swirled Nectar Medicine* (*'Od zer 'khyil pa bdud rtsi sman gyi gzhung bzhugs lags s+ho*, Figure 8),[34] was found as a treasure in the eleventh to twelfth century. Contemporary leading scholars on Tibetan treasure literature use the dates of such supposed discoveries as an approximate (and sometimes the latest possible) dating for the time of the given texts' composition. The language of this text also indicates the likely origin in this period.

This dating is also supported by another treasure text discovered in the twelfth century. This scripture, *The Transmission of Knowledge of Family Holders* (*Rigs 'dzin rig pa'i thugs rgyud.*),[35] contains myths about origin of the world, deities, Bonpo teachings, and ritual instructions. As such, it is neither a healing practice, nor a tantric *sādhana* text. Like the *mendrup* text and ritual, the work is again attributed to the deity Küntu Zangpo as its original source, then to Drenpa Namkha as its supposed receiver, and finally to a master of the Ma (rMa) family

32 The Bonpo term and genre are analogous to the Buddhist *chos 'byung*.

33 Kværne 1971 and Martin 2017. Further work on the sources by the author is in progress.

34 MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*); dKar ru Grub dbang sprul sku bstan pa'i nyi ma 1998a: v. 168, text 1, 1998b: v. 230, text 22.

35 The standard spelling of the beginning would be *rig 'dzin*. *Rigs 'dzin rig pa'i thugs rgyud* (Anon. 1972b: ff. 186–237).

dated to the twelfth century, Matön Shérap Senggé, possibly Matön Sindzin's grandson, as its discoverer.[36] Further, other close similarities to the *mendrup* can be observed. The same classes of deities are important here – the *zhi tro*, the forty-five peaceful and eighty-six wrathful deities, among them Trowo Tsochok Khagying. Throughout the work, more categories corresponding to the *mendrup* occur, such as the opposition of harmful poison (*dug*) and beneficial medicine (*sman*) or nectar (*bdud rtsi*), and the notion of possible transformation of the former into the latter through the power of certain divinities (*dug sman du bsgyur*).[37] The former is linked to the five mental poisons or afflictions (*nyon mongs dug lnga*).[38] This contrast and the intended conversion into the five wisdoms (*ye shes lnga*),[39] which are also mentioned, form the key element of the *mendrup*. The text also touches upon *rasayana* medicine (*ra sa ya na sman*),[40] possibly mercury,[41] which plays a role in the *mendrup* ritual as well. Thus, both *The Main Text of the Light-Swirled Nectar Medicine* of the *mendrup* and *The Transmission of Knowledge of Family Holders* at the least partly derive from a shared body of knowledge and traditions, and likely reflect the Bonpo intellectual environment of the twelfth century.

A much stronger support for this possible dating of the *mendrup* ritual and text is found in *The Biography of Lama Shen* (*Bla ma gshen gyi rnam thar*) dated to the thirteenth century.[42] This relatively short composition presents the history of the famous Shen (gShen) family lineage and its transmissions of teachings.[43] The title evokes the family's most prominent character, master Shenchen Luga, who is strongly associated with *mendrup* by the Bonpo tradition.[44] Here, we find the earliest historical account of Bonpo *mendrup* I am aware of. Pönsé Dzamling (dPon gsas 'dzam gling, b. 1259/1271),[45] a direct descendant of Shenchen Luga after a few generations, figures in the following account (translation by Dan Martin):

36 Martin 2017 and Karmay 1972: 170 f.

37 "*Rigs 'dzin rig pa'i thugs rgyud*," (Anon. 1972b: ff. 201–2 and 209). Further in Sehnalova In press.

38 "*Rigs 'dzin rig pa'i thugs rgyud*," (Anon. 1972b: f. 192).

39 "*Rigs 'dzin rig pa'i thugs rgyud*," (Anon. 1972b: f. 188).

40 "*Rigs 'dzin rig pa'i thugs rgyud*," (Anon. 1972b: f. 215).

41 The exact meaning of the term remains a speculation: actual mercury, a mercury-based medicine, another substance, or a certain healing or other practice. The *sman* ("medicine") syllable is likely to indicate a material substance. Cantwell 2017 (in this volume) elaborates on the complexity of the word *ra sa ya na* (Sanskrit: *rasāyana*).

42 "*Bla ma gshen gyi rnam thar*," (Anon. 1972a: ff. 238–44), dated by Martin (2001).

43 For further information on the lineage, see Karmay 2007 and rMe'u tsha bstan 'dzin rnam rgyal 2014.

44 Moreover, he is associated with both main *mendrup* rituals of the Bru lineage, of both the deities Trowo Tsochok Khagying and Purwa.

45 Dating in Martin 2001: 77.

> He [Pönsé Dzamling][46] obtained the essential scriptures, blessings and empowerments of the past masters, including 'uncle and nephew' (*khu dbon*) lamas. He performed the *Zhi-khro* ("Peaceful Wrathful") and Medicine practices (*sman sgrub*)[47] and became a great master in the transmission of blessings.[48] His mental continuum was thoroughly tamed and his thoughts were immaculately pure. He was completely free of erroneous conceptions of the subjective and objective and devoid of attachment to partial perspectives that come from holding on to the 'self' and one's own special qualities. Therefore, he could overpower and control other peoples' experience of the phenomenal world. Because of his blessings and compassion, he could overpower all hindrances and injuries.[49]

Mendrup appears as powerful ritual knowledge, which is continued from the past and transmitted by the Shen lineage as one of their main practices. It is explicitly listed as one of the chief achievements of master Pönsé Dzamling. As the text indicates, Pönsé Dzamling was granted the practice, performed it, excelled in it, was entitled to hand it over, and is believed to have gained extraordinary skills from the practice. The necessity of acquiring the given text and empowerment, along with the previous masters' blessings, for performing and further bestowing the practice, are stressed, as they are today. In addition, the connection of the *mendrup* practice with the *zhi khro*, peaceful and wrathful deities, is clearly visible.

Relying on the examined sources and their plausible dating, it can be stated that the Bonpo *mendrup* ritual and its scriptures very likely existed before the thirteenth century, and probably originated between the eleventh and thirteenth century. This dating would correspond with the emergence of the Nyingma *mendrup* rituals.[50]

SOURCES FROM THE FOURTEENTH TO SEVENTEENTH CENTURIES

The evidence for the existence of the Bonpo *mendrup* ritual by the thirteenth century is further strengthened by the only known commentary on the ritual and its

46 My insertion.
47 My insertion.
48 I suggest an alternate translation: "He became a great master of the lineage of blessings of [the practices of] the peaceful and wrathful deities and the *mendrup* [associated with them], as well as other [practices]." (*zhi khro dang sman sgrub la swogs pa/ bying brlabs rgyud pa'i dpon gsas chen por gyur cig/*). "*Bla ma gshen gyi rnam thar*," (Anon. 1972a: f. 243).
49 "*Bla ma gshen gyi rnam thar*," (Anon. 1972a: f. 243), tr. by Martin (2001: 77 f.).
50 Cantwell 2017 (in this volume) and Garrett 2009, 2010.

Main Text of the Light-Swirled Nectar Medicine. The commentary comes from the pen of the eminent Bonpo master Nyö Tsültrim Gyeltsen (gNyos Tshul khrims rgyal mtshan), active in Yéru Wensaka monastery in the fourteenth century. The work is entitled *The Mirror Illuminating the Practice of Good Qualities of the Light-Swirled Nectar* (*'Od zer 'khyil pa bdud rtsi yon tan gyi phyag bzhes gsal byed me long bzhugs so*.).[51] Apart from the *mendrup* text itself, this writing constitutes the first extensive historical evidence of the Bonpo *mendrup* ritual in general, and of the *mendrup* of Trowo Tsochok Khagying in particular. It gives detailed instructions on the ritual's performance, is very technical and prescriptive, and is considered very authoritative. The work has codified the practice of the ritual and is followed in contemporary performances. It is regarded as the main work on the ritual within the Bonpo tradition. The commentary frames the ritual into a very formalised structure of a Buddhist *sādhana* and organised, large-scale monastic ritual practices with many stages and substages, elaborated preliminary activities, various sequences of the main activities, etc. Moreover, it imposes a clearer Buddhist cosmological and ritual framework to create the whole as an extended and coherent unit. The manual gives accurate guidance throughout the rite, which suggests that the *mendrup* ritual's practice might have not significantly changed since the time of Nyö Tsültrim Gyeltsen. The individual stages of the ritual as we know it today might have been expanded, elaborated, etc., but not created anew, and still follow Nyö Tsültrim Gyeltsen's writing.

From a slightly later period, from between the fourteenth to sixteenth centuries,[52] come two short mentions of *mendrup* in the historical work *The Lamp Illuminating the Explanations and Developments of the Teachings* (*bsTan pa'i rnam bshad dar rgyas gsal ba'i sgron ma zhes bya ba bzhugs*),[53] written by the famous scholar Patön Tengyel Zangpo (sPa ston bsTan rgyal bzang po).[54] The work enumerates transmitted teachings and practices of Bon and organises them into lists of groups and subgroups. The *mendrup* here appears under its common epithet as "the nectar medicine" (*bdud rtsi sman*) and is listed among cycles of the tantras of the *zhi tro*, the peaceful and wrathful divinities.[55]

Similarly, a biography of Nyammé Shérap Gyeltsen (mNyam med Shes rab rgyal mtshan, 1356–1415),[56] one of the chief leading figures of Bon in its history,

51 MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil pa bdud rtsi yon tan gyi phyag bzhes gsal byed me long bzhugs so* by gNyos tshul khrims rgyal mtshan) (attribution of the work in its colophon); Millard and Yungdrung (unpublished) provide an English translation.

52 See the discussion on its time of composition in Martin 1997: 78 f.

53 Spa-ston Bstan-rgyal-bzang-po 1972: ff. 498–769, sPa ston bsTan rgyal bzang po 2010: 187–364. Cf. Martin 1997: 78 f.

54 Dating in Martin 1997: 78 f. and Karmay 2007: 72.

55 Spa-ston Bstan-rgyal-bzang-po 1972: ff. 519–25, sPa ston bsTan rgyal bzang po 2010: 204–5.

56 Dating in Karmay 2007.

has *mendrup* performed in a list of various practices. Nyammé Shérap Gyeltsen was an extremely influential Bonpo scholar, who is credited with establishing the principal Bonpo Tashi Menri monastery in Central Tibet in 1405, and with transforming Bon into its current institutionalised monastic form. In *The Splendorous Lotus Rosary Biography of the Omniscient Precious Lord, the Great One-eyed Master* (*rJe rin po che thams cad mkhyen pa slob dpon spyan gcig pa chen po'i rnam thar ngo mtshar pad mo'i phreng ba.*),[57] one of the several accounts of his life,[58] the empowerment of Trowo Tsochok Khagying and "medicinal ritual arrangements" (*sman gyi chog khrigs*) feature among the recorded activities master Nyammé Shérap Gyeltsen engaged in.[59] The account is supposed to have been composed by Drakpa Gyeltsen (Grags pa rgyal mtshan), a disciple of the master's spiritual son Gyeltsap Rinchen Gyeltsen (rGyal tshab Rin chen rgyal mtshan, b. 1360/4),[60] and hence can presumably be dated to the late fourteenth or fifteenth century.

The dating of two other writings significant to the endeavour of tracing the Bonpo *mendrup* ritual remains very problematic. In my estimation, they might be included into this period of the fourteenth to seventeenth century, or into slightly later times. Both compositions deal with important Bonpo historical figures who at least are datable. The first is Druchen Namkha Yungdrung (Bru chen Nam mkha' g.yung drung, 994/999–1054),[61] one of the most prominent masters of the Dru lineage, and the second the above-mentioned treasure revealer Matön Shérap Senggé (twelfth century) who figures in both works. Namkha Yungdrung, aka Druchen, "the Great Dru [lineage master]," the alleged founder of the Yéru Wensaka monastery, is the central figure of the explicitly-titled *The Biography of Lama Druchen* (*Bla ma gru chen po'i rnam thar bzhugs so.*),[62] authored by a certain Tazhi Dülwa Senggé (Mtha' bzhi 'Dul ba seng ge), who is difficult to trace. The work presents Namkha Yungdrung's life story, and within it records the very first performance of the *mendrup* ritual. The text records how, from a young age, the master travelled, meeting teachers and requesting teachings from them.[63] Having acquired a diverse education and experience of practice, he himself became a teacher followed by a number of disciples. Among them was Matön Shérap Senggé. In a group with two other students, Darma Drogön Azha (Dar ma 'Gro 'gon 'a zha) and Pönsé (dPon gsas), he approached the master and requested the outer, inner and secret empowerments and transmissions

57 Tshe ring bkra shis 2004: 20–69.
58 Cf. Tshe ring bkra shis 2004.
59 Tshe ring bkra shis 2004: 40.
60 Tshe ring bkra shis 2004: 3–4. The birth year 1364 in Tshe ring bkra shis 2004, 1360 in Achard 2004: 256, Kværne 1971: 232 and cf. Karmay 1972: 143 f.
61 Kværne (1971: 229) lists the wood horse year of 994, whereas *The Biography* itself (Mtha'-bzhi-'Dul-seng 1972: f. 239) places the birth into a pig year, which would be 999 (Vostrikov 1970: 238 f.).
62 (Mtha'-bzhi-'Dul-seng 1972: ff. 438–57).
63 (Mtha'-bzhi-'Dul-seng 1972: ff. 440).

of *bdam skar*.[64] The text remains silent about the possible inclusion of *mendrup* among them. Reading further, the transmission of this specific practice seems to be have been confined to a single chosen disciple. In a section of the biography recording the master's bestowed practices and empowerments, their recipients, and eventually the payments made for them, the transmission of *mendrup* is explicitly registered as granted to student Pönsé:

> In [the place of] Zhikha (bZhis kha),[65] the above-mentioned Biri Agom (Bi ri a sgom) offered a part of a nomadic estate [to master Druchen]. At that great place, [master Druchen] practised the familiarisation and accomplishment (*snyen (bsnyen) sgrub*) and concentrated practice (*nyams len*). According to the prophecy of Sipé Gyelmo (Srid pa'i rgyal mo),[66] he gave the instructions (*lung nos*) for the nectar medicinal accomplishment (*bdud rtsi sman grub* [sic]) to master Pönsé.[67]

Then again, Pönsé was honoured by receiving the practice from the master at another location:

> In [the place of] Chi (sPyi) [master Druchen] offered the nectar medicinal accomplishment (*bdud rtsi sman bsgrub* [sic]) to master Pönsé, and [the rites] of the earth demons and sky demons, as well as many other selected practices, to Rikdzin khandro (Rigs 'dzin mkha' 'gro) and others.[68]

Yet, the most interesting is the reference to the very first celebration of the *mendrup* ritual, with which master Druchen is credited:

> [Master Druchen] led the first *mendrup* ritual (*sman sgrub* [sic]). Having conducted it five times,[69] he collected the various medicines

64 The word *bdam skar* remains unclear, it might refer to a certain name (possibly derived from a star constellation, as *skar* means star). *de dus bla ma dar ma 'gro 'gon 'a zha/ bla ma rma sher seng (shes rab seng ge)/ bla ma dpon gsas dang bzhi bar 'dzom pa la/ phyi nang gsang ba'i dbang lung dang/ bdam skar mtha' dag zhus/* (Mtha'-bzhi-'Dul-seng 1972: f. 441).

65 Probably in Central Tibet.

66 One of the main protectors of Bon (Kværne 1995: 107 f., 113).

67 *bzhis kha la snga ba bi ri a sgom gyis 'brog bzhis (gzhis) dum cig phul/ gnas chen der snyen (bsnyen) sgrub dang/ nyams len grims par mdzad pas/ srid rgyal gyis (srid pa rgyal mos) lung stan (bstan) nas/ bla ma dpon gsas la bdud rtsi sman grub* [sic] *gi (kyi) lung nos gsung/* (Mtha'-bzhi-'Dul-seng 1972: f. 442).

68 *spyi ru bla ma'i (ma) dpon gsas la bdud rtsi sman bsgrub* [sic] *dang/ rigs 'dzin mkha' 'gro la swogs pa/ sa gdon dang gnam gdon/ gzhan yang bdams pa'i bzhug rnams mang du zhus/* (Mtha'-bzhi-'Dul-seng 1972: f. 442).

69 The source does not provide any details of the mentioned five performances of the *mendrup* ritual.

> (*sman rnams*), and many good signs appeared. The welfare of beings spread and increased, and [all] the four lands were blessed. In Shubar (Shu bar), close to the teacher Śrī Vajrapāṇi, he enslaved (tamed) demons [hindering] men and eliminated those [demons] who opposed. In Wensaka and Chi, offerings were presented [to the master] several times. [Also] the Bonpos of the pastoralist lands invited [the master] in order to tame [the harmful demons there]. [By this the master] showed kindness to all. [Master Druchen then] performed the familiarisation and accomplishment of the peaceful and wrathful deities (*zhi khro'i snyen (bsnyen) sgrub*), and the accomplishment of liberation by eating nectar (*bdud rtsi zos grol sgrub pa*). [Subsequently,] the big violent spirits together with their retinues, the to-be-tamed rock demoness Dakpa Shago (bDag pa sha 'go, 'The deer-headed one'), the lords of the land (*gzhi bdag*) of Droshong (Gro shong), and others, were truly and completely bound by oath to the Doctrine (*bka'*).[70]

This passage ascribes Druchen with the orchestration of the first *mendrup*. It emphasizes that there are a number of different medicines which must be acquired before the ritual can commence. The ritual is depicted as bringing universal prosperity and blessings; this is also the way it is understood by the contemporary Bonpo community. Druchen performs the ritual for lay communities in response to their request and offerings, in this case along with other ritual services. In this context, Druchen also pacifies malevolent forces of the environment, and tames them into the protectors of the Doctrine, suggesting that the *mendrup* performance itself might have been perceived as effecting these actions. It is now difficult to prove such claims, yet the capability of the *mendrup* ritual to balance and pacify the whole environment is overtly stressed by Bonpos during contemporary performances.

70 In the Bonpo context, the term *ka* (*bka'*), "Word," refers to the teachings of the supposed founder of the religious tradition of Bon, Tönpa Shenrap Mibo (sTon pa gShen rab mi bo). In the Buddhist context, the "Word" signifies the teachings of Buddha Shakyamuni, see Kværne 1995.

sman sgrub [sic] *dang po'i sna drangs nas/ thengs lnga mdzad pas/ sman rnams slongs (slong) cing bzang rtags du ma byung/ 'gro don rgyas par 'phel cing sa bzhi byin gyis rlabs/ shu bar du bha vadzra pa ṇi stan pa'i dra ru langs pa la/ mi bdud bran du bkol nas 'gal byed cham la phab/ dben tsha kha dang spyi ru 'bul ba rnams gzhag thengs 'ga' mdzad/ 'brog phyogs bon pos tul gyur spyan drangs kun la bka' drin gnang/ zhi khro'o snyen (bsnyen) sgrub dang/ bdud rtsi zos grol sgrub pa mdzad nas/ che btsun sde 'khor dang/ tul kyu'i brag srin bdag pa sha (shwa) 'go la swogs/ gro shod kyi bzhi bdag rnams dngos su yongs nas bka' dang dam la btags/* (Mtha'-bzhi-'Dul-seng 1972: f. 446).

Throughout the quotes, the *mendrup* ritual is referred to as the "nectar medicinal accomplishment" or the "practice of the nectar medicine" (*bdud rtsi sman sgrub*). In the last example, the rite is attributed with the capacity of liberating, i.e., achieving awakening, through digestion, which refers to the Tibetan practice of liberation through the sense of taste (*myong grol*). The *mendrup* practice is again connected to the peaceful and wrathful deities. Both master Druchen Namkha Yungdrung and the *mendrup* are placed into the area of the first known Bonpo monastery Yéru Wensaka in Central Tibet. This locality of the initial *mendrup* performances, as well as their link to the Dru lineage, are similarly accentuated by the contemporary oral histories of Bonpos. The supposed dating of Druchen (994/999–1054) and Shenchen Luga (996–1035), the alleged discoverer of a part of the *mendrup* practice, make them contemporary and thus make this story possible. However, the two other discoverers of other bits of the *mendrup*, Rindzin Chenpo Gyermi Nyiö (eleventh to twelfth century) and Matön Sindzin (b. 1092), post-date Druchen. This indicates that parts of the *mendrup* practice might be of different periods and origin (authorship), or simply that its precise dating remains difficult. Alternatively, we might be dealing with two distinct *mendrup* rituals, each having its own history of discovery and transmission. Nevertheless, this does not seem likely in the context of the other sources presented below.

Another hard-to-date text relevant for the understanding of the history of the Bonpo *mendrup* are the *Visions of Matön Shérap Senggé* (*rMa ston shes rab seng gi gzigs snang lags so.*)[71] by Zhötön Sönam Drakpa (gZhod ston bSod nams grags pa). As the straightforward title indicates, the tract deals with various visions received by the master and treasure revealer Matön Shérap Senggé (twelfth century) in dreams and during his spiritual practice at varied locations. The narration is presented in the first person and reads as a succinct diary or autobiography. Matön Shérap Senggé, and not his grandfather Matön Sindzin, acts here as the acquirer of the *mendrup* text. Matön Shérap Senggé recounts his procurement of the text, as well as of the practical knowledge for performing the ritual, in detail:

> Then, [I] stayed at the rock in Goklung (sGog lung). One day, while entering a narrow passage [of the rock], [I] experienced a vision. That time, the previous[ly encountered] master was there, all dressed in cotton robes. He had returned again and come to his companion (i.e., myself) and said: [Where] the mouth of the rock cave faces East, inside [of the cave] there is an opening. In the middle [of its inside],

71 Gzhod-ston Bsod-nams-grags-pa 1972: ff. 310–24, gZhod ston bSod nams grags pa 1981: 162–75, gZhod ston bSod nams grags pa 1998: ff. 310–24, exactly the same as the first edition.

there is a mandala. Nine vessels are spread [on it]. To the central vessel there are eight vessels on the edges [of the mandala], [all] joined by a spell cord (*bzungs thag*). In the four cardinal points and in the four corners of the mandala there are eight men coming forth. Stretching the spell cord, they stand in a row. On the crowns of their heads they have a tied, plaited tuft of hair. They stand facing [the mandala].[72] In the four corners of the mandala, silk ribbons in the four [colours of] white, yellow, red, and blue, are tied to the neck (i.e., upper part) of the four vultures' victory banners.[73] The *sé* vessel in the centre is wrapped in fine silk.[74] Many offerings are arranged [there]. In the West there is a big throne, the master is on its top. Also plenty of *chang*[75] is [arranged] there." [Then,] the master said: "This place is a garden of the jewel of turquoise, and this rock is a *sé* rock of heaped jewels. The cave and the rock are in union [like] the sun and the moon. Here, the nectar medicine will be accomplished (*bdud rtsi sman du bsgrub*). It is a practice (*sgrub*) in order to [be] without (i.e., overcome) birth and death," he said.

[Upon that,] I requested: "How should the place [of the practice] be accomplished (i.e., established, *sgrub*)? As for the accomplishment of nectar medicine, what are the root (i.e., main) and the branch (i.e., minor) [ingredients of the practice]? How to master the general meaning of the practice? How to accomplish the manual of the main text [of the practice] (*sgrub bzhung lag khrigs*)? How to accomplish the main purpose [of the practice]? What is the [actual] practice (*lag len*) of the [ritual] activities? [How] to observe the particular kinds of the medicines? How [to accomplish] the special *siddhi* of the medicinal empowerment (*sman dbang*)? How to gather the three ways of accumulation?"[76] To that [the master] said: "This place is a garden of the spontaneously achieved turquoise realm [to] accomplish the nectar without birth and death. As for the accomplishment of the nectar medicine, there are five root (i.e., main) and eight branch (i.e., minor) [ingredients]. I have collected them. The general meaning is to accomplish [the state] without birth and death. He explained all the methods of the practice (*lag len bya thabs*) of the lower door (i.e.,

72 This is a tentative translation.

73 This refers to the arrangement of paraphernalia on the mandala.

74 The *sé* (*bse*) material can denote rhinoceros or other animal horn, a type of stone or copper, or leather. See Jäschke 1881; Das 1902; Zhang 1993.

75 Barley beer or another alcoholic beverage as an offering to the deities.

76 The three ways likely refer to the following methods proposed by the master.

esoteric instructions of the lower gate of the body), and the means of accumulating *siddhi* of the medicinal empowerment (*sman dbang*). It was explained in the *Key of Medicine* (i.e., of medicinal practice) (*sman gyi lde mig*).

"Who are these eight men? Don't you have any helpers?" [I asked.] [After the master] explained how to prepare the vessels, and how to tame (*btul*) the medicine, the eight men acted as the eight *vidyādhara*s (*rig 'dzin brgyad*) pressing the ground as a swastika.[77] The one in the East performed the peaceful medicinal accomplishment (*sman sgrub*) of meditation on deities. The one in the North accomplished the medicine of life without dying (*ma dur tshe sman sgrub pa*).[78] The one in the West accomplished the medicine of the empowerment of Dawa Gyeltsen (Zla ba rgyal mtshan). The one in the South accomplished the life empowerment (*tshe'i dbang*) of activities illuminating the meaning of eternity (*gyung drung don gsal phrin las*). The one in the southeast accomplished the spontaneous accomplishment of the earth medicine of [the deity] Mupung Seldang (Mu spungs gsal dangs [dwangs]). The one in the northeast accomplished the lifting action of the lifting hollowness of the wind of Zarang Mébar (Za rang me 'bar). The one in the northwest accomplished the ripening of the medicinal heat (*sman drod smin pa*) of Mutsa Gyemé (dMu tsha gyer med). The one in the southwest accomplished the water medicine of Mugyel Tsukpü (dMu rgyal rtsug phud). Their purpose was the accomplishment of space (*dbyings sgrub*). [The action of] increasing (*rgyas pa*) was explained in the *Key*. [The master] also bestowed the medicinal yeast (*sman phabs*). [I] also attained the medicinal empowerment (*sman dbang*). Thus is the sixth false word of a beggar.[79]

77 Probably refers to the pattern of their distribution in the four cardinal and the four intermediate points, by which they form the shape of a swastika.

78 Literally "not burying" (*ma dur*).

79 Due to likely mispellings in the original, the translation remains tentative. Gzhodston Bsod-nams-grags-pa 1972: ff. 318–20, gZhod ston bSod nams grags pa 1981: 171–73, gZhod ston bSod nams grags pa 1998: ff. 310–24, are exactly the same as the first edition. The transliteration is based on the first edition, supplemented by corrections according to the second marked by a small cross.

(318/171) de nas sgog lung gi brang la yod tsam na// nang cig bseb †(gseb) du phyin tsa na// snang ba phyed yengs nas 'dug/ de dus sngon gyi bla ma de// ras kyi na bza' kun ka 'dug/ yang yongs zla la 'deng dang gsung// brag phug kha shar du ltas pa nang phye ba cig 'dug/ dkyil na dkyil (319) 'khor cig 'dug/ bum pa dgu spram †(skram) nas 'dug/ dkyil gyi bum pa'i mtha' bum pa rgyad (brgyad) kyi bzungs †(bzung) thag sbrel nas 'dug/ dkyil 'khor phyogs bzhi zur bzhi na/ mi brgyad rtsog ge bzhugs nas/ zungs thag

In this vision, Matön Shérap Senggé met a master and interacted with him in a dialogue. The master revealed the *mendrup* mandala to him, all the medicinal vessels on top of it, and their layout together with the spell cord. He gave advice on how to compose the ritual's complex medicinal mixture. As in the *mendrup* text itself, the various ingredients are referred to as root and branch, major and minor, ingredients. The structure of the *mendrup* medicine recipe is alluded to as well, as the ingredients in it are divided into the main fivefold cluster organised according to the five elements, and a minor second cluster of an eightfold pattern reflecting the eight classes of consciousness (*rnam shes brgyad*).[80] Importantly, the master also granted the medicinal yeast (*sman phabs*) and the medicinal empowerment (*sman dbang*) crucial for the success of the ritual. Shérap Senggé received complex instructions upon his multiple questions. He was also rewarded by seeing the firm arrangement of the mandala based on the elements along with their respective properties and medicines in each cardinal point.[81] This organisation is typical for Bon: the element of earth and the medicine of earth in the

'phyan †('thin) na 'grangs †(bgrangs) nas 'dug/ spyi bo na thor cog bcings †(bcing) nas 'dug/ bdong †(gdong) pa 'phyan na bcug nas 'dug/ dkyil 'khor zur bzhi na/ bya rgod rgyal mtshan (172) bzhi la/ skye (ske) na dar dkar ser dmar sngo bzhi btags nas 'dug/ dkyil na bse'i ga 'u †(ga'u) la dar †(der) zab kyis bril nas 'dug/ mchod rdzas mang bar bshams nas 'dug/ nub phyogs na khri che ba cig 'dug/ de'i kha na bla ma de brda †(gda')// chang yang mang bar brda †(gda')/ bla ma de'i zhal nas/ gnas 'di rin chen g.yu sdings kyi †(sding gi) 'tshal †(tshal)/ brag 'di bse brag rin chen spungs pa yin// brag phug nyi zla kha sbyor yin// 'di na bdud rtsi sman du bsgrub// skye shi med pa'i don sgrub yin gsung// bdag gis zhus pa/ gnas ji ltar sgrub pa'i don lags/ bdud rtsi sman du sgrub pa ni/ rtsa ba yan lag gang lags/ sgrub pa'i spyi gang la bdags †(bdag)// sgrub bzhung lag khrigs gang la sgrub// de'i rgyu mtshan ci la sgrub// bya ba'i lag len gang ltar lags// sman gyi bye brag du †(tu) yis srung// sman dbang dngos grub ci ltar lags// sdu (bsdu) thabs rnam gsum gang la sdu// de la yang gsungs pa/ gnas 'di lhun grub g.yu sdings †(sding) 'tshal (tshal)// skye shi med pa'i bdud rtsi sgrub// bdud rtsi sman du bsgrub pa la// rtsa ba lnga la yan lag rgyad// nying (nyid) lag stod du sog pa yin// spyi ni skye shi med par sgrub// 'og sgo la lag len bya thabs (320) sman dbang dngos grub sdu thabs kun gsungs te/ sman gyi lde mig na bsal †(gsal)/ mi brgyad po 'di gang lags/ khyed la las 'khan †(mkhan) mi (173) †(mi) bdog gam/ ga'u 'cha' na ji ltar 'cha'// sman gyi btul thabs ji ltar btul gsungs pas/ mi brgyad po 'di g.yung drung sa non rigs 'dzin †(rig 'dzin) brgyad bya ba yin/ shar na 'dug pa 'di lha sgom zhi ba'i sman sgrub bya ba yin// byang na 'dug pa 'di ma dur tshe sman sgrub pa yin/ nub na 'dug pa 'di zla ba rgyal mtshan dbang gi sman sgrub pa yin/ lho na 'dug pa 'di g.yung drung don gsal phrin las tshe'i dbang sgrub pa yin/ lho shar na 'dug pa 'di/ mu spungs gsal dangs †(dwangs) sa sman sgrub lhun grub tu sgrub pa yin/ byang shar 'dug pa 'di/ za rang me 'bar rlung 'degs pa'i sbubs 'degs bya ba byed pa las su sgrub pa yin// byang nub na 'dug pa 'di/ dmu tsha gyer med sman drod smin par grub pa yin/ lho nub na 'dug pa 'di/ dmu rgyal rtsug phud chu sman du sgrub pa yin// 'di rnams kyi don la dbyings sgrub pa yin// rgyas pa lde mig na gsal/ sman phabs yang gnang/ sman dbang yang thob/ sprang po'i rdzun tshig drug pa pa †(pa) yin//

80 MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*); dKar ru Grub dbang sprul sku bstan pa'i nyi ma 1998a: v. 168, text 1, 1998b: v. 230, text 22.

81 On the role of elements in the Tibetan medical tradition, see, for example, Gerke 2014; Hofer 2014.

East, wind in the North, fire in the West, and water for the East. In this text, the elements have slightly moved to cover the intermediate directions as well. The complementing fifth element, space, is placed into the middle of the mandala.[82] The cardinal points are personified by eight divinities referred to as *vidyādharas*, "holders of magical power",[83] each of whom is responsible for accomplishing a given ritual action and medicine of the direction.[84] The story closes declaring the event to be a "false word of a beggar," by which master Shérap Senggé is depicted as adhering to the social code of modesty, actually conveying his greatness.

The comprehensiveness of this account suggests that its author was very familiar with the *mendrup* rite. The Zhötön Sönam Drakpa's text, as yet undated, accords in the key features, ritual arrangement and paraphernalia of the *mendrup* practice rendered in *The Main Text of the Light-Swirled Nectar Medicine* (*'Od zer 'khyil pa bdud rtsi sman gyi gzhung bzhugs lags s+ho*) and still performed today.

The *mendrup* ritual is also mentioned in later historical works which are easier to date with certainty.

MENDRUP IN THE EIGHTEENTH CENTURY

There are several relevant passages in *The Treasury of Wish-fulfilling Jewels Yielding all Desired on the General Origin of the Buddha's Teachings* (*Sangs rgyas bstan pa spyi yi 'byung khung yid bzhin nor bu 'dod pa 'jo ba'i gter mdzod*) by Kündröl Drakpa (Kun grol grags pa, b. 1700), which is likely to have been written in 1766.[85] This text presents the gradual development of the world, the Bonpo doctrine and its spread. The chronicle mentions several *mendrup* treasure discoveries by different adepts, likely referring to the *mendrup* rituals specific to individual Bonpo lineages.[86] Thus, the text seems to capture a rare piece of information on the diversification of the practice within Bon.

It contains a section on treasure traditions which consists of short passages listing the name of each discoverer and the texts and teaching cycles which the individual revealed. A certain Dranga Rinchen Dampa (Dra nga Rin chen dam

82 The same is found in the main *mendrup* text *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*, transmitted in MS Kathmandu, Triten Norbutse monastery (containing *'Od zer 'khyil ba bdud rtsi sman gyi gzhung lags s+ho*); dKar ru Grub dbang sprul sku bstan pa'i nyi ma 1998a: v. 168, text 1, 1998b: v. 230, text 22, more in Sehnalova 2013 and Sehnalova In press.

83 Snellgrove 1987: 135.

84 In the Nyingma *mendrup* analysed by Cantwell 2015 and Cantwell 2017 (in this volume), the *vidyādhara*s play a similar role.

85 Kun-grol-grags-pa 1974: ff. 197–552. The dates are also based on this publication and the work's colophon.

86 Kun-grol-grags-pa 1974: ff. 325, 326–7, 338, 356 and 400–401. On the lineages see Karmay 1998, 2007 and rMe'u tsha bstan 'dzin rnam rgyal 2014.

pa) from Samyé (bSam yas) is attributed with introducing the practice of "*amaraya* nectar medicine" (*a ma ra ya bdud rtsi sman*).[87] The term *amaraya* is usually understood to refer to the *mendrup* ritual specific to the Bonpo Shen lineage.[88] The individual ritual lineages of Bon had the tendency to develop their own *mendrup* practices, just as the main Dru lineage cultivated the so called "light-swirled *mendrup*" coined for the *mendrup* of the deity Trowo Tsochok Khagying. The source thus witnesses the diversity of *mendrup* within Bon.

In this chronicle, Matön Söldzin, already known to us as Matön Sindzin (the grandfather of Matön Shérap Senggé) and the discoverer of the "light-swirled *mendrup*," is recorded as the revealer of a treasure containing scriptures of the accomplishment of peaceful and wrathful deities (*zhi sgrub khro sgrub*).[89] These are likely to involve *mendrup* as well, although no *mendrup* practices are explicitly attributed to him in this document.

Also, someone called Butso Sipé Gyelpo (Bu mtsho srid pa'i rgyal po) is recorded to have found the "nine lineages of nectar medicine" (*bdud rtsi sman gyi rgyud dgu*).[90] It is possible that various traditions of *mendrup* are being referred to by this phrase, but it could (perhaps more likely) refer to the organisation within the *mendrup* ritual itself, namely the nine distinct medicinal containers to be placed on the mandala. The writer mentions the nine vessels and also describes the pattern of the *mendrup* based on the division of space into the centre and eight cardinal points – this is a very common practice in Tibetan (and tantric) ritual, as has been described for *mendrup* above.

MENDRUP IN THE TWENTIETH CENTURY

The next known textual accounts of *mendrup* are found in early twentieth-century writing. The same story is detailed in two important historical works of this period. The first is the *Ketaka* chronicle by Lungtok Gyatso (Lung rtogs rgya mtsho), a distinguished master of the Yungdrung Ling monastery. The work has been dated to 1917, and holds the elaborate title *The Necklace of Ketaka Jewels Distinguishing the Knowledge on the Origin of the Teachings* (*bsTan 'byung rig pa'i shan 'byed nor bu ke ta ka'i do shal zhas bya ba bzhugs*).[91] The second is the well-known *Treasury of Good Sayings*, authored by Shardza Trashi Gyeltsen (Shar rdza

87 Kun-grol-grags-pa 1974: f. 320.
88 The word *amaraya* is explained by contemporary Bonpo monastics as probably deriving from the Sanskrit *amṛta*, and thus as synonymous to *bdud rtsi*, "nectar."
89 Kun-grol-grags-pa 1974: f. 322.
90 Kun-grol-grags-pa 1974: f. 325 and the same story is found in Karmay 1972: 170.
91 mKhas grub Lung rtogs rgya mtsho 2010: 449–557 and in Martin 1997: 15. The word *ketaka* is likely of Indian origin and in Tibetan denotes "a gem which has the property of purifying water," or alternatively "a great mountain situated north of the great forest plain." See Das 1902; Zhang 1993. In Sanskrit, *ketaka* or *ketakī* refers to the Pandanus tree. See Charles University 1998–2009, under *Pandanus fascicularis Lam.*.

bKra shis rgyal mtshan, 1859–1933), one of the main Bonpo scholars of modern times,[92] and translated into English by Samten Karmay. According to Karmay, Gyeltsen's compilation was begun in 1922. The full name of the work reads *The Precious Treasury of Good Sayings, Pleasant Rain for the Wise* (*Legs bshad rin po che'i mdzod dpyod ldan dga' ba'i char*).[93] As both scripts come from approximately the same time, it is unclear if one copied the other or if both used a third (so far unknown) source.

The *Ketaka* chronicle reads:

> From the [Pa, sPa] lineage, Patön Pelchok [(sPa ston dpal mchog, b. 1014)][94] appeared at the same time as Shenchen Luga (i.e., they were contemporaries). After Patön Pelchok heard that Shenchen Luga had discovered a treasure, he went to Driktsam ('Brig mtshams) to see him. When he arrived and met him, the master [Shenchen Luga] was of poor health. Having proclaimed him [Patön Pelchok] a master of tantric teachings destined by his karma, he [Shenchen Luga] bestowed the empowerment of Trowo [Tsochok Khagying] on him. He instructed him in detail on how to obtain the blessed objects, the texts with their treatises and supplements from Dzibön Wanggyel ('Dzi bon dbang rgyal, aka 'Dzi ston, Dzitön).[95]

In the *Treasury*, the same account is in Karmay's translation worded as follows:

> How the Tantric Teachings were commissioned. 'Dzi-bon 'Phan-rgyal entreated the Teacher [Shenchen Luga][96] to impart the *Khro-bo dbang-chen*[97] to him. The Teacher gave even the (master) copy to him. He also gave him the cup containing the lees of the elixirs (*bdud rtsi ga'u dang ru ma*).[98] He gave him the name of dBang-gi rGyal-mtshan. Some have said that since sPa-ston dPal-mchog (Patön Pelchok)[99] did not meet gShen-sgur [i.e., Shenchen Luga],[100] he got in touch

92 See Achard 2008.
93 Karmay's translation in Karmay 1972.
94 Dating in Karmay 2007: 60.
95 *de'i gdung las spa ston dpal mchog byon pa dang gshen chen klu dga' byon pa dus mnyam ste/ spa ston nyid gshen chen gyis gter thon pa thos nas 'brig mtshams su mjal du byon skabs/ bla ma sku bsnyungs bzhes pa dang thug/ las can gsang sngags kyi bdag po zhig 'dug gi gsungs nas khro bo'i dbang bskur/ byin rlabs kyi rdzas rnams dang/ dpe dang cha lag bkrol byang rnams zhib par 'dzi bon dbang rgyal la mnos shig gsung nas lung bstan/* mKhas grub Lung rtogs rgya mtsho 2010: 520 and cf. Martin 2001: 67–9.
96 The bracketed insertion is mine.
97 The word *Khro-bo dbang-chen* (Khro bo dbang chen), Trowo Wangchen, can denote both, an epithet of the deity Trowo Tsochok Khagying (meaning 'The Great Wrathful Powerful One') and refer to the linked practices, or the great empowerment (*dbang chen*) of Trowo Tsochok Khagying.
98 My insertion.
99 My insertion.
100 My insertion.

> with 'Dzi-bon and Me-nyag. But (in fact) when gShen-sgur was ill he bestowed the consecration of the *Khro-bo dbang-chen* to him. He proclaimed him a worthy master of Tantric teachings and instructed him in detail to receive the sacred objects, the copy of the text and its supplementary texts; and the treatises on them from 'Dzi-bon.[101]

The section immediately following the above text accords almost word-for-word in both the *Ketaka* and the *Treasury*.[102] Hence, I cite Karmay's translation of the *Treasury* to continue the above-cited extracts of both works:

> Then, dPal-mchog (Patön Pelchok)[103] met 'Dzi-bon and requested the texts, the medical specimen of the 'pledge' (*phud gta' sman phab*)[104] which had been used (by the teachers) from 'Chi-med gTsug-phud up to the "Four scholars." 'Dzi-bon also gave dPal-mchog the "Dance-spear" and the cup (*gar mdung dang bsve'i ga'u*) and appointed him to be in charge of the Tantric Teachings. Then he [sPa ston dpal mchog /Patön Pelchok][105] practised the *Khro-bo dbang-chen* in the solitude of Yang-dban[106] and beheld the countenance of Srid-rgyal[107] according (to the representation of) the basic liturgy. Once he saw her face with lightning issuing from her eyes, whirlwinds from her nose, roaring thunder from her ears, her hair being like masses of clouds. (212b) She was adorned with ornaments of cemetery-bones; her eyes were upturned, her nose was wrinkled up and her mouth was wide open. As she tore her chest with her hands he saw distinctly without any obstruction the body of gTso-mchog (Trowo Tsochok Khagying)[108] in the centre of the wheel of her heart which is one of the six wheels of the three vital channels in her body. While he performed the medicinal rite of the *Phur-bu dgu* drops of nectar descended (into his mystic circle) (*phur bu dgu'i sman sgrub la bdud rtsi'i zil thigs babs/*).[109]

I propose to amend the translation of the last sentence to: "The drops of nectar then descended into the medicinal accomplishment of the nine vessels".[110]

101 Karmay 1972: 135, transliteration of the Tibetan original.
102 Apart from very few syllable and letter alternations, the *Treasury* omits three syllable clusters within its verses that appear in the *Ketaka*, whereas the *Ketaka* skips a few syllables of the *Treasury*.
103 My insertion.
104 Insertions of the Tibetan original are mine.
105 My insertion.
106 More likely: "in the Wensaka (dBen sa kha) monaster" (*de nas yang dben dgon par*). Karmay 1972: 297 and mKhas grub Lung rtogs rgya mtsho 2010: 520.
107 See note 66.
108 My insertion.
109 My insertion. Karmay 1972: 135–136, Tibetan original 297.
110 Based on the spelling in mKhas grub Lung rtogs rgya mtsho 2010: 520: *bum dgu'i sman sgrub la bdud rtsi'i zil thigs babs/*.

The passages record the transmission of the *mendrup* of Trowo Tsochok Khagying within the Pa lineage directly from its revealer Shenchen Luga.[111] Besides the scriptures, special attention is paid to describing the essential material objects of the ritual. Master Patön Pelchok procured the crucial "yeast," *papta*, here translated as "medical specimen of the 'pledge,' " along with its cup container, and a "spear." Such a ritual spear with ribbons in five colours is still used in circumambulating the *mendrup* medicine during the ritual today. In both versions, Patön Pelchok was also given the task to continue the *mendrup* practice by an empowerment from Shenchen Luga himself. Later in Wensaka, he had a vision of Trowo Tsochok Khagying, in which the medicinal nectar of *mendrup* descended into its nine vessels. This has fully authorised Patön Pelchok to become the bearer and transmitter of the *mendrup* of Trowo Tsochok Khagying.

After the hagiographic genealogies of the Pa lineage, the *Ketaka* continues with the history of the Meu (rMe'u) family. Their members are recorded to have travelled around Central Tibet in the search of teachings, including Trowo Tsochok Khagying's *mendrup*:

> When Denpakpa Zigompa (Dan 'phags pa zi sgom pa) requested the great empowerment of Trowo [Tsochok Khagying] (*khro bo dbang chen*),[112] for a few moments he saw the master (not identified) having the complete appearance, ornaments and attributes of Trowo Tsochok Khagying. When he came with his request to the master to the cave of Kyikharngo (sKyid mkhar sngo), he crossed the Yéru (g.Yas ru) river[113] without any boat. When he performed the accomplishment of the nectar medicine (*bdud rtsi sman sgrub*) in Sébao (Se ba 'o), one [of the performers] was seated on a throne. One led the recitation of the main *mendrup* mantra (*sman 'dzab*), while performing a circumambulation [around the medicinal mandala]. One went to a tavern, offered a libation, and seen by all, became inspired, realising that he was a *trülku* (*sprul sku*, a reincarnated master).[114]

111 The same story is also found in Karmay 1972: 10, 2007: 60–61, 70; Martin 2001: 68–70.

112 See note 97.

113 This might refer to the famous Bonpo meditation caves of mKhar sna (*skyid* as an attribute would mean "of happiness") close to Menri, Yungdrung Ling and former Wensaka monasteries, as well as the Yéru river.

114 *dan 'phag ba zi sgom pas khro bo'i dbang chen zhig zhus skabs bla ma'i sku gtso mchog mkha' 'gying rgyan dang cha lugs rdzogs pa zhig skad cig gsum gyi yun du mthong/ skyid mkhar sngo phug tu bla ma zhu yi mdun du phebs dus/ g.yas ru gtsang po'i kha nas gru gzings gang la'ang ma brten nas chu yi pha kir phebs/ se ba 'o ru bdud rtsi sman sgrub mdzad dus sku cig bzhugs khrir bzhugs/ gcig gis sman 'dzab kyi sna drangs nas bskor ba mdzad/ gcig chang tshang du phebs nas skyems gsol ba kun gyis mthong bas mos pa tshud cing sprul sku yin par shes so/* mKhas grub Lung rtogs rgya mtsho 2010: 523.

As can be seen, the *Ketaka* chronicle recorded the practice of the *mendrup* ritual itself and the related miracles happening. The author Lungtok Gyatso paid attention to various aspects of the act. He mentioned the required unceasing recitation of the main *mendrup* mantra and texts during the performance. He also noted some of the accompanying offerings (libation) and the elevated throne of the principal master during the ritual, as is done today. The auspicious rite of *mendrup* is probably concluded by a fellow monk realising himself to be a reincarnated master. Again, the writer must have been well-acquainted with the practice, and may possibly have taken part in it himself.

In 1929, *mendrup* found another expression in a few lines of the chronological work *The Lineage Succession* (by full title: *The Immaculate Crystal Rosary of the Lineage Succession of the Collected Precious Kangyur, the Teachings of the Teacher of the Three Bodies, Transmissions*),[115] written by Khüpungpa Ratön Ngakwang Kelzang Tenpé Gyeltsen (Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan). Once again, *mendrup* is described as among important practices at Bonpo monasteries. Ten types of *mendrup* are suggested, and the text describes auspicious signs occurring during the performances, such as rainbows appearing in the sky and a diffusing fragrant smell.[116]

Among the scriptures of medical knowledge cited in this chronicle, the recovery of a treasure of nine precious vessels (*rin chen bum pa gdu*) by Butso Sipé Gyelpo is recorded, as in the work from the eighteenth century discussed above. These then gave origin to the nine lineages of the nectar medicine (*bdud rtsi sman gyi rgyud dgu*),[117] i.e., *mendrup*. Again, the quote sounds like it is alluding to diverse *mendrup* rituals, but more plausibly, it is describing one ritual and its nine prescribed containers of nectar medicine.

By the early twentieth century, *mendrup* is clearly presented as an integral component of Bonpo teachings.

4. CONCLUSIONS

It seems probable that the practice of the Bonpo *mendrup* ritual can be traced back to the twelfth, or at least the thirteenth century in Central Tibet. The twelfth and thirteenth centuries were also a crucial time for the establishment

115 Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan 2017. I am indebted to Dan Martin for kindly sharing his introduction and laborious transcription of the work.

116 Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan 2017: ff. 25, 27).

117 Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan 2017: f. 98).

of the Tibetan medical *Sowa rigpa* tradition.[118] The complex *mendrup* ritual exemplifies the rich and diverse intellectual milieu in Central Tibet of that time, in which the spheres of tantra, medicine, alchemy, Buddhist philosophy and soteriology, as well as Tibetan autochthonous notions, merged and mixed to produce new complex structures. The *mendrup* ritual combines the knowledge and practices of all these elements and its dating accords with Buddhist *mendrup* rites, the Nyingma treasure and Yutok Nyingtik (g.Yu thog rnying thig) traditions.

Reference to the *mendrup* ritual in scattered textual sources indicates that *mendrup* has mainly been transmitted by Bonpo teacher-student lineages in Central Tibet, where it has been also preserved until modern times. The sources attest a certain existing variety of the *mendrup* ritual in general, likely reflecting the multiple existing lineages of Bon. The texts suggest that over the centuries, specific lineages developed their own traditions *mendrup*, but also that even the transmission of the specific "light-swirled *mendrup*" (*sman sgrub 'od zer 'khyil ba*) dedicated to the deity Trowo Tsochok Khagying was not confined to the single Dru family line which preserves the practices today. Textual evidence suggests that this practice was transferred by and to other lineages as well, including the Shen, the Pa and the Meu.

In contrast with the Tibetan Buddhist school of Nyingma, Bonpos do not seem to have needed to create an elaborate historiography which precisely traces the evolution of certain ritual practices. Different versions of Trowo Tsochok Khagying's *mendrup*'s discovery and transmission can be traced in the texts. Shenchen Luga of the Shen family and Matön Shérap Senggé of the Ma repeatedly figure as the ritual's revealers and tradents. Similarly, Matön Sindzin is credited with revealing a certain part of the cycle to which *mendrup* belongs. Interestingly, Rindzin Chenpo Gyermi Nyiö, who is ascribed the same role by present Bonpos, does not explicitly appear in it in the studied sources. A certain development of the recording of the practice can be observed, ranging from a short mention in the thirteenth century to the most extensive justification of the practice's lineage in the twentieth century. We have also seen that even in such an important ritual as the extended *mendrup*, contemporary Bonpos tend to rely only on one commentary from the fourteenth century. Oral knowledge and personal transmission are obviously important for the imparting of ritual knowledge. However, the textual tradition also presents remarkable details of *mendrup* practice and performance, proving the authors' close comprehension of and likely own experience with the ritual.

If we accept the assumption that the sources can build up one coherent narrative, despite the intricacies of their dating, a tentative chronological reconstruction of the development and transmission of the ritual is possible: Shenchen Luga

118 See Emmerick 1977; Fenner 1996; Erhard 2007.

(996–1035) found the ritual's text and paraphernalia, which appears as a clear statement already in one of the earliest documents. However, we do not learn any details. As the twentieth century's chronicles add, Shenchen Luga passed all his gains directly to Dzibön Wanggyel, who in turn had to give everything to Patön Pelchok (b. 1014), who was actually empowered by Shenchen Luga as the holder of the practice. Patön Pelchok performed it, receiving a vision of Trowo Tsochok Khagying. A little later, Druchen Namkha Yungdrung (994/999–1054) conducted the very first *mendrup* performance. For that he would have had to receive the ritual's transmission and would have also been entitled to hand it down again. He bestowed secret teachings to a student group, including Matön Shérap Senggé (twelfth century). Of the students, a certain Pönsé was entrusted the *mendrup* practice. Here, the chronology assumed by the sources might not accord with our contemporary dating, according to which Druchen and Shérap Senggé could not have met. Master Druchen was active in the area of the future Yéru Wensaka monastery (founded 1072), where *mendrup* is said to have then flourished.

Nevertheless, another lineage of *mendrup* transmission can be followed in the sources. Matön Sindzin (b. 1092) was recorded in the eighteenth century as a revealer of scriptures of the peaceful and wrathful deities, among which *mendrup* might have been included. His grandson Matön Shérap Senggé then had a vision through which he was assigned the practice by an unnamed master. His so far undated account might have served as a legitimisation of the given form of the ritual's realisation. Its detailed authoritative description could have coined *mendrup* performance and its arrangements. The very early on mentioned Pönsé Dzamling (b. 1259/1271), a direct descendant of Shenchen Luga after several generations, would have come after as the *mendrup* holder and practitioner.

Nyö Tsültrim Gyeltsen's fourteenth-century commentary further codified and institutionalised the practice into an elaborate, demanding and very complex monastic performance; his instructions are still observed at the present. Similarly, the master Nyammé Shérap Gyeltsen (1356–1415) likely engaged in the practice in his newly-established Menri monastery. The striking feature of the texts observed is the overall exclusion of Rindzin Chenpo Gyermi Nyiö (eleventh to twelfth century), one of the presumed discoverers of *mendrup* by current Bonpos. In any case, *mendrup* ritual clearly expresses the identity and continuity of Bonpo lineages, monastic seats and power structures concerned.

It is likely that more written documents mentioning the Bonpo *mendrup* will be discovered as research in the field of Tibetan studies progresses. Therefore, the dating presented should be understood as tentative, based on the sources currently available. The available evidence demonstrates that *mendrup* has been an important healing ritual practice for the Bonpo tradition for the last seven or eight hundred years.

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The photograph in Figure 6 was taken by Anja Benesch and Olga Ryznar in Triten Norbutse on 1st January 2013. All other photographs belong to the author and were taken in Triten Norbutse during the mendrup ceremony in December 2012, apart from the Figure 1, which is from Central Tibet, December 2014.

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PRIMARY SOURCES

Anon. (1972a). "Bla ma gshen gyi rnam thar". In: *Sources for a History of Bon: A Collection of Rare Manuscripts from Bsam-gling Monastery in Dolpo (Northwestern Nepal)*. Ed. by Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

— (1972b). "Rigs 'dzin rig pa'i thugs rgyud". In: *Sources for a History of Bon: A Collection of Rare Manuscripts from Bsam-gling Monastery in Dolpo (Northwestern Nepal)*. Ed. by Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

Charles University (1998–2009). *Pandanus Database of Indian Plants*. Seminar of Indian Studies, Faculty of Arts, Charles University, Prague, Czech Republic. URL: http://iu.ff.cuni.cz/pandanus/ (on 8 Jan. 2018).

"'Od zer 'khyil ba bdud rtsi sman gyi gzhung bzhugs pa lags s+ho" (1998a). In: *g.Yung drung bon gyi bka' brten*. Ed. by dKar ru Grub dbang sprul sku bstan pa'i nyi ma. Vol. 168. Lhasa: Sog sde sprul sku bstan pa'i nyi ma.

"'Od zer 'khyil ba bdud rtsi sman gyi gzhung bzhugs pa'i dbus phyogs legs s+ho" (1998b). In: *g.Yung drung bon gyi bka' brten*. Ed. by dKar ru Grub dbang sprul sku bstan pa'i nyi ma. Vol. 230. Lhasa: Sog sde sprul sku bstan pa'i nyi ma.

dPon slob Rin po che tshangs pa bstan 'dzin, dGe shes bSam gtan gtsug phud, Shes rab mthar phyin, and Khri gtsug bstan pa (2014). *bDud rtsi 'od zer 'khyil ba'i lag len skor: gYung drung bon gyi gdan sa chen mo dpal ldam khri brtan nor bu rtse'i thengs gnyis pa'i sman sgrub chen mo*. Kathmandu: dPal ldam khri brtan nor bu rtse.

gZhod ston bSod nams grags pa (1981). "rMa ston shes rab seng gi gzigs snang". In: *Biographical Materials about Bonpo Masters: A Collection of Rare Bonpo Biographical Sketches Calligraphed from Manuscripts from Nepal and Tibet at the Tibetan Bonpo Monastic Centre, Dolanji, (H.P.)* Ed. by Lopon Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

— (1998). "rMa ston shes rab seng gi gzigs snang". In: *g.Yung drung bon gyi bka' brten*. Ed. by dKar ru Grub dbang sprul sku bstan pa'i nyi ma. Lhasa: Sog sde sprul sku bstan pa'i nyi ma.

Gzhod-ston Bsod-nams-grags-pa (1972). "rMa ston shes rab seng gi gzigs snang lags so". In: *Sources for a History of Bon: A Collection of Rare Manuscripts from Bsam-gling Monastery in Dolpo (Northwestern Nepal)*. Ed. by Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

Khud spungs pa dBra ston Ngag dbang skal bzang bstan pa'i rgyal mtshan (2017). "sKu gsum ston pa'i gsung rab bka' 'gyur rin po che'i lung rgyun ji snyed pa phyogs gcig tu bsdus pa'i bzhugs byang brgyud rim bcas pa dri med shel gyi phreng ba". In: transcriber Dan Martin. URL: https://sites.google.com/site/tibetological/transmission-document-of-bon (on Sept. 2017).

Kun-grol-grags-pa (1974). "Sangs rgyas bstan pa spyi yi 'byung khung yid bzhin nor bu 'dod pa 'jo ba'i gter mdzod". In: *Three sources for a history of Bon: the Rgyal rab of Khyuṅ-po Blo-gros-rgyal-mtshan, the Bstan byung of Kun-grol-grags-pa, and the Bstan byung of Tenzin Namdak*. Delhi and Dolanji: Khedup Gyatso and Tibetan Bonpo Monastic Centre.

Millard, Colin and Khenpo Tenpa Yungdrung, eds. (unpublished). *'Od zer 'khyil pa bdud rtsi yon tan gyi phyag bshes gsal byed me long 'zhug so: Mendrup Oser Kyilba – The Light-Infused Medicine Blessing Ritual*. unpublished.

mKhas grub Lung rtogs rgya mtsho (2010). "bStan 'byung rig pa'i shan 'byed nor bu ke ta ka'i do shal zhas bya ba bzhugs". In: *Deb dang po, sTon pa'i mdzad rnam dang lo rgyus kyi skor*. Ed. by sTong skor Tshe ring thar et al. Beijing: Mi rigs dpe skrun khang.

Mtha'-bzhi-'Dul-seng (1972). "Bla ma gru chen po'i rnam thar bzhugs so". In: *Sources for a History of Bon: A collection of rare manuscripts from Bsam-gling Mon-*

astery in Dolpo (Northwestern Nepal). Ed. by Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

sKyang 'phags (1998). "Rig 'dzin gyer mi nyi 'od kyi gyer mi skyang 'phags chen po'i skyes rabs sgal thar yon tan thung rje nyi ma bzhugs". In: *g.Yung drung bon gyi bka' brten*. Ed. by dKar ru Grub dbang sprul sku bstan pa'i nyi ma. lha sa: sog sde sprul sku bstan pa'i nyi ma.

sPa ston bsTan rgyal bzang po (2010). "bsTan pa'i rnam bshad dar rgyas gsal ba'i sgron ma zhes bya ba bzhugs so". In: *Deb dang po, sTon pa'i mdzad rnam dang lo rgyus kyi skor*. Ed. by sTong skor Tshe ring thar et al. Beijing: Mi rigs dpe skrun khang.

Spa-ston Bstan-rgyal-bzang-po (1972). "bsTan pa'i rnam bshad dar rgyas gsal ba'i sgron ma zhes bya ba bzhugs". In: *Sources for a History of Bon: A collection of rare manuscripts from Bsam-gling Monastery in Dolpo (Northwestern Nepal)*. Ed. by Tenzin Namdak. Dolanji: Tibetan Bonpo Monastic Centre.

Tshe ring bkra shis (2004). *rJe rin po che mnyam med shes rab rgyal mtshan gyi rnam thar*. Chengdu: Si khron mi rigs dpe skrun khang.

SECONDARY SOURCES

A dpal bzang (2013a). *sMan sgrub chen mo 'tshogs rgyu'i gsal brda*. URL: http://old.himalayabon.com/article/news/20130125936.html (on Apr. 2017).

— (2013b). *sMan sgrub chen mo 'tshogs rgyu'i gsal brda*. URL: http://blog.himalayabon.com/u/basang/archives/2013/3000.html#5252 (on Dec. 2017).

Achard, Jean-Luc (2004). *Bon po Hidden Treasures: a catalogue of gTer ston bDe chen gling pa's collected revelations*. Leiden & Boston: Brill.

— (2008). *Enlightened Rainbows: the Life and Work of Shardza Tashi Gyeltsen*. Leiden: Brill.

Aschoff, J. C. and Tashi Yangphel Tashigang (2001). *Tibetan "Precious Pills", the Rinchen Medicine: A Tantric Healing System with Great Benefits, Some Problems, Many Secrets*. Ulm, Donau: Fabri Verlag.

— (2004). *Tibetan Jewel Pills: the Rinchen Meditation*. Ulm, Donau: Fabri Verlag.

Bentor, Yael (1996). "Literature on consecration (Rab gnas)". In: *Tibetan Literature, Studies in Genre*. Ed. by J. I. Cabezón and R. Jackson. Ithaca, NY: Snow Lion Publications, pp. 290–311.

— (1997). "The Horseback Consecration Ritual". In: *Religions of Tibet in Practice*. Ed. by Donald Lopez. Princeton: Princeton University.

Blaikie, Calum (2013). "Currents of Tradition in Sowa Rigpa Pharmacy". In: *East Asian Science, Technology and Society* 7, pp. 425–51. DOI: 10.1215/18752160-2332223.

— (2014). "Making medicine: Pharmacy, exchange and the production of Sowa Rigpa in Ladakh". PhD. Canterbury: University of Kent.

— (2015). "Wish-fulfilling Jewel Pills: Tibetan Medicines from Exclusivity to Ubiquity". In: *Anthropology and Medicine*, pp. 1–16. DOI: 10.1080/13648470.2015.1004504.

Blaikie, Calum, Sienna Craig, Theresia Hofer, and Barbara Gerke (2015). "Co-Producing Efficacious Medicines: Collaborative Ethnography with Tibetan Medicine Practitioners in Kathmandu, Nepal". In: *Current Anthropology* 56.2, pp. 178–204.

Bstan-'dzin-rgya-mtsho, Dalai Lama XIV, Lopon Tenzin Namdak, Henry M. Vyner, and Lopon Tegchoke (2007). *The Healthy Mind Interviews: The Dalai Lama, Lopon Tenzin Namdak, Lopon Thekchoke*. Kathmandu: Vajra.

Cantwell, Cathy (2015). "The Medicinal Accomplishment (*sman sgrub*) Practice in the Dudjom *Meteoric Iron Razor* (*gnam lcags spu gri*) Tradition: Reflections on the Ritual and Meditative Practice at a Monastery in Southern Bhutan". In: *Journal of the Oxford Centre for Buddhist Studies* 8, pp. 49–95.

— (2017). "Reflections on Rasāyana, Bcud len and Related Practices in Nyingma (Rnying ma) Tantric Ritual". In: *History of Science in South Asia* 5.2. DOI: 10.18732/hssa.v5i2.17.

Cech, Krystyna (1987). "The Social and Religious Identity of the Tibetan Bonpos with Special Reference to a North-west Himalayan Settlement". PhD. Oxford: University of Oxford, Oxford.

— (1988). "A Bon-po bča'-yig: the Rules of sMan-ri Monastery". In: *Tibetan Studies: Proceedings of the 4th Seminar of the International Association of Tibetan Studies, Munich 1985*. Ed. by Helga Uebach and Jampa L. Panglung. München: Kommission für Zentralasiatische Studien, Bayerische Akademie der Wissenschaften.

Craig, Sienna R. (2011). "From Empowerments to Power Calculations: Notes on Efficacy, Value, and Method". In: *Medicine Between Science and Religion: Explorations on Tibetan Grounds*. Ed. by Vincanne Adams, Mona Schrempf, and Sienna R. Craig. Oxford: Berghahn Books. ISBN: 978-1-78238-122-8.

— (2012). *Healing Elements: Efficacy and the Social Ecologies of Tibetan Medicine*. Berkeley: University of California Press. ISBN: 9780520273245.

Czaja, Olaf (2013). "On the History of Refining Mercury in Tibetan Medicine". In: *Asian Medicine* 8, pp. 75–105. DOI: 10.1163/15734218-12341290.

— (2015). "The Administration of Tibetan Precious Pills: Efficacy in Historical and Ritual Contexts". In: *Asian Medicine* 10, pp. 36–89. DOI: 10.1163/15734218-12341350.

Das, Chandra (1902). *A Tibetan-English Dictionary*. Calcutta: Bengal Secretariat Book Depôt.

Donden, Yeshi and Jeffrey Hopkins (1997). *Health Through Balance: An Introduction to Tibetan Medicine*. Delhi: Motilal Banarsidas. ISBN: 978-0937938256.

Emmerick, R.E. (1977). "Sources of the rGyud-bzhi". In: *Zeitschrift der Deutschen Morgenländischen Gesellschaft (Wiesbaden)* 3.2, pp. 1135–42.

Erhard, F.P. (2007). "A Short History of the g.Yu thog snying thig". In: *In Indica et Tibetica. Festschrift für Michael Hahn. Zum 65. Geburtstag von Freunden und Schuulern überreicht*. Ed. by K. Konrad and J. Hartmann. Wiener Studien zur Tibetologie und Buddhismuskunde 66. Wien: Arbeitskreis für Tibetische und Buddhistische Studien Universität Wien. ISBN: 9783902501059.

Fenner, E. T. (1996). "The Origin of the *rGyud bzhi*: A Tibetan Medical Tantra". In: *Tibetan Literature, Studies in Genre*. Ed. by J. I. Cabezón and R. Jackson. Ithaca, New York: Snow Lion Publications, pp. 458–69. URL: http://www.thlib.org/encyclopedias/literary/genres/genres-book.php#!book=/studies-in-genres/b27/ (on 18 Mar. 2018).

Garrett, Frances (2009). "The Alchemy of Accomplishing Medicine (*sman sgrub*): Situating the *Yuthok Heart Essence* (*G.yu thog snying thig*) in Literature and History". In: *Indian Philosophy* 37, pp. 207–30. DOI: 10.1007/s10781-009-9070-3.

— (2010). "Tapping the Body's Nectar: Gastronomy and Incorporation in Tibetan Literature". In: *History of Religions* 49.3, pp. 300–326.

Gerke, Barbara (2012). *Long Lives and Untimely Deaths: Life-span Concepts and Longevity Practices among Tibetans in the Darjeeling Hills, India*. Leiden: Brill.

— (2013). "'Treating the Aged' and 'Maintaining Health': Locating *bcud len* Practices in the Four Tibetan Medical Tantras". In: *Journal of the International Association of Buddhist Studies* 35, pp. 329–326. URL: https://www.academia.edu/6925072 (on 28 Mar. 2018).

— (2014). "The Art of Tibetan Medical Practice". In: *Bodies in Balance*. Ed. by Theresia Hofer. New York: Rubin Museum of Art.

— (2017). "Tibetan Precious Pills as Therapeutics and Rejuvenating Longevity Tonics". In: *History of Science in South Asia* 5.2. DOI: 10.18732/hssa.v5i2.15.

Hofer, Theresia (2014). "Foundations of Pharmacology and the Compounding of Tibetan Medicines". In: *Bodies in Balance*. Ed. by Theresia Hofer. New York: Rubin Museum of Art. ISBN: 9780295807089.

Jäschke, H. (1881). *A Tibetan-English Dictionary*. London. URL: https://archive.org/details/atibetanenglisd00lahogoog (on 13 Mar. 2018).

Karmay, Samten G. (1972). *The Treasury of Good Sayings: A Tibetan History of Bon*. Delhi: Motilal Banarsidas.

— (1998). "A General Introduction to the History and Doctrines of Bon". In: *The Arrow and the Spindle: Studies in History, Myths, Rituals and Beliefs in Tibet*. Ed. by Samten G. Karmay. Kathmandu: Maṇḍala Book Point.

— (2007). "A Historical Overview of the Bon Religion". In: *Bon: The Magic Word, The Indigenous Religion of Tibet*. Ed. by Samten G. Karmay and Jeff Watt. New York: The Rubin Museum of Art. ISBN: 9780856676499.

Karmay, Samten G. and Yasuhiko Nagano, eds. (2001). *A Catalogue of the New Collection of Bonpo Katen Text – Indices*. Bon Studies 4. Osaka: National Museum of Ethnology.

— eds. (2003). *A Survey of Bonpo Monasteries and Temples in Tibet and the Himalaya*. Bon Studies 7. Osaka: National Museum of Ethnology.

Karmay, Samten G., Yasuhiko Nagano, Nagru Gelek Jinpa, and Tenpa Yungdrung, eds. (2001). *A Catalogue of the New Collection of Bonpo Katen Texts*. Bon Studies 4. Osaka: National Museum of Ethnology.

Kind, Marietta (2002). *Mendrup: A Bonpo Ritual for the Benefit of All Living Beings and for the Empowerment of Medicine Performed in Tsho, Dolpo*. Kathmandu: WWF Nepal Program.

Kohn, Richard Jay (1988). "Mani Rimdu: Text and Tradition in a Tibetan Ritual". PhD. Madison: University of Wisconsin, Madison.

Kværne, Per (1971). "A Chronological Table of the Bonpo: the *Bstan rcis of Ñi-ma bstan-'Jin*". In: *Acta Orientalia* 33, pp. 205–82. ISSN: 0001-6483.

— (1995). *The Bon Religion of Tibet: The Iconography of a Living Tradition*. London: Serindia. ISBN: 978-1570621864.

Martin, Dan (1997). *Tibetan Histories: A Bibliography of Tibetan-Language Historical Works*. London: Serindia. ISBN: 9780906026434.

— (2001). *Unearthing Bon Treasures: Life and Contested Legacy of a Tibetan Scripture Revealer with a General Bibliography of Bon*. Leiden: Brill. ISBN: 978-90-04-12123-2.

— (2017). *Prop Names Biblio Key*. URL: https://sites.google.com/site/tiblical/prop-names-biblio-key (on Sept. 2017).

Millard, Colin (unpublished). "Rinchen Medicines in the Bon Medical Tradition". unpublished.

Oliphant, Jamyang Charles (2015). "The Tibetan Technique of Essence-Extraction (*Bcud len*) and its Benefits". In: *Tibetan and Himalayan Healing: An Anthology for Anthony Aris*. Ed. by Charles Ramble and Ulrike Roesler. Kathmandu: Vajra Books.

— (2016). "'Extracting the Essence': *Bcud len* in the Tibetan Literary Tradition". PhD. Oxford: University of Oxford, Oxford.

Parfionovitch, Yuri, Gyurme Dorje, and Fernand Meyer (1992). *Tibetan Medical Paintings: Illustrations to the Blue Beryl treatise of Sangye Gyamtso (1653–1705)*. 1st ed. 1 vols. New York: Harry N. Abrams.

rMe'u tsha bstan 'dzin rnam rgyal (2014). *Bon gyi gdung rgyud chen po drug gi byung ba brjod pa*. Lha sa: Bod ljong mi dmangs dpe skrun khang.

Samuel, Geoffrey (2010). "A Short History of Indo-Tibetan Alchemy". In: *Studies of Medical Pluralism in Tibetan History and Society. PIATS 2006: Proceedings of the Eleventh Seminar of the International Association for Tibetan Studies*. Ed. by Sienna Craig. Königswinter: International Institute for Tibetan and Buddhist Studies. ISBN: 978-3038091080.

Schaeffer, Kurtis R. (2002). "The Attainment of Immortality: From Nathas in India to Buddhists in Tibet". In: *Journal of Indian Philosophy* 30.6, pp. 515–33. DOI: 10.1023/a:1023527703312.

Sehnalova, Anna (2013). "The Bon *sman sgrub* Ritual". M.Phil. University of Oxford.

— (2015). "Inviting Medicine: Mendrub (Sman grub) healing for everyone and everything". In: *Tibetan and Himalayan Healing: An Anthology for Anthony Aris*. Ed. by Charles Ramble and Ulrike Roesler. Kathmandu: Vajra Books.

— (In press). "The Bonpo Mendrub (*Sman sgrub*) Ritual: Medicinal Materiality of a Universal Healing Ceremony". In: *Journal of the International Association for Bon Research*. In press.

Snellgrove, David (1987). *Indo-Tibetan Buddhism: Indian Buddhists and Their Tibetan Successors*. London: Serindia.

Tsetan (1998). "Bön Tibetans Hold Their Holiest Ceremony". In: *Tibetan Review*, p. 7.

Van Schaik, Sam (2013). "The Naming of Tibetan Religion: Bon and Chos in the Tibetan Imperial Period". In: *Journal of the International Association for Bon Research* 1, pp. 227–257.

Vostrikov, Andrei Ivanovich (1970). *Tibetan Historical Literature*. Calcutta: Indian Studies: Past & Present.

Yungdrung, Khenpo Tenpa (2012). *25th Anniversary of Triten Norbutse. Ceremony for Blessing Healing Medicine 9 December 2012 – 2 January 2013*. Himalayan Bön Foundation. URL: http://himalayanbon.org/2012/12/02/25th-anniversary-of-triten-norbutse/ (on Apr. 2017).

Zhang, Yisun (1993). *Bod rgya tshig mdzod chen mo*. Beijing: Minzu chubanshi.

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Cathy Cantwell

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Reflections on Rasāyana, Bcud len and Related Practices in Nyingma (Rnying ma) Tantric Ritual

Cathy Cantwell

University of Oxford

1. INTRODUCTION

References to *rasāyana*, and its equivalent Tibetan term, *bcud len*, abound in Tibetan Buddhist tantric traditions, so much so that it is not altogether straightforward to sum up the range of meanings of these terms.[1] The Tibetan term, *bcud len*, is sometimes used entirely metaphorically; the life story and songs of a great eighteenth-century lama, for instance, entitled, "Mentally imbibing the essence juice of [the Buddha] Samantabhadra's theatrical display".[2] The second part of the term, *len*, is from the verb, *len pa*, which in everyday language is the most common word for *to take*. Thus, in this context, *taking the essence juice* can imply incorporating essences into oneself, and also the practice of taking or extracting essences from a substance. Non-metaphorical usages of the term *bcud len* in tantric contexts generally draw on both these senses of the term, and indicate the yogic practice of subsisting on nutritional essences, and especially the practice of making and consuming pills of such essences as part of such a yogic regime. In my translation, *imbibing the essence juice*, I emphasise the aspect of bodily incorporation which is a central feature of the tantric practice. The term *rasāyana* in Tibetan transliteration, in contrast, does not seem to have such frequent metaphorical usage, but can refer to tantric transmutation in various contexts, especially where material substances such as liquids and pills are involved.

1 See the discussion of Fenner (1980: 59–83), which focuses mainly on early Indo-Tibetan tantric sources, although also includes consideration of a Tibetan commentarial text by the fourteenth to fifteenth-century Bodongpa (*Bo dong phyogs las rnam rgyal*), who treats the spiritual exercises focused on the tantric channels and airs within the body (*rtsa rlung*) as an inner type of *bcud len*.

2 *kun tu bzang po'i zlos gar yid kyi bcud len*, Ngawang Tsering 1978.

In fact, it is used in a broad sense to apply to Medicinal Accomplishment (*sman sgrub*) practices which are widespread in Tibetan monastic temple settings, and not restricted to virtuoso meditators. Such communal practices for compounding and consecrating sacred medicinal pills are integrated into large-scale Major Practice Sessions lasting for many days, and culminating in public blessings and distribution of sacred pills and other items.

In this article, I consider two case studies, the first of which is a specifically *bcud len* text, deriving from a fourteenth-century source, but integrated into a twentieth century collection of longevity rituals. The second case study is a Medicinal Accomplishment (*sman sgrub*) ritual, based on a textual manual which explicitly describes the process as *rasāyana* transcribed into Tibetan. For both examples, I will refer to works by the late Dudjom Rinpoche (1904–1987), and their associated ritual practices, so I introduce him first.

Dudjom Rinpoche was a prominent and important twentieth century lama and scholar, who drew on many different Nyingma traditions in his writings and teachings; Nyingma being one of the major 'divisions' of Tibetan Buddhist traditions. Nyingma practices stem from the heritage of the early or ancient tantric transmissions to Tibet from the eighth century, as well as further revelations linked to these sources. Unlike many of the later transmissions from India, the early tantras did not become the basis for a school with a single organisational structure. Nyingma monasteries were in contrast loosely integrated through their common heritage, while Nyingma transmissions also frequently passed through high status lamas of the more hierarchically structured schools. As a principal lineage holder of most of these separately transmitted teachings, Dudjom Rinpoche was a key figure in bringing some coherency and integration to the Nyingmapa in the twentieth-century. He took a central role in salvaging the Nyingma religious and textual heritage in the mid-twentieth-century, following the Chinese invasion of Tibet, and became the first Head of the Nyingmapa, when a more modern structure was created in exile. He is renowned both for his own textual revelations, and for contributing manuals and commentaries for a large number of the lineages he held; his collected works amount to twenty-five volumes.

2. A TEXT FOR IMBIBING THE ESSENCE JUICE

First, we should consider practices associated with the translated word, *bcud len*, "imbibing the essence juice". There are a great many Buddhist tantric texts on *bcud len*, since each tradition and even each cycle associated with a specific tantric deity might require its own version compatible with the specific meditation training. The early history of tantric *bcud len* practices has not yet

been well researched,[3] but it is clear that short *bcud len* practices occur in some early transmitted texts, such as Drakpa Gyaltsan's (*grags pa rgyal mtshan*, 1147–1216) *sman chen po'i bcud len*.[4] These practices became particularly established in the Nyingma revelatory literature and were included in the twelfth-century medical classic, the Four Tantras (*rgyud bzhi*), whose sources included Nyingma tantric texts (see Gerke 2012). I have not identified any specifically *bcud len* type text in the works of the twelfth-century Nyingma ancestral forefather, Nyang-ral Nyima Özer (*Nyang ral nyi ma 'od zer*).[5] By the time of Nyang-ral's thirteenth-century successor, Guru Chöwang (*Gu ru chos dbang*), the various techniques were presumably well-known. Thus, Guru Chöwang presents a classification of *bcud len* into fourteen types, and proceeds to give recipes and instructions for each of them, as well as producing a separate text on a different type of *bcud len* from any of the fourteen.[6]

Essentially, *bcud len* practices in the Nyingma system are integrated with the inner tantras, of Mahāyoga, Anuyoga, and Atiyoga (different but complementary tantric techniques for gaining liberation), and designed to support meditation and yogic practices aiming at Enlightenment. The Nyingma inner tantras assume that buddhahood is primordially fully developed, and the practitioner needs only to actualise this through the spiritual training. The *bcud len* practices are subsidiary rather than self-sufficient components of this training, always dependent on the wider meditation system being practised, and often serve as an optional extra which can be added in. This is even the case when complete enlightenment is predicted as the result of a single *bcud len* practice, since such a practice is always to be integrated with the yogic training and could not be performed by a person who had not been initiated into the tantric path.

It is clear that there are some contrasts in this respect between the medical traditions for creating "precious pills" (*rin chen ril bu*) and pills for "rejuvenation" (*bcud len*) on the one hand (see Gerke, this volume), and these tantric traditions for "imbibing the essence juice", as well as the Medicinal Accomplishment practices described below on the other hand. There is no doubt that the medical and the tantric ritual traditions share much of the same historical heritage, and have much in common. Their intertwined histories represent an important and

3 Jamyang Oliphant (2016) includes some discussion of a few early *bcud len* practices, but makes no attempt at an historical assessment of the early Tibetan sources.

4 Drakpa Gyaltsan 2007; on this text, see Oliphant 2016: 53, 74, 92–94.

5 This is not to say that there are no extant *bcud len* passages amongst his many works, simply that I have not identified them; and there may also be texts no longer extant. Nyang-ral's *Key to Secret Mantra terms* (*gsang sngags bka'i lde mig* (Nyang ral, Nyi ma 'od zer 1979–1980b: v. 4: 333–451)) gives a gloss on the word *bcud* (Nyang ral, Nyi ma 'od zer 1979–1980d: v. 4: 420–422) that is very much in line with *bcud len* practices.

6 Guru Chöwang 1976–1980a: 287–314.

currently under-researched topic. But over many generations, the medical traditions of Sowa Rigpa became increasingly secularised, even before the modern era (see Gyatso 2015), with more emphasis on the mix of ingredients, and less on the spiritual status of the person compounding the pills. Moreover, for Sowa Rigpa, the primary aim of treatments or remedies is the physical well-being of the physician's patients, rather than any spiritual benefits, even though the physical and spiritual aspects may be seen as complementary, both by "medical" and "religious" specialists. In Nyingma practice, the compounding of the substances takes place within the context of the tantric ritual and meditations, the spiritual dimension is central, does not simply represent an additional consecration or blessing, while the benefits are as much for the practitioner as for those to whom they may pass on the pills.

Given their integration into the tantric training, Nyingma *bcud len* texts are frequently rather short, unless they include a number of recipes and practices, which may be suitable for different circumstances, or unless standard practice (*sādhana*) sections are included together with the *bcud len* instructions. These practices are considered appropriate especially for individual yogic training and retreat contexts rather than communal rituals,[7] and they also have the practical purpose of enabling the hermit to subsist on very little food, since the meditations and concentrated sacred pills are considered able to sustain the practitioner.

Sometimes *bcud len* texts may consist simply of recipes giving lists of ingredients and/or the processes for preparing or compounding them, but often, the associated meditation/visualisation practices will also be included, and there are even practices of subsisting on the inner or outer elements, without consuming any substances at all. Such a means of "imbibing essence juice" may be obliquely referred to in tantric manuals which are not specifically concerned with *bcud len*.

For example, Dudjom Rinpoche's Guru Rinpoche revelation known as the *Lake-Born's Heart Creative Seed* (*mtsho skyes thugs thig*) has a longevity practice which has some succinct instructions on transforming the body through meditating on imbibing the essence juices of conditioned and unconditioned existence, and although the specific word, *bcud len*, is not used explicitly, it was explained to me that this represented a kind of *bcud len* practice:[8]

> … in the ultra-profound longevity practice, either with the elaboration of the deity mantra, or without it, one's own body, empty yet radiant, free of grasping, rests in equanimity in the state like the sky.

7 Sometimes there are some hints that the practice may be performed in a group, or at least that it is to be done for the benefit of others, with an empowerment as part of the practice (e.g., Rigdzin Gödem 1980b: v. 3 Ga: 23–24).

8 Indeed, the same phrasing of "consuming the sky as food" (*nam mkha' zas su za ba*) is found in *bcud len* texts such as Guru Chöwang's *Rin chen gter mdzod* (Guru Chöwang 1976–1980b: 314).

> All samsara and nirvana's essence juice (and) vibrant lustrous appearance is drawn in, liquid blue, (like) the nature of the sky. Through collecting it in the abdomen, stabilize the meditation of the pure awareness holder (Skt. *vidyādhara*) of immortal life; and through training in (this) yoga of consuming the sky as food, it is taught that gradually, the adamantine (Skt. *vajra*) body is accomplished.[9]

As a brief example of a tantric *bcud len* text, I have selected one from Dudjom Rinpoche's corpus of texts for Zilnön Namkhai Dorje's (*zil gnon nam mkha'i rdo rje*) early twentieth-century longevity revelation cycle of the *Immortal Life's Creative Seed* (*'chi med srog thig*). When Dudjom Rinpoche was compiling this collection, which takes up one volume in his *Collected Works*, he added in a short *bcud len* practice from the Jang Ter (*byang gter*) tradition,[10] since he wanted to create a complete set of texts, and the original revelation had no *bcud len* section. The text he used is in fact a short section from a longevity practice text within the fourteenth-century Rigdzin Gödem's (*rig 'dzin rgod ldem*, 1337–1408) Guru Drakpo-tsal (*thugs sgrub drag po rtsal gyi chos skor*) revelation.[11] Rigdzin Gödem produced more substantial *bcud len* texts, including a lengthy text found within the same revelatory cycle,[12] but it seems that Dudjom Rinpoche chose instead to use a short extract from the longevity practice since it is succinct and suitable to use as an insert for a different deity practice.[13]

The text begins with preparatory instructions, which concern the physical and spiritual health of the practitioner – he/she is to modify the diet and drink boiled water to clean out the system, and also to save animal lives and give out medicines, practices which are considered to create auspicious conditions for

9 *khyad par yang zab kyi tshe sgrub la lha sngags kyi spros pa'ang dor nas rang lus stong gsal 'dzin med nam mkha' lta bu'i ngang la mnyam par bzhag bzhin pas/ 'khor 'das kyi dwangs bcud thams cad nam mkha'i rang bzhin du sngo mer gyis drangs te lto bar bskyil bas 'chi med tshe'i rig 'dzin brtan par bsam zhing nam mkha' zas su bza' ba'i rnal 'byor la bslab pas rim gyis rdo rje'i lus su 'grub par gsungs so/*, from *Accomplishing Longevity (through) the profound path (of) the Lake-Born's Heart Creative Seed (cycle), the Quintessential Manual (of) Pith Instructions* (*zab lam mtsho skyes thugs thig gi tshe sgrub man ngag gnad byang*) (Dudjom Rinpoche 1979–1985g: 576); here and below, all the translations from Tibetan are mine.

10 Dudjom Rinpoche 1979–1985f: 513–17.

11 The extract is within the *tshe sgrub lcags kyi sdong po las: phyi sgrub rin chen bum pa*, (Rigdzin Gödem 1980c: 517–520).

12 Rigdzin Gödem 1980b.

13 Since this four-volume collection of Rigdzin Gödem's Guru Drakpo-tsal *Heart Practice* was edited by Dudjom Rinpoche and published in Sikkim in 1980 (Rigdzin Gödem 1980a), it is probable that Dudjom Rinpoche had been working on it during the same period in which he was compiling and writing texts for the Zilnön *Immortal Life's Creative Seed* cycle (mostly in Kalimpong in the late 1970s), and perhaps it was in the context of his editorial work that the Rigdzin Gödem passage came to the forefront of his attention and he decided to reuse it.

generating longevity in oneself. The main practice starts with the recipe, the principal ingredients of which constitute two groups of substances considered by Tibetans to provide natural vitality. These groups, of the five vital essences (*dwangs ma*) and four elixirs (*bdud rtsi*) are found also in the geriatric chapter of the *rgyud bzhi*, and used in the medical tradition. Gerke (2012: 347) identifies this group in the medical texts as most probably related to the Buddhist ritual rather than Ayurvedic sources of the medical classics. The final section of the text waxes lyrical about the benefits to be achieved by the practice and the consumption of the *bcud len*, which include longevity equal to that of the sun and moon, the recovery of youthful vigour and mental clarity, and disappearance of the signs of ageing, as well as recovery from disease, and divine protection.

The vital essence of earth is mineral pitch (*brag zhun*) exuded from rocks in the Himalayas or other high mountains, equivalent to *śilājatu* in Ayurvedic medicine. Such *śilājatu* is frequently included in Ayurvedic longevity recipes (*rasāyana*). The vital essence of stone is a specially prepared form of calcite called *cong zhi* in Tibetan; I have been told that a good source is stalactites or stalagmites found in caves in Bumthang in Bhutan, and similar sites elsewhere.[14] The text claims that these substances will help to generate new teeth and strengthen the bones.[15] The vital essence of wood or trees is *bu ram*, which is usually taken to be raw sugar or molasses, although Lopon P. Ogyan Tanzin suggested to me that maple syrup or other tree syrups would be most appropriate for this category. The vital essence of vegetation is butter from a female yak (*'bri mo*); the idea is that the yak consumes good quality grasses and the richness is concentrated in her butter. These two vital essences are said respectively to increase strength,[16] and spread the essence juices through the body. The vital essence of flowers is honey.

14 Lama Kunzang Dorjee of Jangsa Monastery, Kalimpong (personal communication. According to Dagmar Wujastyk (personal communication 23/08/2017), calcite does not feature in the *rasāyana* sections in Ayurvedic literature, but there may be a link with the Indian Siddha traditions.

15 See also Rigdzin Gödem's longer *bcud len* text (Rigdzin Gödem 1980b: v. 3: 26): calcite and mineral pitch augment the flesh and bones (*cong zhi dang ni brag zhun gyi: sha dang rus pa rgyas par 'gyur:*). This appears to be a reversal of the perhaps rather more intuitively logical associations given in the medical tradition, where *brag zhun* is given first, and restores the flesh, while *cong zhi* restores the bones (see Gerke 2012: 348). Perhaps at some stage, there was a scribal error with a reversal of *brag zhun* and *cong zhi*. On the other hand, it is also possible that the medical tradition might have tidied up an apparent discrepancy in the tantric literature, which has little need to be presented in a consistent or logical manner. The consultation of further sources would be necessary to clear up this point.

16 See also Rigdzin Gödem's longer *bcud len* text (Rigdzin Gödem 1980b: v. 3: 27): molasses brings great bodily strength (*bu ram gyis ni lus stobs che:*). For the medical tradition, see Gerke 2012: 348, where the two enhanced qualities are given as as physical strength (*stobs*) and radiance/lustre (*mdangs*).

Lopon Ogyan Tanzin commented that in this case, the honey should have been produced by bees which have fed exclusively on flowers.[17] The text notes that this will help to restore the glistening luster of the complexion. This category of five vital essences found in *bcud len* texts, is closely related to a list of five essences (*snying po lnga*) found widely in other Nyingma ritual contexts.[18]

The four elixirs are collected from plants, possibly all evergreen, and considered to have good fragrance; it is perhaps noteworthy that they are also burnt as incense. The text gives annotations in small writing, supplying the information about when the plant sources should be gathered. It is not clear whether these notes on the timing are part of the original revelation; they are not marked by the revelation punctuation, but nonetheless occur within the Rigdzin Gödem revelation text. The first elixir is juniper (*shug pa*), which should be gathered when the leaves are spreading out. In Rigdzin Gödem's longer *bcud len* text in the corpus, the timing is specified as when the fruits – presumably, in this case, the seed cones or berries – are ripening. Here, there is no indication of the part of the plant to be collected, but some other sources specify the seed cones.[19] The second elixir is *ba lu*, which is a fragrant dwarf rhododendron species (perhaps *Rhododendron capitatum Maxim*), to be collected when the flowers are open. Thirdly, *mkhan pa*, a Himalayan species of artemisia, is gathered when the leaves are green, while fourthly, ephedra (*mtshe*), is collected when the greenish colour and the fragrance is fading. The text continues with a short instruction on how specific amounts of the ingredients are to be mixed and processed, boiling them down and condensing them into a syrup.

The next section moves to the ritual and visualisation practices to be performed: the mixture is to be put into five skull-cups with auspicious characteristics, and placed on the mandala. The male and female deities of the five buddha families are invited, and offerings are made to them. The main mantra is to be recited – instead of the appropriate mantra from the original revelation context, in Dudjom Rinpoche's presentation, the root mantra for the *Immortal Life's Creative Seed* would be recited here. The accompanying meditation is very similar

17 See also Rigdzin Gödem 1980b: v. 3: 4. This specifies "unadulterated" (*lhad med*) honey, which may have the same implication.

18 For instance, see the version given in Magsar's ritual commentary: "The essence of water is sea-salt; the essence of flowers is honey; the essence of wood/trees is molasses; the essence of vegetation is butter or milk; the essence of medicines is myrobalan fruit, or alternatively, the essence of grain juice is beer" (*chu'i snying po lan tshwa/ me tog gi snying po sbrang rtsi/ shing gi snying po bu ram/ rtsi thog gi snying po mar ram 'o ma/ sman gyi sning po a ru'i 'bras bu'am/ 'bru bcud kyi snying po chang du byas kyang rung/* (Magsar 2003: 153)).

19 Guru Chöwang's separate text for a *bcud len* based on juniper speaks of gathering the seeds: "when it is the time for carefully gathering the juniper seeds…" (*shug 'bru legs par 'thu ba'i dus:…* (Guru Chöwang 1976–1980b: 307))

to that used in Medicinal Accomplishment practices (see below): the five visualised male and female buddhas unite and the fluids produced from their union rain down as elixir, filling the skull-cups. After seven days of intensive practice, the "siddhis" are to be imbibed. The "siddhis" (Skt. *siddhi*, Tibetan *dngos grub*) are tantric spiritual accomplishments, and here indicate the *bcud len* substances, some of which are to be ceremonially eaten. Here, Lopon P. Ogyan Tanzin elaborated that the regular practice of the *Immortal Life's Creative Seed* would be performed on the final siddhi-imbibing day, such that the section on "Imbibing the Siddhis" would be reached as the dawn is breaking, and mixture from the skull-cups would on this occasion be consumed to transmit the siddhis. He added that when the practice is performed by an individual in retreat, they would not need the skull-cups fully filled, since they will only need a small quantity, but where the *bcud len* is being performed for distribution to others, a large quantity can be made, and after the practice, the substances can be made into pills.

This concise example of a *bcud len* text perhaps covers the main components of *bcud len* in the Nyingma tantric context. First, the practice is integrated into the wider spiritual and yogic training, and the visualised tantric consecrations are a central and necessary aspect of the practice. Secondly, with the exception of a number of specialised yogic practices such as those focused on the vital airs, generally, there is a physical support to the practice – real ingredients are used, mostly substances considered to constitute natural essences or naturally to have medicinal value or life-enhancing qualities. The substances are processed and concentrated, and after the accompanying meditations and consecrations, they are considered actually to possess real potency to bring about longevityand other benefits, and this potency will continue beyond the practice context. Much the same could be said of other Nyingma rituals such as Medicinal Accomplishment rituals (*sman sgrub*) and Longevity Accomplishment rituals (*tshe sgrub*) during which "sacred elixir dharma medicine" (*dam rdzas bdud rtsi chos sman*) or longevity pills (*tshe ril*) respectively are produced.

3. MEDICINAL ACCOMPLISHMENT (*SMAN SGRUB*) AS RASĀYANA

MEDICINAL ACCOMPLISHMENT RITUALS are tantric practices which are generally performed communally by trained, often monastic or full-time practitioners, supported by sponsorship for the event. They involve intensive meditations and rituals over a number of days, the primary purpose of which is the accomplishment of the tantric deity and spiritual realisation. As a part of these complex rituals, medicinal substances are consecrated and compounded into pills which are distributed at the end of the session to the entire congregation. On the final day, the gathered assembly may run into hundreds or even thousands of lay

people. A store of the pills will also be retained and can be given away at later times. The distribution of these highly valued pills may have some similarities to the commodified production and distribution of precious pills (*rin chen ril bu*) by medical institutions,[20] but with one important difference. In this Buddhist production, the tantric practice and any purchase of ingredients are funded by sponsorship and the pills must be given away, not sold. The pills may be seen, especially by devoted followers, as panaceas which may help to promote health or dispel disease, but perhaps particularly in today's world when Buddhist monasteries would not wish to be brought under the purview of modern regulations of "medicines," it is their spiritual qualities which tend to be emphasised.

I have written about these ritual practices at length elsewhere.[21] According to important Nyingma sources, these entire rituals, and especially the manufacture of the tantric medicinal pills, can be seen as a process of *rasāyana*. Dudjom Rinpoche uses the term, *rasāyana*, in this broad sense, to apply to the Medicinal Accomplishment practice as a whole, such as in the final words of his opening eulogy to his *Medicinal Accomplishment text for the Meteoric Iron Razor* (*gnam lcags spu gri*) tradition, i.e., "I hereby joyously set out the methods for accomplishing sacred substance *rasāyana* in this celebration of wondrous elixir"[22] and in similar vein at slightly greater length in introducing the sections of his Medicinal Accomplishment text for Dudul Dorje's Enlightened Intention Embodied (*dgongs pa yongs 'dus*) cycle:

> There are seven general sections in this clarification of the methods for absorbing the profound accomplishment of the *vajrayāna samaya* substance *rasāyana*, while relying on the guru, the mandala circle of the three roots.[23]

Here, the notion of *rasāyana* is linked to a fundamental feature of Buddhist tantra or *vajrayāna*, that is, the *samaya* (Tibetan *dam tshig*) or tantric bond linking the practitioner with the guru, the deity and the community of practitioners. Thus, imbibing the sacred substances is a way of connecting the practitioners with the sacred tantric vision, and transforming everyday experience. This usage is not

20 See Gerke's paper in this volume (Gerke 2017).

21 Cantwell 2015.

22 *"dam rdzas ra sā ya na sgrub pa'i tshul/ ngo mtshar bdud rtsi'i dga' ston 'di na spro/"* (Dudjom Rinpoche 1979–1985d: 306–7).

23 *gu ru rtsa ba gsum gyi dkyil 'khor gyi 'khor lo la brten nas rdo rje theg pa'i dam tshig gi rdzas ra sā ya na'i sgrub pa zab mo ji ltar nyams su len pa'i tshul gsal bar 'chad pa la spyi don rnam pa bdun te/* (Dudjom Rinpoche 1979–1985b: 367). Dudjom Rinpoche was considered a reincarnation of Dudul Dorje (*bdud 'dul rdo rje*, 1615–1672); he took on responsibility for Dudul Dorje's heritage and wrote many practice texts for his tantric revelations.

Figure 1: Ritual grinding of the medicinal ingredients at the mid-point of the ritual.

Figure 2: Mixing of the ground medicinal ingredients. Note the face masks to avoid breathing on and polluting the substances.

idiosyncratic; we see, for instance, the same characterisation in a text on Medicinal Accomplishment in the twelfth-century cycle of the *Eightfold Buddha Word, Embodying the Sugatas*, of Nyang-ral Nyima Özer (*nyang ral nyi ma 'od zer*, 1124–1192).[24] The specific reference is in the section on the signs of success, where the quantity of collected *rasāyana* is said to increase greatly.

24 Nyang ral, Nyi ma 'od zer 1979–1980d "*ra sa ya na 'dus pa la mang du 'phel ba 'byung:*," Nyang ral, Nyi ma 'od zer 1979–1980c: v. 8: 416.5.

Figure 3: Placing the dish of unground medicinal ingredients at the top of the maṇḍala construction.

To sum up, sacred medicinal pill production is integrated into a full mahāyoga tantric practice connected with realising all physical, verbal and mental phenomena as enlightened body, speech as mind, led by an accomplished lama and a team of specialised meditation masters and ritualists. Special ingredients, including sacred tantric substances and substances considered to have natural medicinal potencies, are prepared and installed in a three-dimensional tantric mandala, which becomes the focus of the practice. In the first half of the ritual, a proportion of the raw ingredients are set out in a prescribed arrangement at the top of the mandala (see Figure 3), while further sacks of ingredients are placed lower within the mandala. Half-way through the practice session, on day 4 or 5 of the ritual, the now consecrated ingredients are ceremonially removed, ground up and compounded into medicinal pill pieces (see Figures 1 and 2), which are then installed within special medicinal containers, placed back into the mandala (see Figure 4) and ritually sealed.[25]

Figure 4: Maṇḍala with the large and small medicinal containers of ground and mixed ingredients, for the second half of the ritual session.

Following several further days of tantric practice, the medicinal pills become one of the key sacred substances to be ingested as *siddhi* substances, and distributed in the public blessings. The remaining store of pill pieces may be dried and further processed at this stage, creating a large supply for further use and distribution (see Figure 5).

The significance of these tantric pills should not be underestimated – as Dudjom Rinpoche sums up the benefit of consuming them:

> "… if you eat them, the qualities are indescribable. You will attain the qualities of the five buddha bodies. Outwardly, illnesses and evil forces afflicting your body will be vanquished; inwardly, the emotional afflictions and five poisons will be purified; degenerated and broken tantric vows (*samaya*s) will all be restored; secretly, self-arisen primordial wisdom will be realised."[26]

It is not only that many kinds of spiritual accomplishments and physical healing and life extending qualities are attributed to the substances. Equally significantly, they are considered to be a vital embodied aspect of the tantric transmission from master to student, and of the tantric community, binding together

25 Again, this ritual is more fully explained in Cantwell 2015.

26 */zos pas yon tan brjod mi langs/ /sangs rgyas sku lnga'i yon tan thob/ /phyi ltar lus kyi nad gdon 'joms/ /nang du nyon mongs dug lnga 'dag /dam tshig nyams chag thams cad skong/ /gsang ba rang byung yes shes rtogs/* (Dudjom Rinpoche 1979–1985c: 340).

Figure 5: Putting the medicinal pills into small bags for distribution to individuals.

the generations of practitioners descending in specific lineages of tantric practice. Thus, they are known as *samaya* substances (*dam tshig gi rdzas*). That is, by partaking of these substances, the bonds linking the tantric community are created, embodied and repaired. And this is not only a matter of specific occasions when the pills are made. Each time, a small amount of concentrated pills will be retained by the lama for use in future batches, so that the stream or continuity of the sacred "fermenting agent" (*phab gta'* or *phab rgyun*) never runs out. Indeed, The Head Lama of the Jangsa Monastery in Kalimpong told me that the late Dudjom Rinpoche used to tell his students that while there were many different specific lines through which the *phab gta'* had been passed, all Nyingmapa lamas are connected since some component of everyone's dharma pills ultimately stems back to the mass ceremonies performed in the seventeenth-century by the great lama, Terdak Lingpa (*gter bdag gling pa*, 1646–1714). I have no way of assessing the accuracy of this claim, but the circulation of this story encapsulates well the notion of a spiritual bonding enacted and maintained through the consumption of *rasāyana* tantric pills.

Figure 6: Medicinal Cordial offering (sman mchod): the Head Lama takes up a little liquid and flicks it as the offering to the tantric deities is recited.

More specifically, within the Major Practice session rituals, there are two sections where the term *rasāyana* may be explicitly used, and it is interesting to reflect on what might connect these two sections. My current hypothesis is that while most of the *mahāyoga* meditations and rituals for actualising buddha body, speech and mind within these practices have a distinctly Tibetan flavour, both the contexts in which the term, *rasāyana*, occurs, are picking up on specifically Indian tantric precedents. The first is during lengthy recitations for the medicinal cordial offering (*sman mchod*) (see Image 6). This offering is a standard part of all *mahāyoga sādhana* liturgies, and here, the *rasāyana* is not the tantric pill production of the Medicinal Accomplishment rite, but the offering of liquid elixir in a skull-cup, generally of white, clear or light coloured alcoholic drink, along with consecrated medicinal pills, made to the tantric deities as one of the three elements of the inner offerings. The medicinal cordial offering, then, is made not only in elaborate rituals, but as part of the regular everyday tantric practices (*sādhanas*) of different deities, performed by individuals as well as temple communities. It has various symbolic connotations; one is that it is to be equated with the or the male wrathful deity's (Heruka's) sexual fluid, in this tantric con-

text seen as the ambrosia of life, and as the white *bodhicitta* or the substance of enlightened mind, and linked in a pair with the inner offering of blood (*rakta*) (red *bodhicitta*), connected with the female deity.

The verses of recitation do not always equate the medicinal cordial offering with *rasāyana*, but where the word occurs, it seems that it is linked to a classic line relating to the varieties of medicine, which occurs in early Nyingma sources, including root tantras of the Elixir Qualities (*bdud rtsi yon tan*) class. The line runs:

> medicines compounded from the eight principal and thousand (varieties)[27]

and then sometimes the rest of the verse or a subsequent verse continues with a reference to the liquid as a *rasāyana* elixir, in some cases elaborating that it embodies the five samaya substances and represents the five poisons transformed.[28] Here, *samaya* substances imply the five substances considered most polluting in Indian thinking – human flesh, excrement, urine, semen and menstrual blood – which through the tantric practice, actually come to embody the five Buddha wisdoms.[29] Thus, this inner offering of medicinal cordial is in tantric Buddhist terms an offering of the inner saṃsāric defilements - attachment, aversion, delusion, jealousy and pride – while recognising and enjoying their flavour as the five buddha wisdoms.[30] And note that the practitioner, or in the case of a communal ritual, the presiding lama, not only visualises offering the elixir to the various deities in turn, but then, visualising himself as the deity, actually partakes of some of the elixir at the end of the offering verses.

The second instance in the Major Practice session rituals in which the term, *rasāyana*, may be used explicitly is within the central part of meditations for the Medicinal Accomplishment practice, which is repeated each day before the recitation of the main mantra for consecrating the medicines. It is made up of

27 *rtsa brgyad stong la/las sbyar ba'i sman*. For more on this classic line and its connotations, see Cantwell 2017; as well as Pema Lingpa 1975–1976.

28 Amongst many examples, see in Dudjom Rinpoche's works, his *Ritual Manual for the Meteoric Iron Razor Vajrakīlaya* (Dudjom Rinpoche 1979–1985d: 114) and that for his *Razor Disintegration-on-Touch Vajrakīlaya* (Dudjom Rinpoche 1979–1985e: 489). In his *Guru Accomplishment* (*bla sgrub*) text, these elements all occur without the word, *rasāyana* being drawn upon (Dudjom Rinpoche 1979–1985a: 15). See also Terdak Lingpa's *Ritual Manual for Guru Chöwang's Ultra Secret Razor Vajrakīlaya* cycle (Terdak Lingpa 1998b: 288v).

29 Note that there is a discussion of the connotations of the five *samaya*s, linked to a discussion of the *rasāyana* medicines, given in a commentarial work within Nyang-ral Nyima Özer's *Eightfold Buddha Word, Embodying the Sugatas* (Nyang ral, Nyi ma 'od zer 1979–1980b: 288).

30 The corresponding wisdoms: discriminating, mirror-like, spatial field, accomplishing, and sameness.

consecutive sections leading up to the mantra. The first is known in the Dudjom Meteoric Iron Razor cycle as, *Inviting the Medicinal Guardians* (*sman srung spyan 'dren pa*) and the second as, *Clearing the Thoughts* (*rtog pa bsal ba*). At this stage, the main deity visualisation for the medicinal sections has already been set up. The medicinal substances have been generated as elixir personified, the deity Amṛtakuṇḍalī with his consort. Now, an Invocation is recited (Dudjom Rinpoche 1979–1985c: 317), calling upon the medicinal guardians, who are described in terms of Indian categories, *brahmā*, seers (*ṛṣi*s), *nāga*s, and goddesses of herbal medicines.[31] They are reminded of the mythology of how they became guardians of *rasāyana*. They are requested to pay heed in accordance with their former vows and to grant the siddhis of *rasāyana*. As this recitation ends, music is played, the incense censer is carried around the hall, and the principal practitioners wave coloured streamers, bringing down the presence of the deities. These deities are then visualised gathering above the medicinal palace mandala containing the medicinal substances, which has been constructed in the temple.

The section on Clearing the Thoughts follows immediately, and is accompanied by the flicking of medicinal cordial, as in the inner offerings, but here as a way of bringing consecration. The recitation for this section is particularly interesting because it draws on a passage found in root tantras and early Nyingma tantric manuals. It would seem that a variant of these verses is generally integrated into Medicinal Accomplishment practice manuals of any length,[32] constituting a kind of basis for the ritual and symbolic transformations. The passage appears, then, to represent a root tantra citation significant for the entire Nyingma Medicinal Accomplishment literature, expressing key values which summarise the approach of this tantric meditative practice. It draws on the Indian religious theme

31 For *tsak li* initiation cards which give depictions of such medicinal guardians, see *Himalayan Art Resources*, `http://www.himalayanart.org/items/53351968/images/primary#-458,-1331,1465,0`, and `http://www.himalayanart.org/items/53351946/images/primary#-441,-1331,1482,0`. These cards are for a quite different deity cycle, the *gYu thog snying thig*, but they are nonetheless illustrative of Tibetan styles of depicting Indian seers etc.

32 Since I am not extensively familiar with this literature, I cannot be certain how ubiquitous the passage is: I may have overstated the point here. The passage is found in the fifth *bam po* of the rNying ma'i rgyud 'bum's *thams cad bdud rtsi lnga'i rang bzhin nye ba'i snying po'i bdud rtsi mchog gi lung bam po brgyad pa* (rnying ma rgyud 'bum, mTshams brag 1982: 40, gTing skyes 1973: 177). Terdak Lingpa's Medicinal Accomplishment manual identifies his source as the *bam brgyad* (written in small letters; Terdak Lingpa 1998a: 125r). A version is also found in the probably early tenth-century *bSam gtan mig sgron* of Nubchen Sangyé Yeshé (see Nubchen Sangyé Yeshé ca. 1990–2000: 376); (thanks to Dylan Esler, who is working on the *bSam gtan mig sgron*, for drawing my attention to this source); in Nyang ral's *bKa' brgyad bde gshegs 'dus pa*, in the *bdud rtsi sman sgrub thabs lag khrid du bsdebs pa* (Nyang ral, Nyi ma 'od zer 1979–1980a: v. 8: 445–6); and in Guru Chöwang's *zhi khro bka' brgyad las bdud rtsi sman bsgrub* (Guru Chöwang 1979: 283–4).

of the opposition between the pure and the impure, and not simply a Buddhist opposition between a defiled *saṃsāra* and pure *nirvāṇa*.

Here, the imagery is more classically Indian: Brahmā, seers (Tibetan *drang srong* = Skt. *ṛṣi*), *nāga*s, brahmans, and cows are said to eat pure foods. Dudjom Rinpoche's (and also the thirteenth-century Guru Chöwang's) version adds in an explicit opposition with dogs and pigs eating impure foods. In any case, the refrain with each of the examples is that we would not say that they are liberated as a result of their "purity" (or "impurity"). The text continues that in contrast, liberation is brought about by transcending the opposition between the pure and the impure, and recognising that the single ultimate body of the Buddha (*dharmakāya*) is displayed variously, its natural qualities the five buddha families. Thus, the genuinely "pure" or consecrated potent substances[33] are to be consumed non-dualistically, bringing alchemical transmutation and accomplishment.[34]

This section is concluded with a request for the gathered *vidyādhara*s of *rasāyana* to bestow consecrations upon the substances and practitioners. The following section for the mantra recitation opens with a recited visualisation which includes the medicinal deities raining down elixir into the mandala, so that the supreme alchemical transmutation takes place – and again, the transliterated word, *rasāyana*, is used.[35].

It seems likely that the passage on the Medicinal Guardians and their consecrations of the sacred medicines derives from an Indian source; in the Tibetan case, tantric transformation is more usually concerned simply with the sameness of saṃsāra and nirvāṇa, and realising ordinary body, speech and mind as buddha body, speech and mind, and in any case, caste rules and ideas about cows as sacred or pure are not a prominent feature of Tibetan life. It seems that transcendence of Indian caste purity rules is particularly played on in the ritual traditions focusing on producing transformative elixir with key ingredients classed

33 That is, the arranged medicinal substances, which feature the tantric five fleshes and five elixirs, the most polluting of all substances from a classically Indian viewpoint, yet constitute potent consecrated elixir, partaking of Amṛtakuṇḍalī's nature, from the tantric pure-vision perspective, already developed in the earlier practice.

34 Törzsök (2014) discusses the ritual use of impure substances in various strands of Hindu tantras, and their differing ontological connotations. This Buddhist inner tantra context is more similar to the later groups described by Törzsök which upheld a non-dual ontology, although of course, the philosophical implications were somewhat different in the Buddhist tantras. Garrett (2010: 302 ff.) traces the usage of impure substances in Tibet from the *Nyingma Elixir Qualities* (*bdud rtsi yon tan*) tantras and (*ibid.*, 316–321) contextualises the uses and adaptations of the consumption of body parts and waste products etc. in the Tibetan case where Indian notions of purity and pollution are less central.

35 Dudjom Rinpoche 1979–1985c: 319.

as "polluted" substances,[36] and perhaps this is why we find the transliterated Sanskrit term in this context rather than a Tibetan translation.

4. CONCLUSION

The practice of making and consuming sacred pills and other substances in the tantric contexts of rituals of Medicinal Accomplishment (*sman sgrub*), Longevity Accomplishment (*tshe sgrub*) and Imbibing the Essence Juice (*bcud len*) are clearly variations on the same theme, and closely connected in both their conceptualisation and practice. Each type of practice has its own specific emphasis, and in the case of Imbibing the Essence Juice, the main preoccupation is the distillation of naturally occurring concentrated substances which can become nutritional essences sustaining the yogi. On the other hand, while some of the same substances might also be included in the more complex recipes for Medicinal Accomplishment pills, the central theme in that case is a transmutation process termed *rasāyana*, focused on powerful substances which become tantric elixir.

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36 The imagery also sometimes occurs in the Tibetan tantric feast (*tshogs*) rite. Many *tshogs* texts include an exchange between the Vajra Master and the Master of Offerings at the point where the food is to be consumed and the Master of Offerings presents a plate to the Vajra Master. The Master of Offerings says one verse as he offers the food: "Hoḥ! See, these are supreme dharmas, beautiful! It is not right to doubt this. Partake, with the meditation that brahmans and untouchables, dogs and pigs, are one in their natural qualities!" (*hoḥ: gzigs shig mdzes ldan dam pa'i chos: 'di la the tshom byar mi rung: bram ze gdol pa khyi dang phag: rang bzhin gcig tu dgongs te rol:*; the exchange occurs in many texts; here I cite Terdak Lingpa's compilation of Guru Chöwang's *Bla ma gsang 'dus*, (Terdak Lingpa 1998c: 11v).) The Vajra Master accepts the *tshogs* foods with a verse recognising their total purity and abandoning dualism. Interestingly, the exchange is also referred to by the same term that we find here: Clearing the thoughts (*rtog pa bsal ba*). Both cases involve the consumption of consecrated tantric substances: the *tshogs* also needs to contain the fleshes and elixirs, embodied in the sacred Dharma medicinal pills. There is also the element of creating the tantric community through commensality, during which everyone becomes part of the divine display, no matter what their worldly status.

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All photos were taken at the Medicinal Accomplishment practice held at Pema Yoedling Dratsang, Gelegphu, Bhutan, November 2013 and are © the author.

REFERENCES

The TBRC reference numbers refer to the electronic texts made available by the Buddhist Digital Resource Center (BDRC), Cambridge, MA, USA (http://www.tbrc.org/).

Cantwell, Cathy (2015). "The Medicinal Accomplishment (*sman sgrub*) Practice in the Dudjom *Meteoric Iron Razor (gnam lcags spu gri)* Tradition: Reflections on the Ritual and Meditative Practice at a Monastery in Southern Bhutan". In: *Journal of the Oxford Centre for Buddhist Studies* 8, pp. 49–95. URL: http://www.jocbs.org/index.php/jocbs/article/view/106 (on 3 Dec. 2017).

— (2017). "Reflections on Pema Lingpa's *Key to the Eight Principal Tantric Medicines*, and Its Relevance Today". In: *A Maṇḍala of 21st Century Perspectives: Proceedings of the International Conference on Tradition and Innovation in Vajrayāna Buddhism, July 2016*. Ed. by Dasho Karma Ura, Dorji Penjore, and Chhimi Dem. Thimpu, Bhutan: Centre for Bhutan Studies & GNH Research. ISBN: 978-99936-14-88-3. URL: http://www.bhutanstudies.org.bt/mandala-on-21st-century-perspectives/ (on 7 Jan. 2018).

Drakpa Gyaltsan (2007). "sman chen po'i bcud len". In: *Collected Works: sa skya gong ma rnam lnga'i gsung 'bum dpe bsdur ma las grags pa rgyal mtshan gyi gsung*. Vol. 3. 5 vols. Pe cin: Krung go'i bod rig pa dpe skrun khang, pp. 406–407. TBRC W2DB4569.

Dudjom Rinpoche (1979–1985a). "bla ma thugs kyi sgrub pa'i las byang dngos grub 'dod 'jo'i dga' ston". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye*

Shes Rdo Rje'i Gsung 'bum. Vol. Ca. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 1–39. TBRC W20869.

Dudjom Rinpoche (1979–1985b). "dam chos dgongs pa yongs 'dus las dam rdzas bdud rtsi'i sgrub thabs gsal bar bkod pa 'chi med 'dod 'jo'i gter bum". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Ja. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 365–410. TBRC W20869.

— (1979–1985c). "dpal rdo rje phur bu bdud 'joms gnam lcags spu gri'i mchog gi phrin las dam rdzas bdud rtsi'i sgrub thabs dngos grub rgya mtsho'i dga' ston". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Tha. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 305–343. TBRC W20869.

— (1979–1985d). "dpal rdo rje phur bu thugs kyi sgrub pa gsang ba'i rgya can bdud 'joms gnam lcags spu gri'i las byang khrag 'thung mngon par rol pa'i dga' ston". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Tha. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 77–153. TBRC W20869.

— (1979–1985e). "rdo rje phur pa spu gri reg phung gi phrin las bdud sde'i g.yul 'joms". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Ba. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 418–520. TBRC W20869.

— (1979–1985f). "rdo rje tshe sgrub dang 'brel bar bcud len gyi gdams pa". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Pha. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 513–17. TBRC W20869.

— (1979–1985g). "zab lam mtsho skyes thugs thig gi tshe sgrub man ngag gnad byang". In: *The Collected Writings & Revelations of His Holiness Bdud-'joms Rin-po-che 'jigs-Bral-Ye-Shes-Rdo-Rje, bdud 'joms 'jigs Bral Ye Shes Rdo Rje'i Gsung 'bum*. Vol. Ma. 25 vols. 0334–0358. Kalimpong: Dupjung Lama, pp. 575–76. TBRC W20869.

Fenner, Edward Todd (1980). "Rasayana Siddhi: Medicine and Alchemy in the Buddhist Tantras". PhD. Madison: University of Wisconsin, Madison.

Garrett, Frances (2010). "Tapping the Body's Nectar: Gastronomy and Incorporation in Tibetan Literature". In: *History of Religions* 49.3, pp. 300–26. ISSN: 0018-2710. DOI: 10.1086/651992.

Gerke, Barbara (2012). "'Treating The Aged' and 'Maintaining Health': Locating *bcud len* Practices in the four Medical Tantras". In: *Journal of the International*

Association of Buddhist Studies 35.1–2, pp. 329–62. URL: https://journals.ub.uni-heidelberg.de/index.php/jiabs/article/view/13767 (on 3 Dec. 2017).

— (2017). "Tibetan Precious Pills as Therapeutics and Rejuvenating Longevity Tonics". In: *History of Science in South Asia* 5.2, pp. 1–30.

Guru Chöwang (1976–1980a). "bcud len gyi cho ga mchog tu zab pa'i gdams pa: gu ru chos dbang gi gter kha bdun pa". In: *rin chen gter mdzod chen mo*. Ed. by 'Jam mgon kong sprul blo gros mtha'yas. Vol. 48. 111 vols. Paro: Ngodrub and Sherab Drimay, pp. 287–304. TBRC W20578.

— (1976–1980b). "bdud rtsi shug pa'i bcud len". In: *rin chen gter mdzod chen mo*. Ed. by 'Jam mgon kong sprul blo gros mtha'yas. Vol. 48. 111 vols. Paro: Ngodrub and Sherab Drimay, pp. 305–14. TBRC W20578.

— (1979). "zhi khro bka' brgyad las bdud rtsi sman bsgrub". In: *bKa' brgyad gsang ba yongs rdzogs: a Complete Cycle of Rñiṅ-ma-pa Practice Focussing upon the Ancient Eight Pronouncements of Guru Rin-po-che Padmasambhava*. Vol. 3. Paro: Ngodrup and Sherab Drimay, pp. 277–303. TBRC W23819.

Gyatso, Janet (2015). *Being Human in a Buddhist World. an Intellectual History of Medicine in Early Modern Tibet*. New York: Columbia University Press. ISBN: 9780231164962.

Magsar (2003). *hur pa'i rnam bshad he ru ka dpal bzhad pa'i zhal lung (bcom ldan 'das dpal chen rdo rje gzhon nu'i 'phrin las kyi rnam par bshad pa he ru ka dpal bzhad pa'i zhal lung)*. sNgags mang zhib 'jug khang (Ngak Mang Institute). Beijing: Mi rigs dpe skrun khang. TBRC W25111. Author's Tibetan name: mag gsar kun bzang stobs ldan dbang pa. TBRC W25111.

Ngawang Tsering (1978). "dpal ldan bla ma dam pa 'khrul zhig rin po che ngag dbang tshe ring gi rnam thar kun tu bzang po'i zlos gar yid kyi bcud len". In: *'khrul zhig ngag dbang tshe ring gi rnam thar dang nyams mgur sogs*. Kawring: Tobdan Tsering, pp. 1–413. TBRC W1KG10256.

Nubchen Sangyé Yeshé (ca. 1990–2000). "bsam gtan mig sgron". In: *bKa' ma shin tu rgyas pa (snga 'gyur bka' ma)*. Vol. 97. 110 vols. Chengdu: Kaḥ thog mkhan po mun sel, pp. 1–736. TBRC W21508. Author's Tibetan name: gnubs chen sangs rgyas ye shes. Edition was brought together by Khenpo Munsel (1916–1993) and his disciples.

Nyang ral, Nyi ma 'od zer (1979–1980a). "bka' brgyad bde gshegs 'dus pa las: bdud rtsi sman bsgrub thabs lag khrid du bsdebs pa". In: ed. by gzhan phan rdo rje. Vol. 8. 13 vols. Paro: Lama Ngodrup, Kyichu Temple, pp. 421–507. TBRC W22247.

— (1979–1980b). "bka' brgyad bde gshegs 'dus pa las: gsang sngags bka'i tha ram". In: ed. by gzhan phan rdo rje. Vol. 4. 13 vols. Paro: Lama Ngodrup, Kyichu Temple, pp. 181–331. TBRC W22247.

Nyang ral, Nyi ma 'od zer (1979–1980c). "bka' brgyad bde gshegs 'dus pa las: mchod rdzas bdud rtsi'i bsgrub pa". In: ed. by gzhan phan rdo rje. Vol. 8. 13 vols. Paro: Lama Ngodrup, Kyichu Temple, pp. 377–419. TBRC W22247.

— (1979–1980d). *bKa' brgyad bde gshegs 'dus pa'i chos skor*. Ed. by gzhan phan rdo rje. 13 vols. Paro: Lama Ngodrup, Kyichu Temple. TBRC W22247.

Oliphant, Jamyang (2016). "Extracting the Essence': *bcud len* in the Tibetan Literary Tradition". PhD thesis. Oxford University. URL: https://ora.ox.ac.uk/objects/uuid:72121806-b3f5-4e87-8a9a-02b8b24ad12d (on 30 Nov. 2017).

Pema Lingpa (1975–1976). "1. rtsa brgyad yan lag stong gi lde mig (The Key to the Eight Principal [Medicines] and Thousand Varieties) from the Elixir Medicinal Accomplishment cycle (bdud rtsi sman sgrub kyi skor)". In: *Collected Works: rig 'dzin padma glin pa yi zab gter chos mdzod rin po che*. Vol. 9 Ta. 21 vols. Thimpu: Kunsang Tobgay, pp. 391–397. TBRC W21727.

Rigdzin Gödem (1980a). *thugs sgrub drag po rtsal gyi chos skor. a Cycle of Practice Focussing upon the Esoteric Form of the Guru from the Byan gter Revelations of Rig-'dzin Rgod-kyi-ldem'phru-can*. Ed. by Dudjom Rinpoche. Gantok, Sikkim: Bari Longsal Lama. TBRC W23453.

— (1980b). "tshe sgrub bdud rtsi bcud len: mdzod dbus ma nas byon pa". In: *thugs sgrub drag po rtsal gyi chos skor*. Ed. by Dudjom Rinpoche. Vol. 3 Ga. Gantok, Sikkim: Bari Longsal Lama, pp. 1–28. TBRC W23453.

— (1980c). "tshe sgrub lcags kyi sdong po las: phyi sgrub rin chen bum pa". In: *thugs sgrub drag po rtsal gyi chos skor*. Ed. by Dudjom Rinpoche. Vol. 2 Kha. Gantok, Sikkim: Bari Longsal Lama, pp. 515–521. TBRC W23453.

Rnying ma rgyud 'bum (1973–1975). *A Collection of Treasured Tantras Translated during the Period of the First Propagation of Buddhism in Tibet*. Gting-skyes edition. Vol. La. 36 vols. Thimbu: s.n., pp. 146–200. TBRC W21518. Reproduced from mss. preserved at Gting-skyes Dgon-pa-byang monastery in Tibet under the direction of Dingo Khyentse Rinpoche.

— (1982). "bam po brgyad pa; thams cad bdud rtsi lnga'i rang bzhin nye ba'i snying po'i bdud rtsi mchog gi lung bam po brgyad pa". In: *The Ancient Tantra Collection*. mTshams brag edition. Vol. 34 Ngi. 46 vols. Thimphu: National Library, Royal Government of Bhutan, pp. 2–68. TBRC W21521. In the mTshams brag edition (*The Mtshams brag manuscript of the Rñiṅ ma rgyud 'bum, mtshams brag dgon pa'i bris ma*).

Terdak Lingpa (1998a). "Medicinal Accomplishment manual, *Methods to Accomplish Sacred Ingredient Elixir = dam rdzas bdud rtsi'i sgrub thabs gsang chen gi myur lam*". In: *smin gling gter chen rig 'dzin 'gyur med rdo rje'i gsung 'bum*. Vol. Ta 9. 16 vols. Dehra Dun: D. G. Khochhen Tulku, 107r–152v. TBRC W22096.

— (1998b). "Ritual Manual for Guru Chöwang's *Ultra Secret Razor* Vajrakīlaya cycle = *rdo rje phur bu yang gsang spu gri'i las byang kun bzang rol mtsho*". In:

smin gling gter chen rig 'dzin 'gyur med rdo rje'i gsung 'bum. Vol. Ta 9. 16 vols. Dehra Dun: D. G. Khochhen Tulku, 275r–301r. TBRC W22096.

— (1998c). "The Lama Heart Accomplishment Practice = *gsang 'dus bla ma'i las byang snying po rab gsal*". In: *smin gling gter chen rig 'dzin 'gyur med rdo rje'i gsung 'bum*. Vol. Tha 10. 16 vols. Dehra Dun: D. G. Khochhen Tulku, 1r–20r. TBRC W22096.

Törzsök, Judit (2014). "Nondualism in Early Śākta Tantras: Transgressive Rites and Their Ontological Justification in a Historical Perspective". In: *Journal of Indian Philosophy* 42.1, pp. 195–223. ISSN: 0022-1791. DOI: 10.1007/s10781-013-9216-1.

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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Tibetan Precious Pills as Therapeutics and Rejuvenating Longevity Tonics

Barbara Gerke

University of Vienna

1. MEETING MAGIC PILLS

It is a brilliant sunny afternoon in McLeod Ganj in spring 2016, and I just observed a foreign tourist buying a three-month supply of precious pills, each wrapped in green-colored silk cloth, at a private Tibetan medical clinic. From the color I recognize them as Rinchen Chakril Chenmo, the Precious Great Iron Pill, a panacea for all kinds of eye disorders, including cataracts.[1] I am curious and strike up a conversation with the young man while walking down the bazaar road lined with little Tibetan shops selling hand-knitted socks, shawls, and Dalai Lama post cards. Having settled here in the 1960s after fleeing the Chinese invasion, Tibetan refugees and the Dalai Lama have re-established their government-in-exile here, and it is now a vibrant international community. "Little Lhasa," as this hillside settlement in northwestern India is often called,[2] is buzzing with tourists this time of the year. The young man is from St. Petersburg and tells me that a friend of a friend who is practicing Tibetan medicine in Russia recommended this clinic to him. In Russia, he also heard about the precious pills. When I ask him whether he knows what is inside the pills he says: "We call them magic pills not precious pills. I do not know what is inside them and I don't want to know; I just want to believe in their magic!" He had taken Tibetan medicine himself against stomach pain and felt better after ten days. He explains, "Now I am bringing these magic pills back for my mother. Her eyes are bad and the doctor told me these will improve her eyesight." He is leaving town soon and hurriedly

1 A contemporary description of its therapeutic usage has been published in English by the Men-Tsee-Khang: http://www.men-tsee-khang.org/medicine/rinchen-pills/chakril.htm. Accessed September 8, 2017.

2 Anand 2000.

bids me a quick good-bye before turning the corner. I am left with the question of how many foreigners are taking magic pills back to their loved ones from a visit to McLeod Ganj without knowing much about them and without the person taking the pills ever consulting a qualified Tibetan physician, as is typically required in Tibetan medical practice, also known as Sowa Rigpa.[3]

Later, I google the terms "magic" and "precious pills" and indeed find a website in German by the Tibetan Geshe Gendun Yonten, who is a trained Tibetan monk scholar but not a Sowa Rigpa physician.[4] Geshe Yonten presents precious pills as magic jewel pills (magische Juwelenpillen) with descriptions that are largely translated from the website of the Men-Tsee-Khang (MTK), the largest Tibetan medical institute in the Indian diaspora.[5] The MTK's website does not use the term magic. The Tibetan term for magical power is *tu* (*mthu*).[6] As far as I know it is not found in medical descriptions of precious pills, but I have seen the term "endowed with magical powers" in descriptions of precious substances.. Geshe Yonten uses the word magic to refer to the alchemical and astrological conditions that are considered important in the complex manufacturing of precious pills.[7] We will see how some of these conditions form an integral part of Sowa Rigpa understandings of potency.

Curious, I walk back to the clinic and ask at the counter how many of each precious pill I could buy. "Five hundred a day per kind as long as stocks last," I am told. On another occasion, at the same clinic, I watch a young Tibetan man paying his bill of several thousand Indian rupees[8] and packing large bags of what I guess are hundreds of precious pills into his backpack. The price of precious pills in this clinic varies from forty to sixty Indian rupees per pill, an average of eighty euro cents per pill. Each is individually wrapped in colored silk. Five types are available, each packaged in their own color. "Where are you taking all these?" I ask him in Tibetan. "Back to Tibet" he smiles. "Over there, it is difficult for us to get precious pills. They are expensive, and these here have been blessed

3 In India, Tibetan medicine was officially recognized under the name of Sowa Rigpa in 2010 under AYUSH (the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa, and Homoeopathy, Government of India). See Craig and Gerke 2016 for a critical discussion on the naming of Sowa Rigpa; see Blakie 2016 and Kloos 2016 for the recognition process in India; and see Kloos 2013 for how Tibetan medicine became a "medical system" in India.

4 `http://www.openyourlife.de/magicpills.htm`. German website of Geshe Gendun Yonten. Accessed September 9, 2017.

5 Kloos 2008, 2010.

6 This article follows the transcription developed by The Tibetan and Himalayan Library (THL) to provide the phonetic version of Tibetan terms, followed by their Wylie (1959) transliteration at first use. On the THL transcription system, see Germano and Tournadre 2003.

7 See also Triplett 2014: 199–203.

8 At the time one euro was about seventy-five Indian rupees.

by His Holiness, so they are much better." His comments raise questions of what else other than their complex *materia medica* compositions of twenty-five to more than one hundred ingredients contributes to their perceived efficacy.

Moreover, what kind of access do Tibetans have to their own medicines in the People's Republic of China (PRC)? Hofer describes from her fieldwork in 2006–2007 how precious pills are sold as OTC (over-the-counter) drugs in the Lhasa and Shigatse area in the Tibetan Autonomous Region (TAR), as well as to tourists in "biomedical pharmacies-cum-souvenir shops" as a showcase for a "developing" and "alive" Tibetan medical culture.[9] Since 2003 their production in the PRC follows Good Manufacturing Practices (GMP), which are implemented in diverse ways, at times opposing traditional practice,[10] but have recently received more positive responses from Tibetan physicians.[11] Their state regulation and pharmaceuticalization has turned them into valuable commodities expressing "Tibetanness," while they often remain expensive and unaffordable for rural Tibetans.[12] This situation is different in India, where my fieldwork data is based on.

In Dharamsala, precious pills are sold as OTC-drugs in only one privately-run Tibetan clinic. The MTK, which currently produces eight types of precious pills on a regular basis (priced between 40 and 100 Indian rupees per pill), has strict regulations on their sale. Here, precious pills (as most other medicines, except three herbal OTCs,[13] Sorig supplements, and teas) are principally prescription drugs, and one has to see a Tibetan physician and receive a proper prescription based on a diagnosis. There is even a limit for these prescriptions because of the shortage of precious pills.

In 2015–2016, local Tibetans were given special passes with which they were allowed to receive ten precious pills of each kind per month. This set of eighty pills cost 1,890 rupees (around 27 euros) and was in high demand to be traded not only among Tibetans but also to international Buddhist communities and patients from all walks of life who value them for various reasons. "A trader will add about five hundred rupees commission," I was told by one of the workers at a MTK branch clinic. "Especially in winter, when most Tibetans go on pilgrimage to Bodh Gaya, the demand is very high." I had heard many times from Tibetans that they would take a precious pill before embarking on a journey to be stronger and to protect themselves from infectious disease, especially in the hot Indian plains. But now there seemed to be an additional demand developing. He said, "Apart from the Tibetans, there were the Taiwanese buying precious pills. Now,

9 Hofer 2008: 177.
10 Saxer 2013.
11 Cuomo 2016.
12 Hofer 2008: 178.
13 In 1996, the Men-Tsee-Khang launched three general herbal medicines as OTCs (Men-Tsee-Khang 1996: 1).

more recently, Chinese Buddhists who come to Bodh Gaya take the pills back to Tibet. Last winter, the demand was so high that we only gave out precious pills once a month. On that day the line was always very long, and we'd see about one hundred patients." The current demand for precious pills in India is clearly higher than the supply, even though the MTK has increased production.[14]

In this paper I explore two basic questions: 1) What makes precious pills "precious" and 2) what is "rejuvenating" about them? I approach this inquiry from the angle of how precious pills are publicly presented online, how rejuvenation is explained in Tibetan works on precious pills, and how Tibetan physicians understand these attributes.

2. "EFFICACY COMES IN MANY FORMS"

> "When taken for rejuvenation by a healthy person, [this precious pill] should be taken on an auspicious dates [sic] like eight [the 8th of the Tibetan month], full moon and new moon days of [the] Tibetan lunar calendar to gain optimum result[s]."
>
> – MTK website advice for seven of eight precious pills[15]

The current popularity and perceived efficacy of precious pills appears to be based on a variety of components. They are valued as strong medicines, strengthening tonics, travel protection, spiritual blessings, priced commodities, magic pills, and also as an expression of Tibetan identity in the struggle for a Free Tibet.[16] Their preciousness is traditionally accentuated by the pills' individual silk wrapping (since 2009 the MTK has replaced these with machine-made blister-packs). It also refers to their content of between 25 and 140 plants, semi-precious stones and jewels (e.g., rubies, diamonds, corals, turquoise, pearls, sapphires, lapis), and the special processed compound of a refined mercury-sulfide powder, known as *tsotel* (*btso thal*). *Tsotel* is processed with the ash of eight other metals (copper, gold, silver, iron, bronze, brass, tin, lead) and with eight pre-processed mineral or rock components ("sour-water stone", red mica, gold ore or chalcopyrite, orpiment, magnetite, pyrite or galena, realgar, and silver ore or pyrargyrite).[17]

14 For example, Ratna Samphel, which appears to be in highest demand, was produced twice in June 2016, around 20,000 kilos each batch. http://www.men-tsee-khang.org/dept/pharmacy/prod-finished.htm. Accessed September 18, 2017.

15 Excerpted from the MTK's English website: http://www.men-tsee-khang.org/medicine/pills.htm. Accessed September 18, 2017. The relevant sections on the Tibetan leaflets read: *nad med bcud len du bsten mkhan rigs nas tshes brgyad dang/bco lnga/ gnam gang sogs gza' tshes dge ba'i dus su bzhes thub tshe phan nus che ba yod.*

16 Kloos 2012.

17 These are rough identifications for *chu skyur rdo, lhang tsher dmar po, gser rdo, ba bla, khab len, pha wang long bu, ldong ros,* and *dngul rdo,* respectively; see Gerke 2013: 127.

Vincanne Adams reminds us: "Efficacy comes in many forms" and with different kinds of reasoning, and is often "unattached to singular fixed biological ground in any essential way".[18] My examples above confirm Adam's view that "efficacy happens at the intersection of episteme and practice, where personal and sociological contexts blur. This inter-section forms the essence, the heart, of efficacy".[19] Anthropologists acknowledge that "a medicine's efficacy is often produced at the crossroads of ritual action and pharmacology".[20] The taking of Tibetan pills has been ritualized to varying degrees.[21] Auspiciousness still plays a role in enhancing "efficacy," and is in fact one of the three main pillars on which Sowa Rigpa concepts of potency and efficacy are based, as explained below.

In the Tibetan language, complex notions of potency are often found under the umbrella term *nüpa* (*nus pa*), which is frequently translated into English as "potency," but also as "efficacy." *Nüpa* is combined with the term for "benefit," *pentok* (*phan thog*), as *pennü* (*phan nus*) to indicate the "benefit potency," which Sienna Craig aptly describes as "coupling *that which is useful* with *that which is powerful*".[22] *Pennü* is often glossed as "efficacy," but in itself comprises a complex set of ideas to describe efficacies of medicines and ritual compounds.[23] Tibetan translators have also used the Tibetan word *phenyön* (*phan yon*, meaning "beneficial qualities") to express the "effectiveness"[24] of medicines, but Tibetan physicians themselves do not find the biomedical distinction between "efficacy" and "effectiveness" useful.[25] They think of efficacy in different, more complex ways.

In Sowa Rigpa, *nüpa* comes in three basic ways:[26] through the "*nüpa* of the substance" itself, *dzé kyi nüpa* (*rdzas kyi nus pa*); through the "*nüpa* of mantra" con-

18 Adams 2010: 8.
19 Adams 2010: 10.
20 Craig 2010: 216.
21 Czaja (2015) offers a detailed study of seven medical texts on how to administer precious pills, which all involve Buddhist rituals.
22 Craig 2012: 6, original emphasis.
23 For example, Craig 2010, 2015 and Schrempf 2015: 288.
24 See Witt (2009) for a differentiation between efficacy and effectiveness. Efficacy refers to clearly measurable effects of a drug (through randomized control trials (RCTs)), while effectiveness is more inclusive of "pragmatic" approaches to whether a drug works in normal practice, also including "felt effects of a medicine" (Craig 2012: 8).
25 Craig 2015: 166.
26 There are also other types of potency, such as the "eight potencies," *nüpa gyé* (*nus pa brgyad*), in Sowa Rigpa pharmacology, which are the sensorial parameters of heavy, oily, cool, blunt, light, coarse, hot, and sharp. There are also distinctions made between the "taste potency," *nüpa ro* (*nus pa ro*), which is based on different combinations of the five elements, *jungwa nga* (*'byung ba lnga*), water, fire, earth, wind, and space, and the "intrinsic potency," *nüpa ngowo* (*nus pa ngo bo*), which is based on the nature of the actual substances, *dzé* (*rdzas*). These different types of potencies are explained in chapter twenty of the Explanatory Tantra, the second part of the *Four Treatises* (Yutok Yönten Gonpo 1982: 65/11 ff).

secration, *ngak kyi nüpa* (*sngags kyi nus pa*); and through the so-called "*nüpa* of auspiciousness," *temdrel gyi nüpa* (*rten 'brel gyi nus pa*), which is generated not only through processing substances at an auspicious time,[27] but also by administering pills at a potentially powerful moment, for example, during "nectar hours," on days when one's vital forces are strongest,[28] or during the full and new moon and other favorable Tibetan lunar calendar days as in the MTK's online indications in the opening quote to this section.[29]

The opening quote mentions three auspicious dates: 1) the eighth day of the Tibetan lunar calendar, which is dedicated to the Medicine Buddha and is thus considered auspicious for taking special medicines; 2) the fifteenth day, the full-moon day, auspicious in Buddhism because many life events of Buddha Shakyamuni—e.g., his birth, enlightenment, and death—are said to have occurred during full moon; and 3) the thirtieth day, which is the auspicious new moon day. Tibetan calendars and almanacs are filled with information on auspicious and inauspicious days based on temporal rhythms of various factors that influence life-forces and longevity.[30] Both full and new moon are said to have an influence on the vital forces moving around the body, such as a vital essence called *la* (*bla*), which is said to pervade the entire body for a short period of time on full and new moon days.[31] Taking precious pills on any of these auspicious days is believed to make them more effective; this is what is meant by the "*nüpa* of auspiciousness."

An example of the "*nüpa* of mantra" or "spiritual efficacy" is seen in the above ethnographic example of the young man from Tibet who attributed the Dalai Lama's blessings or *jinlab* (*byin rlabs*) to the precious pills he bought in Dharamsala. *Jinlab* is generated in different ways. First, precious pills are produced in the vicinity of the Dalai Lama, and the entire surroundings are believed to be permeated with his *jinlab*. Second, the MTK itself produces "dharma medicine" (*chos sman*) which is ritually consecrated at the Dalai Lama's temple and then added to the medicines back in the pharmacy. "Dharma medicine" is often confused with, but is actually quite different from, the *mani rilbu* distributed to the public at the Dalai Lama's temple during certain holidays as described, for example, by Audrey Prost.[32] The "dharma medicine" added to the precious pills is so-called "nectar dharma medicine" or *dütsi chömen* (*bdud rtsis chos sman*) and is produced at the MTK pharmacy itself. It is then consecrated at the Dalai

27 An example here is the processing of a type of calcite (*cong zhi*), which is processed during a full moon night in August.

28 Gerke 2012b: 132–33.

29 Czaja (2015: 50–51) gives other examples of auspicious times to take precious pills.

30 This is discussed at length in Gerke 2012b.

31 Gerke 2012b: 139–40.

32 Prost 2008: 78.

Lama's temple and brought back to the pharmacy to be added as *jinlab* to medicines. *Dütsi chömen* follows a specific formula and contains more than a hundred ingredients which are medicinal in nature and even include small amounts of standard herbal formulas for the prevention of infectious disease such as Norbu Dünthang and Pangyen 10.[33] *Dütsi chömen* combines two types of *nüpa*, relying on the *nüpa* of substances as well as that of mantras adding "spiritual efficacy." However, it does not explain the rejuvenating effects assigned to several of the precious pills found on the MTK website and leaflets today.

Below, I explore the question of how, why, and for whom Tibetan precious pills are linked to ideas of rejuvenation—in Tibetan terms, taken as a *chülen* (*bcud len*) by the healthy. How did these pills receive these attributes? What do different texts reveal about their use as rejuvenators?

3. PRECIOUS PILLS AS REJUVENATING TONICS ONLINE

An initial analysis of the MTK website and the corresponding leaflets for their set of eight precious pills shows that almost all of them (except Rinchen Tsajor) are presented as rejuvenating pills for healthy people when taken on auspicious days. In seven out of eight pill descriptions we find the advice: "When taken for rejuvenation by a healthy person, it should be taken on an auspicious date like eight [sic], full moon and new moon days of [the] Tibetan lunar calendar to gain optimum result[s]".[34] Let us look at the eight precious pill presentations in more detail (see Table 1 below, numbers 1–8, for their names).[35]

The website descriptions are the English versions of the individual bi-lingual leaflets (English and Tibetan) that are given out at MTK dispensaries. The

33 Personal communication, Dr Choelothar, Chontra, April 2017.

34 Excerpted from the MTK's English website: `http://www.men-tsee-khang.org/medicine/pills.htm`. Accessed September 18, 2017. The relevant section on the seven Tibetan leaflets reads: *nad med bcud len du bsten mkhan rigs nas tshes brgyad dang/bco lnga/ gnam gang sogs gza' tshes dge ba'i dus su bzhes thub tshe phan nus che ba yod.*

35 Tibetan formulary texts document more than these eight precious pills, for example: Rinchen Gujor (*rin chen dgu sbyor*), Rinchen Jangchö 37 (*rin chen byang chos so bdun*), Rinchen Tsukshel (*rin chen gtsug bshal*), Rinchen Telkem Menjor (*rin chen thal skem sman sbyor*), and others (e.g., Dawa Ridak 2003: 502; Sonam Dhondup and BMTK 2006: 714–21). New formulas of precious pills also exist. For example, Rinchen Ratna Gugul (*rin chen ratna gu gul*), Rinchen Muk Khyung Gugul (*rin chen smug khyung gu gul*), and Rinchen Dangtso (*rin chen dang mtsho*) are made by Gen Rinpoche Lozang Tenzin Rakdho at CUTS in Sarnath, who formulated the first two; Rinchen Dangtso was formulated by Khempo Troru Tsenam (1926–2004). All three contain *tsotel*. Personal e-mail communication, Dr Penpa Tsering, October 2017.

Nr.	*Tibetan Name (Phonetics)*	*English Translation*	*Wylie Transliteration*
1	Rinchen Drangjor Rilnak Chenmo	Precious Cold Compound Great Black Pill	*Rin chen grang sbyor ril nag chen mo*
2	Rinchen Ratna Samphel or Mutik 70	Precious Wish-fulfilling Jewel or Pearl 70	*Rin chen ratna bsam 'phel* or *Mu tig bdun bcu*
3	Rinchen Tsajor Chenmo	Precious Great Hot Compound	*Rin chen tsha byor chen mo*
4	Rinchen Mangjor Chenmo	Precious Great Multi-Compound	*Rin chen mang sbyor chen mo*
5	Rinchen Tsodru Dashel Chenmo	Precious Great Refined Moon Crystal	*Rin chen btso bkru zla shel chen mo*
6	Rinchen Yunying 25	Precious Old Turquoise 25	*Rin chen g.yu rnying nyer lnga*
7	Rinchen Jumar 25	Precious Red Coral 25	*Rin chen byur dmar nyer lnga*
8	Rinchen Chakril Chenmo	Precious Great Iron Pill	*Rin chen lcags ril chen mo*
9	Rinchen Wangril 25	Precious Powerful Pill 25	*Rin chen dbang ril nyer lnga*
10	Rinchen Mutik 25	Precious Pearl 25	*Rin chen mu tig nyer lnga*

Table 1: The ten precious pills mentioned in this article.

Tibetan version of the leaflet varies in some cases. Each leaflet is dedicated to one precious pill and describes its "formula," "brief indication," and "instructions/cautions" on how to take the pill, followed by the Medicine Buddha mantra, which people may recite while taking precious pills. Here are the relevant excerpts referring to rejuvenation and prevention of disease for each of the eight pills:

1) Rinchen Drangjor Rilnak Chenmo Among the eight precious pills, Rinchen Drangjor is the most complex and mentioned first; it is "like the king of all precious pills",[36] with a rejuvenating and aphrodisiac effect on the healthy: "When taken by a healthy person, it enhances complexion, clears sense organs, is a rejuvenator, acts as an aphrodisiac, strengthens nerves, blood vessels and bones, and is a prophylactic …".[37]

36 *rin chen kun gyi rgyal po lta bu yin*. MTK leaflet on Rinchen Drangjor in Tibetan.

37 Excerpted from the MTK's English website: `http://www.men-tsee-khang.org/medicine/rinchen-pills/drangjor.htm`. Accessed September 18, 2017. The relevant section on the Tibetan leaflet reads: *nad med rnams kyis bsten na lus mdangs rgyas shing/ dbang po gsal ba/ rgas ka sra ba/ ro tsa 'phel ba/ rtsa dang rus pa mkhregs pa/ nad gzhi sngon 'gog thub ba sogs bcud len gyi mchog tu gyur ba yin/.*

2) Rinchen Ratna Samphel "When taken by a healthy person, it helps to develop complexion, clears sensory organs, rejuvenates, increases virility and can prevent all disorders mentioned above …"[38]

3) Rinchen Tsajor Chenmo Rinchen Tsajor is not advertised as a rejuvenating tonic; rather, the website cautions: "When taken by a healthy person, it can prevent all disorders mentioned above. However, it is recommended to use this pill only after consulting the physician".[39]

4) Rinchen Mangjor Chenmo "When taken by a healthy person, it develops body radiance, clears sensory organs, helps in rejuvenation, is an aphrodisiac, strengthens nerves, blood vessels and bones and acts as a prophylactic, etc".[40]

5) Rinchen Tsodru Dashel Chenmo "When taken by a healthy person, it acts as a rejuvenator".[41]

6) Rinchen Yunying 25 "It is exceptionally beneficial against chronic liver disorder if taken regularly over a period of time. It can prevent all disorders mentioned above when taken by a healthy person…".[42]

7) Rinchen Jumar 25 "It helps to prevent all the disorders mentioned above when taken by a healthy person".[43]

8) Rinchen Chakril Chenmo "When taken by a healthy person, it can prevent all disorders mentioned above and protects one's eyes".[44]

38 http://www.men-tsee-khang.org/medicine/rinchen-pills/ratna.htm. Accessed April 8, 2017. The relevant section on the Tibetan leaflet reads: *nad med rnams kyis bsten na lus mdangs rgyas shing/ dbang po gsal ba/ rgas ka sra ba/ ro tsa 'phel ba/ gong gsal nad gzhi'i rigs sngon 'gog thub ba sogs bcud len gyi mchog tu gyur ba yin/.*

39 http://www.men-tsee-khang.org/medicine/rinchen-pills/tsajor.htm. Accessed April 8, 2017. The relevant section on the Tibetan leaflet reads: *nad med rnams kyis bsten na gong gsal nad gzhi rnams sngon 'gogs thub pa yin/ 'on te sman par bsten gtugs gnang nas bsten na dge phan che/.*

40 http://www.men-tsee-khang.org/medicine/rinchen-pills/mangjor.htm. Accessed April 8, 2017. The relevant section on the Tibetan leaflet reads: *nad med rnams kyis bsten na lus mdangs rgyas shing/ dbang po gsal ba/ rgas ka sra ba/ ro tsa 'phel ba/ rtsa dang rus pa mkhregs pa/ nad gzhi sngon 'gog thub pa sogs/.*

41 http://www.men-tsee-khang.org/medicine/rinchen-pills/tso-tru.htm. Accessed April 8, 2017. The relevant section on the Tibetan leaflet reads: *nad med rnams kyis bsten na stobs skyed bcud len gyi mchog tu gyur ba yin/.*

42 http://www.men-tsee-khang.org/medicine/rinchen-pills/yunying.htm. *nad med rnams kyis bsten na gong gsal nad gzhi rnams sngon 'gog thub pa yin/.* Accessed April 9, 2017.

43 http://www.men-tsee-khang.org/medicine/rinchen-pills/jumar.htm. *nad med rnams kyis bsten na gong gsal nad gzhi rnams sngon 'gog thub pa yin//.* Accessed April 9, 2017.

44 http://www.men-tsee-khang.org/medicine/rinchen-pills/chakril.htm. *nad med rnams kyis bsten na gong gsal nad gzhi rnams sngon 'gog dang mig srung skyob thub pa yin//.* Accessed April 9, 2017.

The last two precious pills in the above table, Rinchen Wangril 25 and Rinchen Mutik 25, are not manufactured at the MTK but by some private physicians in India and Nepal. They are mentioned in the popular precious pill book by Aschoff and Tashigang (2009) but not as rejuvenating tonics (see further below).

Seven of the eight precious pills (with the exception of Rinchen Tsajor) are presented by the MTK as rejuvenators, as they all include the same advice highlighted in this section's opening paragraph. The additional individual descriptions above show that in one way or another they can be taken by a healthy person for rejuvenation or disease prevention. Other websites that sell precious pills internationally use similar approaches. Here are two examples:

"J. Crow's Marketplace" website, a private North American-based online sale for esoteric items, offers seven of the above listed pills, excluding Rinchen Tsajor. These Indian MTK-made Tibetan precious pills are sold on J. Crow's website only as talismans and with an FDA disclaimer[45] at around twelve US dollars a pill.[46] The website's photos still show the older types of precious pill packaging that were used by the MTK in India before blister packs were introduced in 2009.[47] Four of them (Rinchen Drangjor, Mangjor Chenmo, Ratna Samphel, and Tsodru Dashel) are advertised as a "general tonic" for the healthy; Jumar 25 can be taken "occasionally, by healthy persons, as a preventive measure against nerve disorders" and Chakril Chenmo "can also be used generally to keep the vessels of the eyes fresh and healthy".[48] Only Old Turquoise 25 is advertised as a specific remedy for liver disorders.

The website "Vajrasecrets" is linked to the Buddhist foundation Kechara in Malaysia, which was established in 2000 by the Mongolian-Tibetan Tsem Rinpoche, a reincarnate lama from Ganden Shartse Monastery, who follows the controversial Shugden tradition.[49] Their website sells a variety of precious pills from India as "holy items".[50] Among a range of blessed pills of various sizes that are also called "precious pills," they are clearly identified as "precious pills of Tibetan medicine" with a brief description of their therapeutic range. However, they are only to be "inserted in statues or stupas, or placed on the altar as an

45 This refers to the legislation of foods, dietary supplements, and drugs by the US Food and Drug Administration (FDA), which stipulates that dietary supplements must have a disclaimer on their label. It typically states that the product is not intended to diagnose, treat, cure, or prevent any disease.

46 http://www.jcrows.com/incense.html#pills. Accessed April 9, 2017.

47 http://www.men-tsee-khang.org/announcement/eng-rinchen.htm. Accessed April 9, 2017.

48 http://www.jcrows.com/precioushistory.html. Accessed April 9, 2017.

49 Dreyfus (1998) offers a good summary of the controversy.

50 http://www.vajrasecrets.com/precious-pills. Accessed April 9, 2017.

offering of medicine" thus emphasizing their spiritual efficacy and avoiding any legalities linked to their consumption as medicine.[51] The benefits of longevity or use as rejuvenation tonics are not mentioned. Other websites, such as "Siddhienergetics" mention precious pills as a "general prophylactic," describe how to take them, but at the same time warn about possible dangers and add FDA disclaimers and advise consumers to consult a qualified physician and not take "more than one pill per month unless prescribed by a Tibetan doctor.[52] "Siddhienergetics" was founded by Joseph Wagner in Denver, Colorado, after his own positive experience with Tibetan medicine in Nepal. His medicines are made by Ngawang Drakpa, a Tibetan physician in Kathmandu.

Non-academic, grey literature on precious pills presents similar ideas. Aschoff and Tashigang published various undated leaflets on ten precious pills (the above eight, plus Rinchen Wangril and Rinchen Mutig 25) from across India, Nepal, and some Tibetan pharmacies in the PRC.[53] Six of the ten precious pills are presented for various diseases but also as tonics for the healthy in various ways, except Rinchen Tsajor, Ratna Samphel, Wangril, and Mutig 25.[54]

From these contemporary online and print examples one gets the impression that precious pills are both for the sick and the healthy, and that they have a rejuvenating and disease-preventing effect. Next I will explore the terms that are loosely translated from the Tibetan into English as "rejuvenating," and analyze whether Tibetan textual formulas for precious pills actually present a similar picture as found on contemporary leaflets and websites.

4. TRANSLATING *CHÜLEN* AS "REJUVENATION"

Technical Tibetan terms employed in longevity contexts usually have a variety of other meanings, but tend to be translated in English in terms of "rejuvenation," which is easily associated with modern esoteric connotations of anti-ageing and well-being. When looking at the Tibetan versions of the MTK precious pill leaflets, the predominant Tibetan term that in the English version is translated as "rejuvenation" is *chülen*.[55] *Chü* (*bcud*) has many meanings and can be translated, for example, as taste, essence, elixir, sap, moisture, potency, nu-

51 For example: `http://www.vajrasecrets.com/tsodruptashil-37`. Accessed April 9, 2017.

52 For example: `https://www.siddhienergetics.com/products/jumar-25-precious-pill`. Accessed April 9, 2017.

53 Aschoff and Tashigang 2001, 2004, 2009.

54 Aschoff and Tashigang 2001: 60, 63–65, 72–75, 78–79, 90, 92, 94–95, 97.

55 Other terms used are: "can prevent the cause [of disease]" (*gzhi sngon 'gog thub ba*), and "not looking as old as one is" (*rgas ka sra ba)*, both translated by the MTK as "rejuvenator ."

trition, extraction, good substance, vitality, or distilled essence.[56] In pharmacological contexts I translate *chülen* as "essence extraction," since *chü* must first be extracted from substances such as stones, flowers, metals, or minerals through soaking, cooking, and other practices before it can be consumed.[57] While many *chülen* formulas are described as useful for preventing ageing and revitalizing the body, they also have significant religious, pharmacological, and nutritional meanings and purposes. Their appearance in both medical and ritual contexts supports the wide-spread belief in Tibetan societies that vital essences can be extracted from the outer elements—through visualization and/or pharmacological extraction—and imbibed by humans to support spiritual and physical health. Substances rich in *chü* carry "potency," or *nüpa*, that can be added to strengthen other formulas. I discussed elsewhere how notions of *chülen* have been re-invented at the MTK in the context of Sorig OTC "rejuvenating tonics," sold as supplements.[58] Note that these MTK Sorig supplements do not include precious pills, which are treated as medicine and are made in the pharmacy.

The recurring sentence in the above opening quote of the MTK advice on how to take (seven of the eight) precious pills, "When taken for rejuvenation by a healthy person …" (*nad med bcud len du bsten*), is significant for two reasons. First, it includes the "healthy person" in the group of precious pill consumers. Second, it points to the themes of "prevention" and "rejuvenation." Both refer to two well-known subject areas of Sowa Rigpa knowledge in the *Four Treatises* that emphasize the importance of taking *chülen*: "maintaining health" and "treating the aged".[59] Taking *chülen* for disease prevention and rejuvenation is a long-established Sowa Rigpa episteme going back to the twelfth century with clear links to Indian *rasāyana* (rejuvenation) practices mentioned in the great Ayurvedic classic *Aṣṭāṅgahṛdayasaṃhitā*.[60] Curiously, none of the chapters dealing with *rasāyana/chülen* in the *Four Treatises* mention precious pills; these are mentioned in the chapter on "precious medicine" (see below) and are not directly linked to the *chülen* material adopted from the *Aṣṭāṅgahṛdayasaṃhitā*.

This raises certain questions: What is "rejuvenating" in a precious pill? How is this linked to what makes a precious pill "precious," in Tibetan *rinchen* (*rin*

56 THL (2010).

57 Gerke 2012a. See also Oliphant 2016 for an analysis for *chülen* formulas.

58 Gerke 2012c.

59 I refer here to chapter 23 of the second of the *Four Treatises*, titled 'Normal Health' (*nad med tha mal gnas*, "remaining in a normal state without disease") and to chapter 90 of the third of the *Four Treatises*, titled "The treatment of the aged with essence extractions" (*rgas pa gso ba'i bcud len*). Yutok Yönten Gonpo 1982: 80/13–82/2; 548/6–551/12; See Gerke 2012a for an analysis of these chapters.

60 I used the German translation of the *Aṣṭāṅgahṛdayasaṃhitā* by Hilgenberg and Kirfel (1941: 710–36). For an English translation see Murthy 1996.

chen)? Why, when, and how have precious pills been presented as *chülen*? Three of the MTK precious pills do not contain *tsotel*, but are nevertheless presented as "rejuvenating" (Jumar 25, Chakril Chenmo, Old Turquoise 25). In Tibetan formularies only three of the more complex precious pill formulas (Rinchen Drangjor, Manjor Chenmo, Tsodru Dashel) are called a *chülen*, though not consistently (see below). The Tibetan versions of the MTK leaflets on Rinchen Drangjor, Ratna Samphel and Tsodru Dashel highlight them as a "supreme *chülen*" (*bcud len gyi mchog tu gyur ba yin*). Before exploring these key questions, I ask what makes precious pills actually "precious." What is entailed in calling a formula a precious pill, in Tibetan a *rinchen rilbu* (*rin chen ril bu*)?

5. WHAT MAKES A MEDICINE A *RINCHEN RILBU*?

Precious pills are frequently grouped together as a special group of Tibetan medicines that are categorized, marketed, and packaged as a set of commodities called *rinchen rilbu*, translated as precious pills or jewel pills. But what is a *rinchen*? *Rinchen* means precious and refers to substances categorized in the *Four Treatises* under "precious medicines" or *rinpoché men*. Note that the Tibetan term for medicine, *men*, can refer to both a compound or a single substance. Eleven substances are listed as precious medicines in the *materia medica* chapter (chapter 20 of the *Explanatory Treatise*): gold, silver, copper, iron, turquoise, pearl, mother of pearl, conch shell, coral, and lapis lazuli.[61] Later pharmacopeias list many more precious medicines. For example, the early eighteenth century well-known *materia medica* work *A Lump of Crystal* and its commentary *A Rosary of Crystal*, in Tibetan briefly called *Shelgong Sheltreng*,[62] introduces fifty-six precious substances.[63] The last part of the *Four Treatises* (chapter 11 of the *Last Treatise*) contains a chapter specifically dedicated to the preparation of *rinchen* medicine, focusing on the two precious pills Rinchen Drangjor and Rinchen Tsajor and their manufacturing.[64] Here it is said that *rinpoché men* should be prescribed when the body has become used to other forms of medicines (liquids, powders, pills, etc.), and the disease remains untreated.[65]

There are two common misunderstandings about precious pills. First, statements found online on sites that sell precious pills promote the historically ques-

61 In Tibetan these are *gser, dngul, zangs, lcags, g.yu, mu tig, nya phyis, dung, byu ru,* and *mu men* respectively. Yutok Yönten Gonpo 1982: 66/12–17.

62 In Tibetan *Shel gong shel phreng* (Deumar Tendzin Püntsok 2009).

63 Deumar Tendzin Püntsok 2009: 14–15; 4/2–6/8.

64 Yutok Yönten Gonpo 1982: 601/9–604/14. Gerke and Ploberger (2017) provide an English translation of this chapter. See also Men-Tsee-Khang 2011: 125–33.

65 Yutok Yönten Gonpo 1982: 601/10–11, Men-Tsee-Khang 2011: 125.

tionable claim that they have been "in use for more than 1,200 years in Tibet".[66] The second widespread misunderstanding is that precious pills form a homogenous group of special pills within a homogenous system called "Tibetan Medicine." In fact, precious pills comprise heterogeneous Sowa Rigpa formulas that emerged from different histories, contexts, and sources. The oldest (Rinchen Drangjor, Rinchen Tsajor) are mentioned in simplified forms in the *Four Treatises*, dating back to the twelfth century.[67] The youngest formulas (e.g., Jumar 25, Old Turquoise 25) emerged only around the seventeenth and eighteenth century. Some precious pills are common formulas to which *tsotel* is added. For example, Ratna Samphel, also called Mutik 70, is based on the formula Nyachi 25 mentioned in the *Four Treatises*.[68] Its formula became more complex over time, and it is called a *rinchen rilbu* when *tsotel* is added.[69] The case of Tsodru Dashel is similar in that it is based on the common formula Dashel 37, but includes *tsotel* instead of *kardül* (*dkar 'dul*).[70] This turns it into a *rinchen rilbu* and changes its name to Rinchen Tsodru Dashel.

Precious pill formulas are scattered across Tibetan formularies, and are often presented in chapters dedicated to the diseases they predominantly treat (e.g., Mangjor Chenmo appears in chapters on poisoning, Chakril Chenmo in chapters on eye disease). It is only in some contemporary pharmacopoeias that they appear in unison as a group of pills (though with variations),[71] all prefixed with *rinchen*; only recently have they been commodified as a particular set of medicines, which in part drive the Tibetan medical industry today, though in very different ways, in both the PRC[72] and in India.

When discussing with Tibetan physicians in India the question of what makes a precious pill "precious," I received several different answers, emphasizing four aspects: (1) their costly and precious ingredients, (2) their rarity, (3) their *tsotel* content, and (4) their packaging. First, they are precious because they contain in varying amounts expensive and precious ingredients, such as gold, silver, rubies, turquoise, pearls, sapphires, and so forth, categorized as *rinpoché men* (see above). The term *rinpoché* is also used for a highly respected Buddhist master. The Tibetan physician Dr Choelothar explained: "One main quality of a *rinpoché*

66 https://www.siddhienergetics.com/products/jumar-25-precious-pill. Accessed April 9, 2017. See also: http://www.men-tsee-khang.org/announcement/rinchen-new.htm, that states that "The practice of this formulation [*rinchen rilbu*] is approximately 1200 years old." Accessed April 9, 2017.

67 Men-Tsee-Khang 2011: 126–129.

68 Sonam Bakdrö 2006: 280/2; Yutok Yönten Gonpo 1982: 343/1–3.

69 Sonam Dhondup 2000: 232–33; Sonam Bakdrö 2006: 285/7.

70 Dawa Ridak 2003: 68. *Kardül* is a simplified form of processed mercury sulfide.

71 For example, Sonam Dhondup 2000: 229–38.

72 Saxer 2013.

is 'rarity,' called *könpa* (*dkon pa*). Only something that is rare can be regarded as precious".[73] In Tibet's past, precious pills were certainly a rarity since precious ingredients were difficult to obtain and were considered rare and valuable not only in medicine but also in Buddhist spiritual practices and rituals. They often had to be procured from far away and through spiritual and political alliances,[74] and their manufacture was expensive, time consuming, and required extensive networks between sponsors, monastics, and pharmacological professionals.[75] Furthermore, only the elite could afford or had access to the pills through their connections and socio-economic status.[76]

The third, which for many doctors is the most important aspect of what makes these pills precious, is the addition of *tsotel*. The famous scholar physician Khempo Troru Tsenam (1926–2004), who was instrumental in spreading the *tsotel* practice after the Cultural Revolution in the PRC,[77] was once asked by a Chinese official about the most important practice in Tibetan medicine. He replied, "If you have *tsotel* from the Great Mercury Purification, only then is one able to prepare and make all the varieties of precious pills. Therefore, the real precious pill is actually *tsotel*. Without it, just saying 'precious pills' has no meaning".[78] Gen Rinpoche Lozang Tenzin Rakdho, head of the Sowa Rigpa Department at the Central University of Tibetan Studies (CUTS) in Sarnath, northern India, received the *tsotel* transmission from Troru Tsenam in Lhasa in the 1980s and told me that "All *rinchen rilbu* should have *tsotel*".[79]

When I went back to the private Tibetan clinic in McLeod Ganj where I could buy "500 precious pills a day as long as stocks last" over the counter, I inquired from the physician at the dispensary which of their precious pills contained *tsotel*. I was told:

> We produce six types of precious pills,[80] and these days only one of them has *tsotel*, which is Rinchen Tsodru Dashel. Only one has *chokla*,[81] which is Jumar 25. We do not make Rinchen Drangjor and Rinchen Tsajor; those you get at the Men-Tsee-Khang.

73 Personal communication, Chontra, April 2017.
74 Sangye Gyatso 2010: 327.
75 Czaja 2013.
76 For an example of availability of precious pills among aristocrats in Lhasa in the mid-twentieth century see the memoirs of Tubten Khétsun (Khétsun 2008: 80–81).
77 Gerke 2015; Lozang Lodrö 2006.
78 This is mentioned in the biography of Khempo Troru Tsenam, written by Lozang Lodrö (2006: 173); my translation.
79 Interview, Sarnath, December 2012.
80 At the time they produced Tsodru Dashel, Mangjor Chenmo, Ratna Samphel, Chakril Chenmo, Jumar 25, Old Turquoise 25 (March 2016).
81 Chokla (*chog la*) is processed artificial vermillion used to coat Jumar 25 with a reddish color. Several formulas of Jumar 25 also list vermillion (*mtshal dkar*) as an ingredient, for example, Khyenrap Norbu 2007: 170/10, Sonam Bakdrö 2006: 313.

They did not distribute any leaflets, and I cannot say if they promoted their precious pills as rejuvenating to their patients. I left the clinic wondering if so many precious pills did not contain *tsotel*, what was "precious" about them?

Following Troru Tsenam and Gen Rinpoche Lozang Tenzin Rakdho, one would think that the label *rinchen* is largely a classifier not for the use of precious gems or other forms of processed mercury, but for *tsotel*; clearly, in the many cases as already shown above, when *tsotel* is added to a formula, the prefix *rinchen* is added to the name of the formula.[82] For example, Ngulchu 18 is a common formula made with a simplified form of processed mercury; the formula Rinchen Ngulchu 18 receives the title *rinchen* when it contains *tsotel*, though not any additional gems.[83] But things are not always that straightforward. All eight pills grouped together as "precious pills" by the MTK carry the prefix of *rinchen* in their name, even though three of them do not contain *tsotel* and their names are not necessarily prefixed by *rinchen* in formularies. The 900-page formulary *The Great Collection of Tibetan Medical Formulas*, edited by the contemporary PRC-based medical author Sonam Dhondup, only lists three versions of the Drangjor formula as *rinchen rilbu*.[84] All other precious pills are listed under their simple names. An earlier work by the same author groups them all as *rinchen rilbu*.[85]

Jumar 25 contains red coral, pearl, and lapis, but no *tsotel*. The contemporary PRC-based author Sonam Bakdrö includes *tsotel* in his Jumar 25 formula and calls it Rinchen Jumar 25.[86] Most formulas of Jumar 25 do not add *tsotel*, but processed forms of cinnabar (the ore from which mercury is extracted; *mtshal*), largely as artificial vermillion (*rgya mtshal* or *mtshal skar*), and while some authors call it a *rinchen*,[87] others do not.[88] The same is the case with Old Turquoise 25, which contains turquoise, pearl, coral, and processed vermillion, but no *tsotel*; while some authors do not call it a *rinchen*,[89] others do, but without adding *tsotel*.[90]

The fourth aspect that makes *rinchen rilbu* "precious" is their packaging. The Tibetan physician Tenzin Namdul expressed that "preciousness" also lies in their individual packaging with colored silk, tied with a five-colored thread and a red

82 I noted a few exceptions. Formulas can be called *rinchen* when especially 'tamed' substances, such as a type of calcite (*cong zhi*) which undergoes special processing during full moon, is added as, for example, in Rinchen Gujor (Dawa Ridak 2003: 67).
83 Khyenrap Norbu 2007: 154/1 and 154/5.
84 Sonam Dhondup and BMTK 2006: 718–21.
85 Sonam Dhondup 2000: 229–38.
86 Sonam Bakdrö 2006: 312/10 and 315/6.
87 Khyenrap Norbu 2007: 170/7; Sonam Dhondup 2000: 237/3; Sonam Bakdrö 2006: 312/10.
88 Lozang Nyima and Dhondup Tsering 2006: 264; Sonam Dhondup and BMTK 2006: 517/5; Tshekho 2006: 239/16.
89 Lozang Nyima and Dhondup Tsering 2006: 271; Sonam Dhondup and BMTK 2006: 700/1; Tshekho 2006: 243/1.
90 Sonam Bakdrö 2006: 310/1; Sonam Dhondup 2000: 235/13.

wax seal with a Tibetan symbol, which turns each pill into a piece of authentic Tibetan culture, "something you like to keep on your altar at home or in a special place, and take only when you are really in need of it." For him, high production numbers and blister-packs—while conforming to better hygiene and GMP— translate into a loss of preciousness: "You don't want to keep a machine-made blister-pack on your altar and think of it as blessed. It looks cheap, not precious".[91]

6. *CHÜLEN* IN PRECIOUS PILL FORMULAS

Chapter 11 on precious medicines called *rinpoché men* in the last part of the *Four Treatises* includes a general statement on the benefits of precious medicines: "They become a *chülen* when taken by a healthy person".[92] This statement is not linked to any specific precious pill, but is a general assertion that all precious medicines are *chülen*. The same chapter offers a brief description of how to make Rinchen Drangjor and Rinchen Tsajor with a focus on the necessary mercury refinement; there is no mention of these formulas working specifically as a *chülen*, but it is implied in the above statement that precious medicines have *chülen* benefits. Contemporary Tibetan formularies use this general quote from the *Four Treatises* to highlight the *chülen* character of precious pills, specifically of Rinchen Drangjor and Mangjor Chenmo.[93]

The long list of diseases that can be treated in general with all kinds of precious medicines appears at the beginning of chapter 11. It reappears as a specific therapeutic target group of Rinchen Drangjor in later formularies. Far from unusual, this is a common pattern of how Tibetan formulas are written.[94] It can be explained by the fact that the *Four Treatises* is considered the root text for many formulas, and the chapter on precious medicines specifically contextualizes the benefits of precious pills as a *chülen*.[95] This has to be taken into account for our understanding of the general use of *rinpoché men* for the healthy.

In contemporary formularies, Rinchen Drangjor in particular is presented as a strengthening tonic for old age. Here are some examples:

91 Interview, Dharamsala, May 2016.

92 *nad gzhi med pa'i mi la bcud len 'gyur.* Yutok Yönten Gonpo 1982: 601/14. The translation by Men-Tsee-Khang (2011: 125–6) reads: "They are rejuvenating when taken by a healthy person."

93 For example, Sonam Dhondup 2000: 230/19–20 (Rinchen Drangjor), Sonam Dhondup 2000: 235/4–5 (Mangjor Chenmo). Sonam Bakdrö 2006: 293/7 (Mangjor Chenmo).

94 I discuss this for the Old Turquoise 25 formula, which includes the list of liver diseases from the *Four Treatises* in its formula as its therapeutic target group (Gerke in press).

95 Men-Tsee-Khang 2011: 125/12–15, translated from Yutok Yönten Gonpo 1982: 601/11–14; reappears with slight variations in Sonam Dhondup 2000: 230/18–20.

> Even for the healthy, [Rinchen Drangjor] is a supreme *chülen*.
>
> Thus in old age [the body] will be solid, gaining full strength.
>
> The physical condition will be comfortable, and at night vitality will increase.
>
> [There will be] few infections, and so forth; the benefits are limitless.[96]

The following is found in a contemporary formulary published in the PRC; the description is also found in an eighteenth century *tsotel* manual:

> [When] taken by the healthy, [Rinchen Drangjor will] clear away decrepitude and old age. Hair and beard [will become] shiny and supple; the bones will become [strong] like a vajra [thunderbolt].[97]

It is also advised to take Rinchen Drangjor with strong fermented barley beer (*chang*) when taking it as a *chülen* in healthy conditions.[98] A Tibetan-English Sowa Rigpa dictionary, compiled by a MTK-trained physician in India, lists seven precious pills. Rinchen Drangjor is described as a "general health tonic" as the only one among the seven, which is quite different when compared to the MTK website.[99]

Mangjor Chenmo is advertised as a *chülen* for the healthy in several formulas, using the direct quote from the *Four Treatises*.[100] Tsodru Dashel's therapeutic targets are largely stomach and digestive disorders; rejuvenation is not mentioned in most formularies,[101] but we sometimes find a brief reference to its use as a preventive medicine and a *chülen*. For example, the nineteenth century physician Orgyen Tekchok, alias Orgyen Tendzin, from eastern Tibet in his brief text on Tsodru Dashel mentions at the end: "If taken by the healthy, disease will not arise and it becomes a *chülen*".[102]

96 *nad med la yang bcud len mchog yin te/ rgas ka sra zhing lus stobs rgyas pa dang / lus khams bde la dgong mdangs rgyas par byed/ 'gos nad nyung sogs phan yon mtha' yas shing* (Sonam Dhondup 2000: 231/2–5, my translation).

97 *nad med mi la gtong bas ni/ rgas dang rgud pa sel bar byed/ skra dan sma ra snum zhing mnyen/ rus pa rdo rje lta bur 'gyur* (Sonam Bakdrö 2006: 279/3–5, my translation. This phrase is also found in Dege Drungyig Gurupel 1986: 371/6–372/1).

98 *nad med bcud len yin na gar chang dang* (Sonam Dhondup 2000: 231/9). This refers to the practice that for each disease and condition the medicine should be taken with a kind of carrier, or "medicine horse" (*sman rta*).

99 T. T. Drungtso and T. D. Drungtso 2005: 444.

100 *nad gzhi med pa'i mi la bcud len 'gyur* (Sonam Bakdrö 2006: 293/7; Sonam Dhondup 2000: 235/5; see Yutok Yönten Gonpo 1982: 601/14).

101 Sonam Bakdrö 2006: 321; Sonam Dhondup 2000: 238/10–17.

102 *nad med kyis bsten na nad mi 'byung zhing bcud len du 'gyur ba dang* (Orgyen Tekchok 2005: 151/1, my translation).

When I interviewed contemporary Tibetan physicians in India on what the *chülen* in precious pills refers to, I received answers that reveal that the actual *chü*, or essence, in the pills refers to mercury (*dngul chu*) in its processed form of *tsotel*. A phrase found with variations in many sources is: "For the healthy [refined mercury] is the best *chülen*."[103] Gen Rinpoche Lozang Tenzin Rakdho from CUTS, explained the *chü* of mercury as follows:

> Mercury has a great potential. They call it *pārada* [in Sanskrit]. …a person who has suffering also has the potential to liberate himself from suffering. Mercury has many poisons … some have to be washed away and some have to be bound, and tamed. Then the potential comes out and then it is *dröl sgrol*) *pārada*, liberated mercury'; we say *ngülchu chü kyi gyelpo* (*ngul chu bcud kyi rgyal po*), "mercury, the king of *rasāyana*." If you have a little bit of *chü* inside your body, then you do not attract disease….[104]

Referring to various medical texts, the MTK-trained physician Penpa Tsering summarizes why refined mercury is a *chülen:* it increases the life-span and protects from ageing, evil spells, and poisoning.[105] Concerning the benefits of refined mercury in the form of *tsotel* for the healthy, he writes:

> It is said that if ordinary people who do not have any diseases take [refined mercury] from time to time, the strength of their life span and bodily constituents will increase; it sharpens all the senses, such as the eyes, etc; it brings well-being to the circulation pathways of nerves and blood vessels ("white and black channels"); [it supports] staying strong in old age; grey hair and wrinkles, etc., will not appear, and therefore it is supreme among [all] *chülen*.[106]

If the *chülen* aspect of precious pills was largely linked to refined mercury in the form of *tsotel*, which is rarely made, I wondered how were precious pills given to healthy people in the past and for what reasons. It is beyond the scope of this paper to analyze all formulas of all the precious pills. The examples suffice to demonstrate that the formula texts generally do not promote precious pills

103 *nad med rnams la bcud len mchog yin te* (Nyima Tsering 2009: 81/8).

104 Gen Rinpoche Lozang Rakdho, Interview, CUTS, Sarnath, 16.3.2015.

105 Penpa Tsering 1997: 27/15–18.

106 *nad med tha mal du gnas pa rnams kyis yun du bsten na tshe dang lus zungs kyi thobs 'phel ba dang/ mig la sogs pa'i dbang po'i sgo rnams gsal zhing lus la gnas pa'i dkar nag rtsa yi rgyu lam bde ba dang / rgas kha sra bas skra dkar dang gnyer ma mi 'byung ba sogs bcud len gyi mchog tu gyur cing* (Penpa Tsering 1997: 28/2–6, my translation). See also Nyima Tsering (2009: 58/1–21) on the benefits of refined mercury.

as rejuvenating, except Rinchen Drangjor and Mangjor Chenmo, and sometimes Tsodru Dashel. They focus on the ingredients and their therapeutic benefits. It is predominantly the specific genre of texts on administering precious pills, discussed in the next section, and the online leaflets given out by pharmacies that stress precious pills as preventive, rejuvenating, and as tonics for the healthy.

7. ADMINISTERING PRECIOUS PILLS TO THE HEALTHY

A very useful paper for our understanding of how precious pills were administered to both the sick and the healthy in Tibet's past is by Olaf Czaja.[107] He analyzes seven Tibetan medical works from the sixteenth to the early twentieth century that focus entirely on the administration of precious pills. He begins with a detailed description of the work by Deumar Tenzin Püntsok (b. 1672), titled *Practice of Administering Jewel Pills*.[108] Deumar is still widely respected for his writings on medicine, *materia media* (e.g., the *Shelgong Sheltreng*),[109] and precious pill formulas (he is said to have first composed Jumar 25). At his time, the pills were administered in a highly ritualized fashion.[110] In addition to extensive consecration rituals performed by the doctor before administering the pill to the patient, invasive therapies had to be avoided for the following three months and special dietary precautions had to be kept for at least a year; if instructions were strictly followed, the jewel pill would remain in one's body for a year.[111] All these are indications of how rarely a precious pill would be taken. It probably also involved quite an expense for the patient to cover the physician's ritual and pill production costs.

For our discussion it is important to note that Deumar does not distinguish between the healthy and sick and administers precious pills for two main therapeutic purposes: 1) when ingested, to treat all kinds of diseases, specifically poisoning, and 2) when worn as amulets, to protect from spirits and sorcery.[112] These main emphases on poisoning and protective amulets are also found in the earlier text *Ten Millions Relics (Bye ba ring bsrel)* by Zurkhar Nyamnyi Dorjé (1439–1475), who writes: "It becomes the best of amulets if used by the healthy who bear the promised vows, and it will resist poisons for a life-time".[113] One can imagine that at the time poisoning was a real concern in Tibet,[114] and therapeutics had to

107 Czaja 2015.
108 Deumar Tendzin Püntsok 2006: 853–58.
109 Deumar Tendzin Püntsok 2009.
110 Czaja 2015: 42–47.
111 Czaja 2015: 48–49.
112 Czaja 2015: 49–50.
113 *dam tshig dang ldan pas bsten na nad med pa la srung ba'i mchog tu 'gyur te/ mi tshe 'di'i dug rigs thub 'khrug dang* (Zurkhar Nyamnyi Dorjé 1993: 293/18–20, translated by Gyatso (1991: 44)).
114 According to Da Col (2012) this is still the case in some Tibetan communities today.

be developed to address these concerns which involved preparing antidotes to poisoning in the form of both medicines and protective amulets. That precious pills are still used as protective amulets became apparent in 2002–2003 during the SARS epidemic in the PRC when a special Black Pill 9 called Rilbu Gunak (*ril bu dgu nag*) and Rinchen Drangjor became very popular to be worn as an amulet for protection from SARS.[115]

The other six authors mentioned by Czaja more explicitly include the "healthy" as a category of recipients of precious pills. For example, Orgyen Tekchok in his nineteenth century work *A Beautiful Ornament for the Compendium: A Treasury of Medicinal Elixirs*,[116] distinguishes "two practices of administering [precious pills]: for the sick and the healthy"[117] and gives special instructions on how to administer a precious pill to a healthy person, but does not mention rejuvenation:

> [If administering a jewel pill] to the healthy, clean [the patient's] stomach with a cleansing formula to clear the body from bad smells. Give medicine to protect the loss of regenerative fluid and avoid perspiration. [Keep] a balance of food and exercise, [and] rely on nutritious foods and remedies.[118]

Orgyen Tekchok also offers much astrological advice on auspicious times and extensive rituals for precious pill intake. His and the other works analyzed by Czaja filled a need for detailed manuals on how to administer precious pills. I argue that the appearance of these manuals along with the "healthy" as a category of recipients paralleled the gradual increase in the production of *tsotel* and precious pills in both eastern Tibet (in the eighteenth to nineteenth centuries) and Lhasa (mainly during the late nineteenth and early twentieth century).[119] In Lhasa, Khyenrap Norbu (1883–1962) was a key figure in this regard. He became the founding director in 1916 of the Mentsikhang, the first secular medical institute in Lhasa, and took part in two *tsotel* events in 1919 and 1921.[120] He also

115 Craig 2003; Craig and Adams 2008: 3.

116 The Tibetan title is *Zin tig mdzes rgyan bdud rtsi'i sman mdzod* (Orgyen Tekchok 2005). The work is now published as part of a collection known under its short title *Sorig Notes* or *Sor ig Zin tig* (Kongtrül Yönten Gyatso et al. 2005).

117 *btang tshul lag len nad can nad med gnyis* (Orgyen Tekchok 2005: 284/20).

118 *nad med lto sbyong 'jam pos snod dri bsal/ 'dzag srung bcangs la sman btang rngul 'don spang/ zas spyod gzhan mtshungs bcud ldan zas sman brten* (Orgyen Tekchok 2005: 285/3–5. My translation, cf. Czaja 2015: 52).

119 According to published records, *tsotel* was made in eastern Tibet in 1767, 1795, 1820, 1838, 1856, and 1872. In Lhasa *tsotel* was made in 1678, 1783, 1893, 1919, and 1921 (Sonam Bakdrö 2006: 56–7). Small-scale events are often not documented.

120 For details on these two events see Gerke 2015: 876–878.

wrote a manual on how to administer precious pills.[121] These major *tsotel* production events are fairly well documented and point to a time in which Tibetan medicine flourished and had governmental and financial support. In Lhasa the Dalai Lamas supported the making of precious pills; in eastern Tibet the king of Derge, local chieftains, and the large monasteries of Dzongsar and Palpung supported famous Buddhist scholars and physicians (Situ Panchen, Kongtrül Yönten Gyatso, and others) to refine mercury and make precious pills on a larger scale than before.[122]

Sponsors of *tsotel* events were usually rewarded with a large portion of the *tsotel*,[123] which was also used for spiritual purposes in the consecration of stupas and statues. Sponsors also received precious pills, and we can assume that not all of them were patients. Emphasizing the benefits of precious pills specifically for the healthy enlarged the group of their beneficiaries. The point I make here is that while precious pills and their benefits for the healthy have been mentioned in Tibetan texts since the twelfth century, with their increasing availability, beginning in the eighteenth century, the healthy person seems to receive more attention as is shown in the manuals on how to administer precious pills. While it will take more research to establish the exact reasons for this, we can assume that their greater availability influenced how precious pills were highlighted for the healthy.

8. CONCLUSION

My textual and ethnographic inquiries of what makes a medicine a *rinchen rilbu* revealed several rationales in the naming practices of precious pills. First, they are labeled "precious" by prefixing the Tibetan term *rinchen*, which is done for the most part, but not always, when the complex processed mercury sulfide powder *tsotel* is added. Such inconsistency in naming can be explained to some extent by a second rationale: they are also considered precious if they contain precious substances categorized in medical literature as *rinpoché men*, which include precious metals (gold, silver, etc.) and precious and semi-precious stones (pearls, lapis, turquoise, coral, etc.). What exactly defines the "preciousness" of a medicine or substance can be quite fluid among those who are conferring the term *rinchen* or *rinpoché*. In conclusion, while we can come to a tentative definition that *rinchen rilbu* are precious pills that for the most part contain *tsotel*, there are no set standards in naming a medicine a *rinchen* that are followed across those formularies I analyzed for this paper, which were mostly published recently in the PRC and in India.

121 Khyenrap Norbu 2007: 198–209.
122 Czaja 2013.
123 See, for example, Gerke 2015: 883.

Thus, the "precious" aspects of a precious pill is on the one hand strongly linked to its *tsotel* content but on the other hand also depends on the other "precious" (gold, silver, jewels, etc.) and also rare and costly substances (e.g., musk) included in the formula. This complexity is also apparent from the ways in which Tibetan physicians describe the potency or *nüpa* of these pills, the three main pillars of which are the potency of "substances," "mantras," and "auspicious timing." All of these contribute to how Tibetan physicians explain the efficacy of precious pills. Even if they do not contain *tsotel*, they are often presented as a "rejuvenating" *chülen* for the healthy. This refers to the characteristics of precious medicines or *rinpoché men* that are described in the *Four Treatises* as having general *chülen* benefits.

My data raises questions on the contemporary commodification of precious pills in India. On the one hand, the production and sale of precious pills in India is higher than it ever has been in the history of Sowa Rigpa, and on the other hand precious pills are perceived as less "precious" for varying reasons, for example, the loss of rarity through mass-production, machine-made packaging instead of individual silk-cloth wrapping, or the lack of *tsotel* in precious pills despite "precious" packaging. Like efficacy, preciousness comes in many forms, and a loss of potency and preciousness can occur when precious medicines are commodified, machine-packaged, and marketed for a larger clientele. If they are mass-marketed they are no longer rare, an important aspect of a *rinchen*. Moreover, for some, a machine-made blister pack does not look "precious" enough.

Apart from the packaging, Czaja's work on the manuals describing how to administer precious pills also reveals "precious" ways of administering *rinchen rilbu*. Administering them to patients is described as being highly ritualized with prayers and mantras, at an auspicious time, and observing all kinds of dietary and behavioral rules. This demonstrates the rarity of such an event, which can transform the doctor-patient relationship into a precious moment of human interaction of healing. It also highlights the complex interface of pharmacological, spiritual, and auspicious potency. The ways of administering precious pills today have been simplified. Some dietary and behavioral restrictions are described on the leaflets, but patients take the pills by themselves, maybe reciting the Medicine Buddha mantra if they are drawn to Buddhism. Some patients still adhere to the basic preliminaries of taking precious pills, which are using Sichuan pepper to open the channels before the intake of the pill, and taking saffron to close the channels afterwards.[124] For some, the pills' magic lies in the belief of their efficacy, without knowing much else about them.

124 Czaja (2015) points to several other substances that were prescribed to open and close the channels.

Sowa Rigpa texts talk about what we loosely translate as "rejuvenation" as "essence extraction," or *chülen*, which refers to powerful, often ritually as well as pharmacologically enhanced substances that provide strength, nourishment, and virility. I showed how the *chülen* theme in the *Four Treatises* is largely discussed in terms of maintaining normal health and treating the aged. The relevant chapters, however, do not mention any mercury or precious pills. Just one sentence in the chapter on *rinpoché men* in the *Four Treatises* attributes *chülen* benefits to precious medicines in general when taken by the healthy; however, in a revered root text such as the *Four Treatises* one sentence can be very significant.

Notions of preventative and rejuvenating benefits have been adopted widely in precious pill presentations, more extensively so in notices, leaflets, and on websites addressed to a foreign clientele than in traditional Tibetan formulary works. The noticeable difference between these domains is that many websites and leaflets advertise the rejuvenating and disease-preventive effects, while Tibetan formularies limit attributing *chülen* benefits to three of the eight precious pills currently made in India: Rinchen Drangjor, Mangjor Chenmo, and sometimes Tsodru Dashel. These pills contain both *tsotel* and other rare and expensive precious substances.

Refined mercury sulfide in the form of *tsotel* is considered the "king of rejuvenation," and is said to have preventive benefits, also for the healthy. When added to certain precious pills, *tsotel* increases their potency and makes them even more precious. Based on Czaja's recent work, I pointed out how with the emergence of special manuals on how to administer precious pills beginning in the eighteenth century, the category of the "healthy" came more to the forefront allowing more people—possibly also including the sponsors of *tsotel* events—to partake in the preciousness and benefits of the pills. The partaking in the consumption of what Tibetan culture offers as "precious," including its spiritual aspects, certainly plays a part in the contemporary popularity of precious pills, which in turn also drives their commodification and commercialization.

Today, leaflets and online descriptions of almost all precious pills are aimed also at the healthy as general tonics and rejuvenators. While this seems to be part of the commercialization of precious pills, it is still directly referring to indications from the root text *Four Treatises* and the long historic use of precious medicines. The overall popularity of precious pills draws on a combination of their therapeutic and *chülen* benefits, which are based on the preciousness of potent, rare and expensive substances, as well as the use of *tsotel* as the king of *chülen*.

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ABBREVIATIONS

AYUSH	The Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa, and Homoeopathy, Government of India
BMTK	Bod rang skyong ljongs sman rtsis khang (Men-Tsee-Khang of the Tibetan Autonomous Region)
CUTS	Central University of Tibetan Studies, Sarnath, India
FDA	Food and Drug Administration
FWF	Austrian Science Fund
GMP	Good Manufacturing Practices
MTK	Men-Tsee-Khang, "Medicine-Astrology-House," also Mentsi-khang, is the name of the first secular Tibetan medical institute, founded in Lhasa in 1916. It was also established in 1961 in Dharamsala by exiled Tibetans in India.
OTC	Over-the-counter
PRC	People's Republic of China
RCT	Randomized Controlled Trial
SARS	Severe Acute Respiratory Syndrome
TAR	Tibetan Autonomous Region
THL	Tibetan & Himalayan Library (Germano, Weinberger, et al. 2010)
US	United States

REFERENCES

Adams, Vincanne (2010). "Encounters with Efficacy". In: *Asian Medicine* 6.1, pp. 1–21. DOI: 10.1163/157342110x606833.

Anand, Dibyesh (2000). "(Re)imagining Nationalism: Identity and Representation in the Tibetan Diaspora of South Asia". In: *Contemporary South Asia* 9.3, pp. 271–287. DOI: 10.1080/713658756.

Aschoff, Jürgen C. and Tashi Yangphel Tashigang (2001). *Tibetan "Precious Pills". The Rinchen Medicine. A Tantric Healing System with Great Benefits, Some Problems, Many Secrets*. Ulm/Donau: Fabri-Verlag. ISBN: 3931997138.

— (2004). *Tibetan Jewel Pills*. Ulm/Donau: Fabri Verlag. ISBN: 3931997162.

— (2009). *Tibetan Jewel Pills: With Some Remarks on Consecration (Byin rlabs) of the Medicines*. 3rd ed. Ulm/Donau: Fabri Verlag. ISBN: 9783931997380.

Blakie, Calum (2016). "Positioning Sowa Rigpa in India: Coalition and Antagonism in the Quest for Recognition". In: *Medicine Anthropology Theory* 3.2, pp. 50–86. DOI: 10.17157/mat.3.2.352.

Craig, Sienna (2003). "SARS on the Roof of the World". In: *Explorers Journal* Summer issue, pp. 20–21.

— (2010). "From Empowerments to Power Calculations: Notes on Efficacy, Value and Method". In: *Medicine between Science and Religion: Explorations on Tibetan Grounds*. Ed. by Sienna Craig, Vincanne Adams, and Mona Schrempf. Oxford: Berghahn, pp. 215–40. ISBN: 9781845459741.

— (2012). *Healing Elements. Efficacy and the Social Ecologies of Tibetan Medicines*. Berkeley, Los Angeles, London: University of California Press. ISBN: 9780520273238.

— (2015). "The Efficacy of Collaboration: Tibetan Medicine Across Countries and Conversations". In: *Asian Medicine* 10.1–2, pp. 152–75. DOI: 10.1163/15734218-12341343.

Craig, Sienna and Vincanne Adams (2008). "Global Pharma in the Land of Snows: Tibetan Medicines, SARS, and Identity Politics Across Nations". In: *Asian Medicine* 4.1, pp. 1–28. DOI: 10.1163/157342108x381205.

Craig, Sienna and Barbara Gerke (2016). "Naming and Forgetting: Sowa Rigpa and the Territory of Asian Medical Systems". In: *Medicine Anthropology Theory* 3.2, pp. 87–122. DOI: 10.17157/mat.3.2.350.

Cuomo, Mingji (2016). "Deconstructing and Reconstructing Tradition: Good Manufacturing Practices and the Tibetan Medicine Industry in China, 2001–2014." Conference paper, June 22, 2016. Bergen, Norway.

Czaja, Olaf (2013). "On the History of Refining Mercury in Tibetan Medicine". In: *Asian Medicine* 8.1, pp. 75–105. DOI: 10.1163/15734218-12341290.

— (2015). "The Administration of Tibetan Precious Pills". In: *Asian Medicine* 10.1–2, pp. 36–89. DOI: 10.1163/15734218-12341350.

Da Col, Giovanni (2012). "The Poisoner and the Parasite: Cosmoeconomics, Fear, and Hospitality among Dechen Tibetans". In: *Journal of the Royal Anthropological Institute* 18.s1, S175–S195. DOI: 10.1111/j.1467-9655.2012.01771.x.

Dawa Ridak (2003). *Bod kyi gso ba rig pa las sman rdzas sbyor bzo'i lag len gsang sgo 'byed pa'i lde mig*. Delhi: Rig Drag Publications. Author's Tibetan name: Zla ba ri brag.

Dege Drungyig Gurupel (1986). *Srid Gsum Gtsug Rgyan Si Tu Chos Kyi 'byung Gnas Kyi Zhal Lung Dngul Chu Btso Chen Dang Rin Chen Ril Bu'i Sbyor Sde Zla Ba Bdud Rtsi'i Thig Le Rin Chen Dngul Chu Sbyor Sde Phyogs Bsdebs. = Collected Works on Mercury Formulations (Rasasiddhisastra) by Ju Mi-pham, Bla-sman Orgyan Bstan-dzin, Sde-dge Drun-yid Guru-phel, Kon-sprul Yon-tan Rgya-mtsho. Reproduced from Rare Manuscripts and Sde-dge Woodblocks from the Library of Late Dr Jamyang Tashi, Dr Tenzin Chodrak, and Dr Lobsang Tashi*. Ed. by Tashi Tsering. Library of Tibetan Works and Archives. Dharamsala, pp. 303–91. Author's Tibetan name: Sde dge'i drung yig Gu ru 'phel (18th century). Editor's Tibetan name: Bkra shis tshe ring.

Deumar Tendzin Püntsok (2006). "Rin chen ril bu gtong thabs lag len nges zab snying thig". In: *De'u dmar gso rig gces btus*. Pecin: Mi rigs dpe skrun khang, pp. 853–58. Author's Tibetan name: De'u dmar Bstan 'dzin phun tshogs (b. 1672).

— (2009). *Shel gong shel phreng*. Dharamsala: Men-Tsee-Khang. Author's Tibetan name: De'u dmar Bstan 'dzin phun tshogs (b. 1672).

Dreyfus, Georges (1998). "The Shuk-Den Affair: Origins of a Controversy". In: *Journal of the International Association of Buddhist Studies* 21.2, pp. 227–70.

Drungtso, Tsering Thakchoe and Tsering Dolma Drungtso (2005). *Tibetan-English Dictionary of Tibetan Medicine and Astrology*. Dharamsala: Drungtso Publications. ISBN: 8190139525.

Gerke, Barbara (2012a). "'Treating The Aged' and 'Maintaining Health': Locating *bcud len* Practices in the four Tibetan Medical Tantras". In: *Journal of the International Association of Buddhist Studies* 35.1–2, pp. 329–62. DOI: 10.2143/JIABS.35.1.3078168.

— (2012b). *Long Lives and Untimely Deaths: Life-span Concepts and Longevity Practices among Tibetans in the Darjeeling Hills, India*. Leiden, Boston: Brill. ISBN: 9789004217034. DOI: 10.1163/9789004217485.

— (2012c). "Treating Essence with Essence: Re-inventing bcud len as Vitalising Dietary Supplements in Contemporary Tibetan Medicine". In: *Asian Medicine* 7.1, pp. 196–224. DOI: 10.1163/15734218-12341248.

— (2013). "The Social Life of *Tsotel*: Processing Mercury in Contemporary Tibetan Medicine". In: *Asian Medicine* 8.1 (Mercury in Ayurveda and Tibetan Medicine), pp. 120–52. DOI: 10.1163/15734218-12341287.

— (2015). "Biographies and Knowledge Transmission of Mercury Processing in Twentieth Century Tibet". In: *Asiatische Studien – Études Asiatiques* 69.4, pp. 867–99. DOI: 10.1515/asia-2015-1041.

— (in press). "The Signature of Recipes: Authorship, Authenticity and the Epistemic Genre of Tibetan Formulas". In: *Revue d'Etudes Tibétaines* 45.

Gerke, Barbara and Florian Ploberger (2017). "Jewels in Medicines: On the Processing and Efficacy of Precious Pills According to the *Four Treatises*". In: *Buddhism and Medicine: An Anthology*. Ed. by Pierce Salguero. New York: Columbia University Press, pp. 583–92. DOI: 10.7312/salg17994-062.

Germano, David and Nicolas Tournadre (2003). *THL Simplified Phonetic Transcription of Standard Tibetan*. The THL Tibetan Dictionaries, Tibetan to English Translation Tool, Tibetan and Himalayan Library. URL: http://www.thlib.org/reference/transliteration/%5C#!essay=/thl/phonetics/ (on 8 Apr. 2017).

Germano, David, Steven Weinberger, et al. (2010). *The Tibetan & Himalayan Library. Tibetan to English Translation Tool*. University of Virginia. URL: http://www.thlib.org/reference/dictionaries/tibetan-dictionary/translate.php (on 1 Dec. 2017).

Gyatso, Yonten (1991). "The Secrets of the Black Pill Formulation". In: *Tibetan Medicine* 13, pp. 38–55.

Hilgenberg, Luise and Willibald Kirfel (1941). *Vāgbhaṭa's Aṣṭāṅgahṛdayasaṃhitā, ein altindisches Lehrbuch der Heilkunde, aus dem Sanskrit ins Deutsche übertragen mit Einleitung, Anmerkungen und Indices*. Leiden: Brill.

Hofer, Theresia (2008). "Socio-Economic Dimensions of Tibetan Medicine in the Tibet Autonomous Region, China – Part One". In: *Asian Medicine* 4.1, pp. 174–200. DOI: 10.1163/157342108x381250.

Khétsun, Tubten (2008). *Memories of Life in Lhasa under Chinese Rule*. Ed. by Matthew Akester. New York: Columbia University Press. ISBN: 9780231142861.

Khyenrap Norbu (2007). "Rin chen ril bu'i phan yon dang bsten thabs gsal ba'i me long". In: *Mkhyen rab nor bu'i sman yig gces btus. Mā yang sman yig gces btus*. Ed. by Khyenrap Norbu et al. Pe cin: Mi rigs dpe skrun khang, pp. 198–209. Author's Tibetan name: Mkhyen rab nor bu, (1883–1962).

Kloos, Stephan (2008). "The History and Development of Tibetan Medicine in Exile". In: *Tibet Journal* 33.2, pp. 15–49.

— (2010). "Navigating 'Modern Science' and 'Traditional Culture': the Dharamsala Men-Tsee-Khang in India". In: *Medicine Between Science and Religion: Explorations on Tibetan Grounds*. Ed. by Vincanne Adams, Mona Schrempf, and Sienna Craig. London: Berghahn, pp. 83–105. ISBN: 9781845459741.

— (2012). "Die Alchemie exil-tibetischer Identität. Anmerkungen zur pharmazeutischen und politischen Wirksamkeit tibetischer Pillen (Pro-

cessing Exile-Tibetan Identity: The Alchemy of Tibetan Medicine's Pharmaceutical and Political Efficacy)". In: *Curare* 35.3, pp. 197–207.

Kloos, Stephan (2013). "How Tibetan Medicine in Exile became a 'Medical System' ". In: *East Asian Science, Technology and Society* 7.3, pp. 381–95. DOI: 10.1215/18752160-2333653.

— (2016). "The Recognition of Sowa Rigpa in India: How Tibetan Medicine became an Indian Medical System". In: *Medicine Anthropology Theory* 3.2, pp. 19–49. DOI: 10.17157/mat.3.2.351.

Kongtrül Yönten Gyatso et al., eds. (2005). *Gso rig zin tig yang tig*. Pe cin: Mi rigs dpe skrun khang. Editor's Tibetan name: Kong sprul yon tan rgya mtsho (1813–1899).

Lozang Lodrö (2006). *Gnas lnga rig pa'i paN+Di ta mkhan chen khro ru tshe rnam mchog gi rnam thar baiḍūrya sngon po'i rang mdangs (= Mkhan chen khro ru tshe rnam gyi rnam thar)*. Pe cin: Krung go'i bod rig pa dpe skrun khang. Author's Tibetan name: Blo bzang blo gros.

Lozang Nyima and Dhondup Tsering (2006). *Gso rig lag len spyi don sgron ma*. Zi ling: Mtsho sngon mi rigs dpe skrun khang. Authors' Tibetan names: Blo bzang nyi ma and Don grub tshe ring.

Men-Tsee-Khang (1996). "Over the Counter Medicines". In: *Men-Tsee-Khang Newsletter* 4.3, p. 1.

— trans. (2011). *The Subsequent Tantra from the Four Tantras of Tibetan Medicine*. Dharamsala: Men-Tsee-Khang.

Murthy, K. R. Srikantha (1996). *Vāgbhaṭa's Aṣṭāñga Hṛdayam. Text, English Translation, Notes, Appendix and Indices*. 3rd ed. 3 vols. Krishnadas Ayurveda Series 27. Varanasi: Krishnadas Academy.

Nyima Tsering (2009). *Dngul chu btso bkru chen mo'i lag len*. Lha sa: Bod ljongs mi dmangs dpe skrun khang. Author's Tibetan name: Nyi ma tshe ring.

Oliphant, Jamyang (2016). "Extracting the Essence': *bcud len* in the Tibetan Literary Tradition". PhD thesis. Oxford University. URL: https://ora.ox.ac.uk/objects/uuid:72121806-b3f5-4e87-8a9a-02b8b24ad12d (on 30 Nov. 2017).

Orgyen Tekchok (2005). "Zin tig mdzes rgyan bdud rtsi'i sman mdzod". In: *Gso rig zin tig yang tig*. Ed. by Kongtrül Yönten Gyatso. Pe cin: Mi rigs dpe skrun khang, pp. 191–360. Author's Tibetan name: O rgyan theg mchog; editor's Tibetan name: Kong sprul yon tan rgya mtsho (1813-1899).

Penpa Tsering (1997). "Gso rig sman sbyor gyi nying khu bcud rgyal bdud rtsi dar ya kan nam dngul chu btso thal gyi lag len mdo tsam bkod pa". In: *Men rtsis dus deb* 3, pp. 26–32. Author's Tibetan name: Spen pa tshe ring.

Prost, Audrey (2008). *Precious Pills. Medicine and Social Change among Tibetan Refugees in India*. Epistemologies of Healing 2. Oxford, New York: Berghahn Books. ISBN: 9781845454579.

Sangye Gyatso (2010). *Mirror of Beryl. A Historical Introduction to Tibetan Medicine*. Trans. by Gavin Kilty. 1st ed. The Library of Tibetan Classics 28. Boston, MA: Wisdom Publications. ISBN: 9780861714674.

Saxer, Martin (2013). *Manufacturing Tibetan Medicine. The Creation of an Industry and the Moral Economy of Tibetanness*. Epistemologies of Healing 12. Oxford, New York: Berghahn. ISBN: 9780857457721.

Schrempf, Mona (2015). "Contested Issues of Efficacy and Safety between Transnational Formulation Regimes of Tibetan Medicines in China and Europe". In: *Asian Medicine* 10.1–2, pp. 273–315. DOI: 10.1163/15734218-12341360.

Sonam Bakdrö (2006). *Dngul chu'i byung ba spyi dang bye brag btso bkru rig pa'i lag len rgyas par bkral ba mkhas grub ratna shri'i dgongs rgyan*. Bod ljongs mi dmangs dpe skrun khang: Lha sa. Author's Tibetan name: Bsod nams bag dros.

Sonam Dhondup (2000). *Sman sbyor lag len gyi gdams pa myong grub ma*. Bod lugs sman rig 21. Pe cin: Mi rigs dpe skrun khang. Author's Tibetan name: Bsod nams don grub.

Sonam Dhondup and BMTK (2006). *Bod sman sbyor sde chen mo*. Lha sa: Bod ljongs mi dmangs dpe skrun khang. Author's Tibetan name: Bsod nams don grub.

Triplett, Katja (2014). "Magische Medizin? Kultur- und religionswissenschaftliche Perspektiven auf die tibetische Heilkunde". German. In: *Tote Objekte – lebendige Geschichten. Exponate aus den Sammlungen der Philipps-Universität Marburg*. Ed. by Irmtraut Sahmland and Kornelia Grundmann. Petersberg: Imhof Verlag, pp. 189–205. ISBN: 3865689485.

Tshekho (2006). *Rgyun spyod bod sman thang phye ril bu gsum gyi sbyor sde dang lag len gyi skor brjod pa kun phan bdud rtsi'i chu rgyun*. Khreng tu'u: Si khron dpe skrun tshogs pa, Si khron mi rigs dpe skrun khang. Author's Tibetan name: Tshe kho.

Witt, Claudia M. (2009). "Efficacy, Effectiveness, Pragmatic Trials – Guidance on Terminology and the Advantages of Pragmatic Trials". In: *Forschende Komplementärmedizin / Research in Complementary Medicine* 16.5, pp. 292–94. DOI: 10.1159/000234904.

Wylie, Turrell (1959). "A Standard System of Tibetan Transcription". In: *Harvard Journal of Asiatic Studies* 22, pp. 261–67. DOI: 10.2307/2718544.

Yutok Yönten Gonpo (1982). *Bdud rtsi snying po yan lag brgyad pa gsang ba man ngag gi rgyud*. Lha sa: Bod ljongs mi dmangs dpe skrun khang. Author's Tibetan name: G.yu thog Yon tan mgon po (fl. 12th century).

Zurkhar Nyamnyi Dorjé (1993). *Man ngag bye ba ring bsrel pod chung rab 'byams gsal ba'i sgron me*. Lanzhou: Kan su'u mi rigs dpe skrun khang. Author's Tibetan name: Zur mkhar Mnyam nyid rdo rje (1439–1475).

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Principal Contact:

Dominik Wujastyk, Editor, University of Alberta
Email: ⟨wujastyk@ualberta.ca⟩

Mailing Address:

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

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The Flame and the Breeze: Life and Longevity Practices in Three Bengali Sufi Texts from the Long Seventeenth Century

Projit Bihari Mukharji

University of Pennsylvania

Straddling the artificial boundary between South and South East Asia from 1430 to 1784 there existed a powerful, multicultural kingdom called Roshang.[1] Its Buddhist kings directly and indirectly patronized generations of Muslim Bengali scholars. Many of these scholars were deeply interested in braiding together Islamic and Indic traditions of spiritual praxis. A crucial part of these spiritual praxes were longevity practices that were tied up with ritual performance. Drawing variously from tantric, Sufi, Nāth and yogic traditions, these authors created a new set of Islamic yogic longevity practices.[2]

These texts unfortunately remain woefully understudied. The little scholarship that does exist on the matter is overwhelmingly in Bengali.[3] Moreover, scholarly accounts of this literature have been almost entirely focused on the theological and literary dimensions of the texts.[4] Yet, as France Bhattacharya points out, "*A l'époque, les Soufis comme les yogis étaient aussi crédités de savoirs d'ordre plus 'mondains'*".[5] Naturally, therefore, the texts produced by Bengali Sufis contain a wealth of information about topics such as the mysteries of conception, birth and death, general cosmology and what may be called "long-life" or "longevity practices."

Long-life or longevity practices are a set of practices found across South Asia and beyond. As Geoffrey Samuel points out, many of these practices seem to be

1 Today historians generally refer to the kingdom either as the "Arakan kingdom or the "Mrauk-U kingdom." The Bengali authors who lived and wrote there, however, almost always called it Roshang and so I shall stick to their name in this article. See, for instance, Huq 1993.

2 See, for instance, Bhattacharya 2003.

3 The best-known and most detailed work remains Huq 1993.

4 See, for instance, Hatley 2007; D'Hubert 2014.

5 "At the time, Sufis and yogis were also credited with more "mundane" powers," Bhattacharya 2003: 69.

connected in one way or another with Indian tantric techniques.[6] In this regard, it is also worth noting that the ideal of the *jīvanmukta*, pursued by Nāth Siddhas, entailed much that was akin to life prolongation practices.

> According to the Nāth philosophy the state of *jīvanmukti* is the ideal … The Nāths say that the body in which the supreme wisdom has been received (*parampadprāpti*) must be kept disease-free (*ajara*), immortal (*amara*) and capable to travelling wherever they please….[7]

As a result, the Nāths discuss longevity and immortality at great length, including actual techniques for achieving these ends.[8] But the relationship of the Nāth traditions with tantrism and Sanskrit culture, not to mention between its own various regional variants, remain very ill-understood to date.[9]

Much of the extant scholarship on such longevity practices has been focused specifically on Buddhist practices.[10] Dagmar Wujastyk and Lawrence Cohen, however, have studied longevity practices, and particularly longevity tonics, as components of Indian medicine.[11] Some of the emergent work on the histories of yoga has also discussed longevity practices in passing.[12] Islamic longevity practices too have recently begun receiving some attention. Y. Tzvi Langerman for instance, has discussed *rasāyana* in an eighteenth-century Shi'ite text, whilst Fabrizio Speziale has discussed a fascinating Indo-Persian alchemical treatise attributed to the thirteenth-century saint Hamid al Din Nagawri and others.[13]

In the present paper I wish to add to this discussion by focusing on three Bengali Islamic texts produced in the kingdom of Roshang in the period between the late sixteenth century and the early eighteenth century. These three texts are complex, lengthy works that cover a number of different topics. So it is best to clarify at the very outset that I do not intend to study them as a whole. My interest is mainly in their discussions of life and longevity practices. I want to compare how each of these texts conceptualize the entity called "life" and what kind of practices they recommend for prolonging life.

The paper is divided into seven principal sections. Section one introduces the three texts I will be discussing, giving brief outlines of their content, provenance

6 Samuel 2012: 264.
7 Mallik 1986: 292.
8 Mallik 1986: 310–19.
9 For Bengal see Mallik 1986. For accounts of the Nāth tradition more generally see Lorenzen and Munoz 2011. On Nāth texts see Bouy 1994. For an effort to work out a single, coherent and linear chronology for Nāth and tantric traditions across South Asia, which I find problematic for a tradition as diverse, plural and widespread as the Nāth and tantric traditions, see White 1996.
10 Gerke 2012; Samuel 2012.
11 Wujastyk 2015, 2017: (in this volume); Cohen 1998.
12 Mallinson and Singleton 2017.
13 Speziale 2006; Langermann 2018.

and some general introduction to the available scholarship on these texts. Section two will then provide a general historical context of the kingdom of Roshang and its fascinating polycultural political order. Sections three, four and five will respectively describe the longevity practices discussed in each of the three texts. The sixth section then explores the way "life" and "longevity" are conceptualized in these texts in general. Finally, the seventh section locates these texts within the material culture in which they were produced and suggests that the images of life and longevity reflect the actual material culture of the times.

1. THE THREE TEXTS

The three texts I will be discussing here are, respectively, an anonymous work called *Joga Kalandara / Yoga Kalandar*, a text entitled *Nurjāmāl bā Suratnāmā* by Haji Muhammad and finally, the *Sirnāmā* by Kaji Sheikh Monsur. My reason for choosing these three works is that each of them uses certain strikingly similar metaphors and images, suggesting that they participated in a common tradition. Of course, such participation might have meant direct knowledge of earlier works by later authors or affiliation or acquaintance with a common oral tradition.

The *Joga Kalandara* is generally held to be the oldest of the three texts, though its own history is a matter of some dispute. Ahmed Sharif, who had collected, collated and published all these texts, argued that the text derived from a Persian original written by Shaffaruddin Bu Ali Kalandar (d. 1324) who is buried in Panipat in north India and is credited with several Persian works in a similar vein. The lack of a colophon, as was customary at the time, suggests, however, that the text circulated orally for some time before it was finally committed to writing. Sharif's uncle, Abdul Karim Shahityavisharad, who first discovered many of these Bengali texts in manuscript form in the early twentieth century, found nearly three hundred manuscript copies of the *Joga Kalandara* in the south-eastern corner of Bengal, i.e., in Chittagong. Another Bengali scholar, Enamul Huq, however, disagreed with Sharif and argued that the author of the Bengali *Joga Kalandara* was one Saiyid Murtuza in the seventeenth century (Huq 1993). Huq identified his author as one who lived in the western Bengali city of Murshidabad and wrote poems influenced by Vaishnavite devotees of Krishna. However, Huq failed to explain why the manuscripts of the work are concentrated in the Chittagong area if the author had actually lived in Murshidabad. The two cities were not only geographically distant, but also politically part of different kingdoms at the time. To complicate matters further, when France Bhattacharya chose to translate the Bengali *Joga Kalandara* into French, she found there were significant discrepancies between the manuscript versions used by Sharif and Huq. All this tends to confirm that the *Joga Kalandara* existed as an oral text in the region and

that the manuscripts probably drew variously and independently upon that oral tradition. This also makes dating the text difficult. Yet, given its popularity, it is probably not unfair to assume that it is the oldest of the three texts that deploy similar phrases and images, in other words that the *Joga Kalandara* is the source of these images.

We are on firmer grounds with the *Nurjāmāl ba Suratnāmā*. Ahmed Sharif, who edited and published the *Nurjāmāl*, cited circumstantial evidence such as poet Mir Muhammad Shafi's reference to his own discipleship to one Haji Muhammad as the basis for estimating Haji Muhammad to have lived approximately between 1565 and 1630. Sharif also estimated that the *Nurjāmāl* was written in the 1590s.[14] The surviving manuscripts of the text were all found in Chittagong and clearly evinced the text's connections to the Arakanese court. A copyist with a distinctly Arakanese-sounding name, viz. "Mongarpong", had produced the manuscript upon which Sharif based his published version.[15] In any case, if the dating of the text is correct and it was in fact written in 1590, then Chittagong itself would have been part of the Roshang kingdom at the time. Sharif and Huq, however, disagree once again upon the identity of the *Nurjāmāl ba Suratnāmā.* Huq was of the opinion that the *Nurjāmāl* and the *Suratnāmā* were in fact two distinct texts, rather than two alternate names for the same text.

The *Nurjāmāl* ("Divine Light") is part of a medieval Bengali textual tradition of writings on "divine illumination." Razia Sultana mentions the existence of at least five known *Nurnamas* by five different authors, excluding Haji Muhammad's work. The best-known of these *Nurnamas* was a seventeenth-century iteration by Abdul Hakim, whilst other authors included Sheikh Paran (1550–1615), Mir Muhammad Shafi (1559–1630) and even one by the brahmin author Dwija Ramtanu.[16] Recently, Ayesha Irani has explored the theological and ontological evolution of what she terms the "prophetic principle of light and love" in the hands of Bengali authors in splendid detail.[17] Despite the volume, diversity and complexity of this tradition, many scholars have recognized Haji Muhammad's work as being particularly significant. Thus, Sharif, for instance, wrote that,

> no other author was able to equal Haji Muhammad's adeptness (*naipunya*). He had the habitual deftness (*sbabhābik dakshyata*) to express complex and subtle theoretical issues in a plain and meaningful way.[18]

14 Sharif 1969: 114–17.
15 Sharif 1969: 114.
16 Sultana 2017.
17 Irani 2016.
18 Sharif 1969: 119.

Asim Roy similarly writes that Haji Muhammad offered the "most brilliant exposition" of what Roy calls "monistic pantheism," a position he attributes to a number of Islamic religious authors of middle Bengali texts.[19]

The *Sirnāmā* of Kaji Sheikh Monsur is the latest of our three texts. Monsur informs us in a colophon that he was the son of one Kaji Isa and lived in the important town of Ramu, in the kingdom of Roshang. He also gives us a date, in the local Maghi calendar, for his composition. The date he gives us is 1065 which, according to the Georgian calendar, would be 1703.

Notwithstanding the similarity of some of the contents, the three texts were organized in distinctive ways. The *Sirnāmā* for instance, had nine core chapters and five introductory chapters. The core chapters were adapted, by the author's own acknowledgement, from a work called the *Ahārul Masā.* In the first of these chapters, Monsur described the bio-cosmological system that related the microcosm of the human body to the macrocosm of the cosmos, using a complex system of correspondences organized around four key "stations" or *mokāms/muqams.* As Shaman Hatley and others have pointed out, these "stations' were also correlated to the bio-cosmological "centers" or chakras known in tantric and yogic circles.[20] These "stations" of spiritual ascent are then further related to four, increasingly more sublime, paths of spiritual progress, viz. *Śariata* (Islamic Law), *Tarikata* (The Path), *Hakikata* (Reality) and, finally, *Mārifata* (Knowledge). It was these paths and matters related to it that were described in the subsequent chapters. Chapter Three for instance, gave a detailed description of the composition and the mechanisms of the human body and self. The next chapter described different types of bodies and selves. The fifth chapter described the structure and functions of the heart, whilst the following chapter dwelt at length on breath. It is here that longevity practices are dealt with. Other chapters are devoted to the human seed or "sperm," the "soul," and the Creator.

Haji Muhammad's *Nurjāmāl* also had fourteen chapters. But they covered a wider range of topics and were not as clearly demarcated into primary and introductory chapters. Many of the text's early chapters were devoted to topics such as fate, the duties of pious Muslims and so forth. It is only in the twelfth chapter that Muhammad introduces the bio-cosmological system and its four "stations" which, incidentally, he calls *monjil/manzil* ("destinations"). In this elaborate chapter, he outlines the correspondences between the microcosm and the macrocosm as well as the four different paths to spiritual progress. In fact, the chapter itself is subdivided into four sub-chapters according to the path. It is in the last of these sub-chapters, i.e., one devoted to the description of the *Mārifata* path, that the longevity practices are mentioned. The two final chapters that

19 Roy 1970: 193.

20 Hatley 2007.

follow this lengthy chapter are devoted respectively to conception and birth and the matters of the "soul."

Finally, the *Joga Kalandara* (at least the version published by Sharif), contained only seven chapters. It introduced the bio-cosmological system straight away after the inaugural paeans. It then very briefly described the body, before moving on to the various paths of spiritual progress. The next chapter described a series of postures (*āsanas*) together with directions for particular forms of meditative visualizations. The penultimate chapter was devoted to the signs that foretell death, while the final, very short chapter dealt with the esoteric meanings of various colors. More cogently for our present purposes, the longevity practices were introduced right at the outset of the very first chapter in this text.

The main scholarly interest in this material, as I have said above, has mainly been in its literary and theological content. The early Bengali scholars such as Abdul Karim Shahityavisharad, Ahmed Sharif and Enamul Huq were principally interested in recovering the literary contributions of Muslim authors to Bengali language and literature, though they also shared an interest in Sufism. Amongst western scholars, France Bhattacharya and Shaman Hatley have both explored the religious blending and braiding in these texts.[21] Recently Ayesha Irani's work has also been along similar lines.[22] Tony Stewart's work on cross-denominational translations in early modern Bengal and Carl Ernst's work on the interactions between Sufism and tantrism elsewhere in South Asia provide important contexts, agendas and vocabularies for these works.[23] Similarly, Thibaut d'Hubert's recent explorations of the literary dimensions of the intellectual world of Roshang also tangentially illuminate these texts.[24]

2. THE WORLD OF ROSHANG

Before proceeding any further in our analysis of Haji Muhammad's text, however, it is necessary to have a fuller understanding of the context within which he wrote. Modern national borders and the arbitrary contours of Area Studies have together conspired to obliterate the once powerful kingdom of Roshang from contemporary historical memory.[25] Yet, for nearly four centuries, this powerful kingdom and its intricately braided culture had dominated the Arakan and stretched well into the eastern districts of modern Bangladesh.

Founded in 1430 with its capital at Mrauk-U along one of the branches of the Kaladan river, Roshang's early history is still mired in controversy and con-

21 Bhattacharya 2003; Hatley 2007.
22 Irani 2016.
23 Stewart 2001; Ernst 2005.
24 D'Hubert 2014.
25 For the most comprehensive history of Roshang, see Galen 2008.

jecture. Myths tell of a displaced king who had been given shelter and, thereafter, military support by the Sultans of Bengal to regain his throne. Once returned to power, it was this king, Nara Mit Lha (c. 1404–1434), also referred to as Manh Co Mvan and Narameikhla, who is credited with introducing Bengali Islamic forms and styles to the court.[26] But Roshang remained a weak neighbor to Bengal for almost a century. It was only with the accession of king Min Ba, also known as Sabaq Shah, in 1531 that Roshang became a power to reckon with. Relying on a large contingent of Portuguese Catholic mercenaries, Min Ba rapidly expanded his domain by defeating the neighboring kingdoms of Tripura and Bengal. The lucrative Bengali port of Chittagong along with its hinterlands passed into Arakanese hands and remained with them until 1666. The waning of the Bengal Sultanate's powers in the seventeenth century allowed Roshang to further consolidate its position. In 1625, the Roshang troops even defeated the mighty Mughal army in Bengal and sacked the Mughal capital at Jahangirnagar (Dhaka). It was only in 1666 that the Mughals finally managed to wrest Chittagong back from the Arakanese. The kings of Roshang, however, continued to rule over their depleted kingdom all the way up to 1784, when the Konbaung dynasty finally annihilated the kingdom and incorporated it into the Burmese monarchy.

The kings of Roshang depended heavily upon Portuguese military power, especially autonomous Portuguese mercenaries and adventurers operating in the Bay of Bengal.[27] Through their trading contacts with the southern Indian port of Masulipatnam, they also recruited mercenaries from the kingdom of Golconda in the Deccan. At one point, the seventeenth-century king of Roshang, Thirithudhamma, described his own army to the Mughal governor of Bengal, as being manned mainly by "Firangis (Portuguese) and Telingas (Telegus)".[28] The Portuguese-Arakanese alliance was intimate enough for the Portuguese to even briefly try to foist a Lusianized minor member of the Arakanese royal house who had converted to Catholicism upon the throne.[29] The Bengali Muslims, particularly after the incorporation of Chittagong into the kingdom, provided key intermediaries and service officials.

As Sanjay Subrahmanyam points out, the geography of Roshang, with its core isolated from the rest of Burma by the formidable Arakan Yomas, but connected by rivers to the sea, meant that it could only look outwards through the oceans and not overland.[30] This meant its trade was largely maritime and depended

26 On Nara Mit Lha and his role in real and imagined histories of the Arakan, see Leider and Htin 2015.

27 Charney 2005.

28 Cited in Subrahmanyam 1993: 84.

29 Subrahmanyam 1993.

30 Subrahmanyam 1997: 203.

heavily upon the Dutch East India Company, viz. the *Verenigde Oostindische Compagnie* (VOC). It also meant that culturally, the kingdom saw itself as a part of the Persianate world rather than the Sinophone one. The Bengali Muslim literati were important intermediaries in both these networks. They were the local partners of the Dutch traders as well as the main conduits for Persianate culture.

It was in this milieu that there emerged a sophisticated and rich body of courtly literature. Given the polyglot and multicultural nature of the Roshang kingdom, the court literature was also multilingual. Arakanese, Pali, Sanskrit, Persian, Portuguese and Bengali were just some of the languages that were in use in the kingdom. The famous Bengali poet Alaol noted the presence in the kingdom of Arabs, Egyptians, Syrians, Turks, Abyssinians, Ottomans, Khorasanis, Uzbeks, Lahoris, Multanis, Hindis, Kashmiris, Deccanis, Sindhis, Assamese and Bengalis. Yet, as Thibaut d'Hubert points out, it was the Bengali literature of Roshang that was most significant in its originality and ambition. The Pali and Sanskrit works produced there were largely copies of older works and did not attempt to create a new canon as the Bengali authors did.[31] D'Hubert explains this in terms of the formation of a unique society of Bengali Muslim elites with close ties to the Roshang court who mediated both trade and cultural contacts with the outside world across the seas.

Court poetry and etiquette literature however, were not the only things that these Bengali Muslim intellectuals wrote about. As Shaman Hatley notes,

> One of the most consistent concerns of this genre is the explication of Islamized forms of tantric yoga, the practices of which appear integral to Sufism as it was developed in Bengal.[32]

Tantric practices, Hatley continues, had become,

> prevalent across an extraordinary spectrum of sectarian boundaries in South Asia and beyond, flourishing with Śaivism, Buddhism, and Vaiṣṇavism and finding a place in both Jainism and brahmanical *smārta* traditions.[33]

Most important for us, however, is Hatley's observation that, "Islam constituted no less likely a ground for the assimilation of tantric yoga".[34] Haji Muhammad's *Nurjāmāl* is an excellent testament to this process of Islamization of tantric yoga in Bengali texts from Roshang.

31 D'Hubert 2014: 47 f.
32 Hatley 2007: 351.
33 Hatley 2007: 352.
34 Hatley 2007: 352.

3. LIFE AND LONGEVITY IN THE *JOGA KALANDARA*

After a hasty, ten-line invocation, the *Joga Kalandara* jumped straight into the question of "life" and longevity. It described life through a vivid image of a vital flame burning incessantly on three furnaces.[35]

> These three furnaces, you must know, are the *nāsuta* (নাসুত) station
> The Angel Azrael stands guard there
> Know that those subterranean regions are the place of fire
> Fires burn forever without respite.
> Know that the sun rises at that *mūlādhāra*
> *Jīvātmā* is the lord of it.
> Meditate on that with your eyes and ears shut
> Devote yourself to the teacher as you think of Him.
> The lord of the house sits in a white lotus
> Light the fire every day in that country.
> The fire should never go out
> Light the fire with care at all times.
> My body arises from that fire
> Be careful so that it never is extinguished.
> Forever the fire and eternal, you must know, is the furnace
> Clap shut the tenth portal
> Just as you push loads onto an animal
> Push similarly at the base of the anus.
> Just like lighting the fire in a smithy
> Push similarly frequently.
> If you can do this every day
> Strong body will annul all disease.[36]
>
> নাসুত মোকাম জান এ তিন তিহরী
> আজ্রাইল ফিরিস্তা আছে তথাত প্রহরী
> সে সব পাতাল জান আনলের স্থান
> সদাএ আনল জ্বলে নাহিক নির্বাণ।
> অরুণ উদিত জান সেই মূলাধার
> জীবত্তমা স্বামী হেন জানিঅ তাহার।
> কর্ণ আঁখি মুদি তথা করহ জিকির

35 Though I call this a "vital flame," the actual text does not really name the flame. There is no corresponding Bengali word for "vital" in these texts. It is presented merely as a flame that is coterminous with life. Its extinction leads to death.

36 This and all following translations in this paper are mine.

মুর্শিদ ভজিয়া কর তাহার ফিকির।
ধব কমল তথা গৃহস্বামী বৈসে
অনুদিন আনল জ্বালিও সেই দেশে।
সে আনল-যাবতে নিবি নহি যাএ
জ্বালিবা আনল যত্নে জান সর্বথাএ।
শরীর অমর হএ সে আনল হন্তে
সাবধানে থাকিবা না নিবে যেন মতে।
সদা এ আনল নিত্য জানিবা তিহরী
দশমী দুয়ারে তবে লাগাইব তালি।
পশুএ লাদিলে যেন টিপ দিয়া তোলে
তেনমত টিপ জান দিব গুহ্যমূলে।
কামার শালেত যেন অনল জ্বালন
তেনমত টিপ তথা দিব ঘন ঘন।
এই কর্ম অনুদিন করিতে যদি পার
শরীর বেয়াধি যথ খণ্ডিবেক দড়।[37]

The three furnaces burning at the *mūlādhāra* (chakra) at the base of the spine was not novel. Bhattacharya points out that it was well-known in earlier Nāth texts such as the *Goraksha Bijay* of Sheikh Faijullah. Yet, the *Joga Kalandara*'s specific descriptions of the fire are illuminating. The text clearly connects the flame to life. It asserts that the body becomes immortal from this flame (শরীর অমর হএ সে আনল হন্তে). It instructs the reader to be careful that the fire does not go out (সাবধানে থাকিবা না নিবে যেন মতে), but it also advises the reader to carefully light the fire regularly (জ্বালিবা আনল যত্নে জান সর্বথাএ).

The key practice, however, seems to involve putting pressure on one's anus in a way so as to raise the fire in a way akin to the way loads are raised on to the backs of animals (দশমী দুয়ারে তবে লাগাইব তালি/পশুএ লাদিলে যেন টিপ দিয়া তোলে). If one can do this daily, then the body will be free of all disease.

But interestingly, this was not the only vital flame discussed by the *Joga Kalandara.* The same chapter also mentioned another flame. This latter flame was to be "seen" by meditating upon the "Place of Bile" (*pittasthāna*) where a "spring breeze" blows strongly. Unlike the vital flame of the three furnaces or ovens, this is the flame of a lamp.

Know that these three furnaces are the main home
At the place of bile blows a large spring wind
Every day look at it with care
A lamp-flame there you will behold

37 Sharif 1969: 101.

That flame will spread a bright light
Within that light you will behold an image
Keep your sight trained on that light
You shall see the shape of the past and the future all
If you can behold it daily
Your body will never be destroyed.

এ তিন তিহরী জান প্রধান খাছাল
পিত স্থানে বহে বায়ু বসন্ত বিশাল।

অনুদিত তথা দৃষ্টি করিবা যতনে
এক গাছি দীপ তথা দেখিবা নয়নে।

সে দীপের পসরে উজ্জ্বল হৈব জ্যোতি
সে জোতের মধ্যেত যে দেখিবা মূরতি।

সে জোতের মধ্যে তুমি দৃষ্টি নিযোজিবা
ভূত ভবিষ্যৎ রূপ সকল দেখিবা।

যদি সে করিতে পার দরশন নিত
শরীর তোমার ধ্বংস নহে কদাঞ্চিত।[38]

In stark contrast to this image of a vital flame, the image of life at the next "station," i.e. *malakuta mokām* was that of a "vital breeze." The *Joga Kalandara* mentioned that,

Know that the *malakuta* station is at the navel
Know that at that place the aerial element flows particularly
In yoga it is called by the name *maṇipura*
There seasonal pre-winter [breeze] blows relentlessly
Know that the Angel Israfil presides
Know for sure that the nostrils are his portal
Know that the navel houses the blister (?)
Breaths collected daily stays endlessly
Day and night forty thousand breaths flow
Within the vessel the aerial element stays any way
As long as there is air there is life
When the air disappears death is inevitable.

মলকুত মোকাম জান হএ নাভিদেশ
সে স্থানে বাবি বহে জানিবা বিশেষ।

যোগেত কহএ তারে মণিপুর নাম

38 Sharif 1969: 101.

থাত হেমন্ত ঋতু বহে অবিশ্রাম।

ইস্রাফিল ফিরিস্তা জান তাত অধিকার
নাসিকা নিশ্চয় জান দুয়ার তাহার।

নাভির খাটাল জান ফেস্কার যে ধাম
নিশ্বাস সম্বরে নিত্য রহি অবিশ্রাম।

দিবা রাত্রি চল্লিশ হাজার শ্বাস বহে
ঘট মধ্যে রাখ বাবি যেন মতে রহে।

যাবত পবন আছে তাবত জীবন
পবন ঘুচিলে হএ অবশ্য মরণ।[39]

This contrasting image is not surprising since several Sufi authors tend to associate the particular "stations" with specific primary elements, viz. earth (*khāka*), water (*āba*), fire (*ātaśa*) and air (*bāba*). But what is significant is that the "air" or "breeze" is said to be specific to the "station" (সে স্থানে বাবি বহে জানিবা বিশেষ). Moreover, this particular "vital breeze" is capable of being counted with precision. The number of daily breaths is thus tabulated at 40,000. It is this specific "vital breeze" whose exhaustion leads to immediate death and whose preservation leads to longevity. It is on the basis of this last idea that the author then goes on to recommend particular actions to preserve the "vital breeze."

Training one's vision upon one's own nostrils, with the head bowed so as to allow the chin to touch the throat, the practitioner is advised to raise the right foot over the left thigh. Thus seated, s/he is to meditate upon the breath till a light green image becomes visible. It is this image that is the image of the soul (*ātmā*) and it is at the sight of this image that the flow of breath or "vital breeze" ceases.

Train your sight upon the nostril and glimpse the air
Place your chin on your throat and follow the rules
Lift the right leg upon the left thigh
Stare at the nose with both eyes open
Then the breath will not exit the vessel
You will see the color of yam leaves
In that you will glimpse an image
Know that that is the body of the soul.

নাসিকাত দৃষ্টি দিয়া পবন হেরিবা
কণ্ঠেত চিবুক দিয়া নিয়মে রহিবা।

বাম উরু 'পরে যে দক্ষিণ পদ তুলি

39 Sharif 1969: 102.

নাসাতে হেরিব জান যুগ আঁখি মেলি।

তবে ঘট হন্তে শ্বাস বাহির না হৈব
যেহেন কচুর পত্র বরণ দেখিব।

তার মধ্যে মূর্তি এক হৈব দরশন
সেই মূর্তি আত্তমার জানিঅ বরণ।

4. LIFE AND LONGEVITY IN HAJI MUHAMMAD'S *NURJĀMĀL*

In stark contrast to the *Joga Kalandara*, Haji Muhammad introduced the longevity practices in the very last chapter of his book. Even more strikingly, he flipped the order of the spiritual "stations." Whereas the *Joga Kalandara* had identified the *nāsuta mokām* with the *mūlādhāra* (chakra) and the *lāsut mokām* with the *anāhata* (chakra) at the head of the spine, Muhammad, identified the *lāhuta mokām* with the *mūlādhāra* (chakra). The rest of the description however, looked remarkably familiar.

Know the three furnaces are *lāhuta* station
Angel Azrael stands guard there
In the room sits the Dark Lotus[40]
Every day the fire burns in that country
In that seventh subterranean world the fire is established
Fire burns incessantly without extinction
Always know the principle of the fire there
Every day the fire burns without burning out
That fire is eternally there all the time
The body is immortal from that fire
Stay careful so that it does not go out.

লাহুত মোকামে জান এতিন তিহরী
ফিরিস্তা আজ্রাইল আছে তাহাত প্রহরী।

আন্ধার কমল তথা ঘরেত বৈসএ
অনুদিন আনল জ্বলএ সে দেশএ।

40 One of the reviewers of this paper has suggested that this might be a scribal error for the "base lotus," thus *ādhāra kamala* instead of *āndhāra kamala*. This is certainly a possibility, but we should also be careful not to replace such possible scribal errors and smoothen the text. Not only do scribal errors often take root and mutate the text, but they might also bear testimony to way scribes and practitioners made sense of textual passages that had become obscure for them. In this particular case, it is also significant in my view that the epithet *āndhāra kamala* is in itself well established in Vaiṣṇava circles and often refers to Krishna himself. See for instance, Hawley 2014: 108.

সেই সপ্ত পাতালেত আনল স্থাপন
সদাএ আনল জ্বলে নাহিক নিভন।

সে আনল জ্বলিতে নিভান নহি যাএ
জানিবা আনল নীতি তথা সর্বথাএ।

শরীর অমর হএ সে আনল হোতে
সাবধনে থাক না নিভে যেন মতে।[41]

Not only was the description of the vital flame and the guardian angel almost identical, but even the practices recommended for achieving longevity were remarkably similar. Even the slightly unusual image of loads being lifted onto the back of an animal to describe how to raise the vital flame from the anus was repeated.

As one pushes loads on to the animal
Similarly push up at the anus
If you can do this action daily
All the diseases of the body will be annulled
…
Know these three furnaces are the main home
At the bile-place it goes and sits eternally
When you train your vision there
You will then notice a flame there
That lamp's wares become extremely bright
Within that lamp see an image
Keep your eyes on that image
Past and future all you will see
If you can see it every day
Your body will never be destroyed.

পশুএ লাদিলে যেন টিপ দিয়া তোলে
তেন মতে টিপ দিয়া তোলে গুহ্য মূলে।

এই কর্ম অনুদিন করিবারে পারে
শরীরের ব্যাধি যথ খণ্ডিব তাহারে।

...

এ তিন তিহরী জান প্রধান খাটাল
পীতস্থানে গিয়া সেই বৈসে সর্বকাল।

অনুদিত তথা দৃষ্টি করিবা যখন
এক গাছি দীপ তথা দেখিবা তখন।

41 Sharif 1969: 146.

সে দীপের পসরে উঝল হএ অতি
সে দীপের মধ্যে এক দেখিয়া মূরতি।

সে মূর্তিত দৃষ্ট তবে নিয়োজি রাখিবা
ভূত ভবিষ্যৎ যথ সকল দেখিবা।

যদি সে করিতে পর দরশন নিত
শরীর তোমার ধ্বংস নাই কদাচিত।[42]

Apart from the interchange of the names *lāhuta* and *nāsuta*, the rest of the description of life and longevity practices associated with the first "station" in the *Joga Kalandara* and the *Nurjāmāl* are remarkably similar. This similarity continues to the second "station" as well.

Know the *malakuta* station is the navel
Know that a particular aerial element stays there
In yoga it is called by the name of *maṇipura*
There the air blows incessantly
The Angel Israfil presides there
Know for sure that the nostril is his portal
Day and night twenty-four thousand breaths flow
Keep the aerial element within the vessel as it stays
As long as there is air, there is life
If air is diminished, death is inevitable.

মলকুত মোকাম জানিঅ নাভিদেশ
সেই স্থানে বাবি রহে জানিঅ বিশেষ।

যোগেত কহএ তারে মণিপুর নাম
এথায় থাকিয়া বায়ু বহে অবিশ্রাম।

ইস্রাফিল ফিরিস্তা তথায় অধিকার
নাসিকা নিশ্চএ জান দুয়ার তাহার।

রাত্রিদিনে চব্বিশ হাজার শ্বাস বহে
ঘট মধ্যে রাখ বাবি যেন মতে রহে।

যাবত পবন আছে তাবত জীবন
পবন ঘাটিলে হএ অবশ্য মরণ।[43]

Apart from the change in the number of daily breaths from 40,000 in the *Joga Kalandara* to 24,000 in *Nurjāmāl*—a change that could well have arisen through the oversight of a copyist—the rest of the description is once more remarkably

42 Sharif 1969: 146.

43 Sharif 1969: 146 f.

similar. In this regard, it is also worth noting that Haji Muhammad used the word *vāyu* alongside *pavana* and *bābi* as synonyms, adding yet another layer of meaning to this already multivalent notion of a "vital breeze." The ritual and meditative practices associated with the *malakuta mokām* however, contained some significant changes. Whilst the basic posture described was almost identical, its objective was quite distinctive. Instead of preventing the flow of the vital breeze out of the body, in the *Nurjāmāl*, the objective was to expel air out of the stomach through the anus.

> Train your eyes on the tip of the nose and see the air
> Put your chin on your throat and follow the rules
> Lift the right leg on the left thigh
> Remove your vision to the tip of the nose with both your eyes open
> Then will the aerial element from the intestines be expelled
> You will behold an image the color of yam leaves
> In that you will notice an image
> Know that that is the image of the soul.
>
> নাসিকাত দৃষ্টি দিয়া পবন হেরিব
> কণ্ঠেত চিবুক দিয়া নিয়মে রহিব।
>
> বাম ঊরু 'পরে দক্ষিণ পদ তুলি
> নাসিকা হেরিবা দৃষ্টি দুই আঁখি মেলি।
>
> তবে কোষ্ঠ হোন্তে বাবি বাহির হৈব
> যেহেন কচুর পত্র বরণ দেখিব।
>
> তার মধ্যে মূর্তি এক হৈব দরশন
> সে জুতি আত্মার জানিবা বরণ।[44]

Despite these changes, Haji Muhammad's general conception of life associated with the first two "stations" is similar to the conceptions of the *Joga Kalandara.* Life is essentially conceptualized either as a "vital flame" or as a "vital breeze."

5. LIFE AND LONGEVITY IN KAJI SHEIKH MONSUR'S *SIRNĀMĀ*

In monsur's *sirnāmā*, both the structure and the content of the longevity practices were radically transformed. The text did not organize its spiritual pursuits according to the four "stations," though the "stations" are mentioned in the text. There is as a result no clear distinction between the practices associated with the *nāsuta* and *malakuta mokāms*. Yet, some of the material associated with

44 Sharif 1969: 147.

these stations in prior texts crops up in the *Sirnāmā.* The following description is introduced, somewhat suddenly, in midst of a section dealing with the relation between particular breaths and the conception of progeny.

> Pay attention, one who does the work of the aerial element
> Making the navel touch the back while keeping the spine straight
> Drinking the aerial element in the upper pipes and later the ears
> Close all the portals and strengthen the police station
> Putting your feet to the anus you will lift the air
> Deep push at the furnace touches the sky
> Train your eyes on the tip of the nose
> Do these actions every day
> Along with the aerial element you will see the immaterial self's divine light
> Whatever paths whoever follows the aerial element must be presented
> In that lamp will arise your own divine light
> Past and future will all be disseminated
> If someone is attached (?) to the aerial element
> The world and the cosmos will both serve that person.
>
> যে করে বাবির কর্ম শুন মন দিয়া
> পৃষ্ঠেত লাগাএ নাভি মেরু স্থির হৈয়া।
>
> ঊর্ধ্বনালে পিয়া বাবি পাছে কর্ণে হানা
> সর্বদ্বারে তালি দিয়া দড় কর থানা।
>
> মল দ্বারে পদ দিয়া তুলিবেক বাই
> তিহরীতে ঘন টিপ গগন ঠেকাই।
>
> নাসিকা অগ্রেতে দৃষ্টি দিয়া নিযোজিব
> প্রতিদিন এই মত কর্মেত রহিব।
>
> বাবি সঙ্গে আত্তমার দেখিবেন্ত নূর
> যে যে মতে যেই বাবি করিব হুজুর।
>
> সে দীপে উতপন হৈব আপনার নূর
> ভূত ভবিষ্যৎ যথ হইব প্রচার।
>
> কেহ যদি বাবি সঙ্গে হৈল মুছখর
> দীন দুনিয়া তার হইল কিঙ্কর।[45]

45 Sharif 1969: 185 f.

While the description is still strongly reminiscent of the practices associated with the first "station" in the previous texts, its sense has been radically transformed. In fact, the "vital flame" has virtually disappeared. The ritual actions are now intended to raise the *bāi* or "air" from the *mūlādhāra* or *tiharī*. In fact, the chapter went on to emphasize the powers of air upon longevity, citing the example of the Prophet Isā (Jesus) to the effect that: "Prophet Isā practiced (*sādhana*) *bābi* and went to the sky/ the moment (he) ate *bāi* he became immortal."

The idea of the "vital flame" is lost in Monsur's text. In its place, the rituals intended to nurture the flame are remade to raise the "air." The only competing image of life and longevity not connected putatively to *bābi*, is Monsur's chapter on *maṇi* or the seed/sperm. In this latter chapter, Monsur declared that, "everyone knows that from the jewel [i.e., semen] life is prolonged" (মনি হন্তে আয়ু দীর্ঘ জানিও সকল).[46] It is possible that this replacement of the "vital flame" by the "seed" was enabled by notion of "divine illumination" or *nur* as a mediating principle. For Monsur wrote that, "capacity for eternal life comes from the jewel of divine illumination" (চির আযু কুওত নূর মনি হন্তে হএ).[47] Clearly he was equating the "seed" with the "divine light" and this might have led him to replace the "vital flame" with the "seed." However, at this stage, this replacement cannot be entirely explained and a fuller examination of the topic would lead us too far away from the issues at hand.

6. CONCEPTUALIZING LIFE

In order to get a sense of the true contours of the ways in which life and longevity practices were conceptualized in these Bengali Sufi texts, we must begin by clarifying the relationship between physiological elements and the primary elements they resemble. Most Islamic thinkers accept the four Aristotelian elements, viz. earth, water, fire and air, to be the fundamental building blocks of all physical realities in the sub-lunar world.[48] According to Ibn Sina, i.e., Avicenna, these four primary elements are also the only entities in the sub-lunar world that are life-less.[49] Yet, in our texts, the "stations" where life and death hang in balance are clearly identified with one or the other of these life-less elements, i.e., fire for the first station and air for the next.

It is worth remembering, however, that Ibn Sina's notion of life is quite distinctive from our notion of life. For him, everything in the sub-lunar world is alive, except the four fundamental elements. As Seyyed Hossein Nasr points

46 Sharif 1969: 187.
47 Sharif 1969: 187.
48 Only the Ikhwan hold that the four elements are also constitutive of the sub-lunar world. See Nasr 1993: 62.
49 Nasr 1993: 252.

out, for Ibn Sina and most Islamic cosmologists, all territorial events are "determined and ordered" by the "Intelligences and faculties of the World Soul".[50] The primary elements all remain inert or passive until the World Soul animates them to combine. Such combinations gradually produce rocks, plants, animals and eventually humans. Rocks, plants, animals and humans, all therefore are possessed of specific faculties of the World Soul.[51]

The *Joga Kalandara* conceptualized the relationship between the human soul and the World Soul through the language of *jīvātmā* (Individual Soul) and *paramātmā* (Supreme Soul) It stated that the body belonged to the *jīvātmā*, who was the "husband" (*svāmī*) or "householder" (*gṛhasvāmī*).[52] At another point, the *jīvātmā* was explicitly equated with the *ruh hayawāni*.[53] This latter entity is most likely identical to Ibn Sina's *al nafs al-hayawāniya*, the "Animal Soul," which is also responsible for the preservation of the integrity of the breath.[54] Later, however, it added that the *paramātmā* or Supreme Soul "is there with" the *jīvātmā*.[55] Adding slightly later that,

> *Jīvātmā, paramātmā* are two images
> Arise there as radiances comingle.
>
> জীবাত্তমা পরাত্তমা এই দুই মূরতি
> উদয় হইছে তথা জোতে মিলি জ্যোতি ।.[56]

Finally, the *Joga Kalandara* declared that,

> Water, fire, earth, air are four things
> Along with divine illumination five in the body
> Know that these five things have forty symptoms
> Mixing soul(s) with them makes it conscious.
>
> আব আতস খাক বাত চারি চিজ হএ
> নুরের সহিত পঞ্চ শরীর মধ্যএ ।
>
> এই পঞ্চ চিজ জান চল্লিশ লক্ষণ
> আরোহা মিশাই তারে করিতে চেতন ।a[57]

The Indic idea of *ātmā* and the Islamic ideas about *ruh* thus became braided together, but the overall thrust of Ibn Sina's distinction between a basic World Soul and a specific Animal Soul seems to have been preserved. As the identification of *ruh* and *ātmā* became stronger, however, a unified notion of an all

50 Nasr 1993: 280.
51 Nasr 1993: 250 f.
52 Sharif 1969: 101.
53 Sharif 1969: 103.
54 Nasr 1993: 249, 256 f.
55 Sharif 1969: 103.
56 Sharif 1969: 103.
57 Sharif 1969: 106.

pervasive World Soul became increasingly difficult to discern. Thus in Haji Muhammad's *Nurjāmāl*, an entire chapter was entitled *Ātmatattva* (Essence of *Ātmā*). The chapter commenced by declaring that,

> Soul has four names, four types
> Soul *nāthakī* sits in human bodies
> All the animals got Soul *hāmi*
> *Jirmi* is the name of the soul bequeathed to the earth
> *chaṅga* is the soul given to stones.
>
> আত্মার এ চারি নাম এ চারি প্রকার।
>
> রুহু নাথকী বৈসে মনুষ্য শরীরে
> রুহু হামি পাইল যথেক জানোয়ার।
>
> জির্মি নামে রুহু বকশিয়াছে ধরান্তরে
> ছঙ্গ নামে রুহু দিয়াছে পাথরেরে।[58]

Monsur's *Sirnāmā* also offered a very similar formulation. The chapter dealing with this, however, was titled *Ārohātattva* rather than *Ātmatattva*. The Arabic word *Ārohā* is the plural of the word *ruh*. Yet in Bengali texts, the word is often used to denote a singular entity. Thus, Monsur mentioned, for instance, that *ārohā* was simply the "Arabic name for *prāṇa*."[59] In any case, Monsur wrote that,

> Soul(s) have four names these four types
> …
> *Nāthakī* soul(s) sit(s) in the human body
> Words are spoken and the spoken understood
> *Chaṅga* is the soul sitting in animals and birds
> Cannot speak words for sure
> All the creatures that are contained in the family of animals and birds
> Insects and flies, etc., in the world
> *Jisimi* souls sit in all the plants and trees
> Grasses, creepers, etc., and fragrant good looking
> Souls named *nāsi* sit in all stones
> All the gems, pearls, etc., all the pieces and pebbles.
>
> আরোহর চারি নাম এ চারি প্রকার
>
> …
>
> নাথকি আরোহা বৈসে মনিষ্য তনএ

58 Sharif 1969: 145.

59 Sharif 1969: 188.

বচন কহএ যথ কহিলে বুঝএ।

ছামি নামে পশু পক্ষী আত্তমা বৈসএ
কহিতে না পারে ফিরি বচন নিশ্চএ।

যত জীব ধরে পশু পক্ষী পরিবার
কীট পতঙ্গ আদি পৃথিম্বি মাঝার।

জিসিমি আরোহা বৈসে যথ বৃক্ষ তরু
তৃণ লতা আদি আর সুগন্ধ সুচারু।

নাসি নামে আরোহা বৈসে যথ পাথরএ মনি মুক্তা আদি যথ দানা কঙ্করএ।[60]

The general Islamicate notion of a World Soul and animal, vegetative and mineral souls developed in a way in the Bengali texts that it became increasingly difficult to see them as manifestations of a single unified World Soul. Instead, by the time Monsur wrote, the World Soul had come to resemble animistic notions. This happened particularly through the three-way equivalence that emerged between *ruh, ātmā* and eventually *prāṇa.*

This is particularly interesting since *prāṇa,* in the Indic context, is often described as the "vital breath." According to Kenneth Zysk, "(t)he cosmic wind was mankind's vital breath (*prāṇa*), the principal *manifestation* of a person's immortal soul".[61] But rendering it as an equivalent to *ruh* and *ātmā* clearly expanded its meaning. The term *ātmā*, as Anthony Cerulli has recently pointed out, usually stands for the "non-material self" and this is the sense in which the word appears most often in non-medical Sanskrit literature. Though it is equally noteworthy that the word also connotes the gross physical body in certain contexts, particularly in some classical ayurvedic texts.[62] By equating *ātmā* with *prāṇa* therefore, a notion of a non-material self began to resemble the "vital breath."

It is safe to assume that this elaboration of meaning from "vital breath" to non-material selfhood was enabled by the aforementioned association of the "Animal Soul" (*al nafs al-hayawāniya*) with the "Individual Soul" (*jīvātmā*). Since the former was held by classical authors such as Ibn Sina to be primarily responsible for the integrity of the breath, it became easier to conflate the two. Since Ibn Sina was clear that all breaths originate in a single breath and that what engenders that original breath is the *al nafs al-hayawāniya,* it was possible to gradually identify the cause and the effect.

A similar elaboration also took place with regard to the words for breath, air and the primary aerial element. *Bābi* and *vāyu*, not to mention other related words such as *bāi* and *pavana*, became so closely linked that they were almost

60 Sharif 1969: 188.
61 Zysk 1993: 198, italics mine.
62 Cerulli 2016: 66.

treated as being interchangeable words. Yet, these words originally had distinctive connotations. *Bābi*, strictly so called, was in fact one of the four primary elements of Islamic cosmologies. Whereas, by contrast, *vāyu* could mean a range of things, such as one of the Indic primary elements, one of the three ayurvedic humoral substances (*doṣa),* a particular ayurvedic physiological principle and even simply the wind. To complicate matters further, the word *prāṇa* can often designate either the "vital breath" itself or a particular sub-type of bodily wind.

My point behind drawing attention to these confusing equivalences is to argue that multiple equivalences that were posited in the Bengali Sufi works generated a certain degree of definitional flexibility that confounds a rigorously etymological or philological approach. Recently, Bruno Latour has revived the Egyptologist Jan Assmann's discussion of "moderate relativism" in the ancient polytheistic empires. Latour, following Assmann, points out that these polycultural and polyreligious polities allowed diverse groups to cohabit "without cutting each other's throats" by constantly positing rough equivalences. "What, you a Roman, call Jupiter, I, a Greek, call Zeus".[63] Such equivalences and the "moderate relativism" it engendered would be unsustainable if more rigorous or scrupulous translations were sought. I would argue something similar was at play in these Bengali texts, viz. a practically oriented "moderate relativism" where conceptual flexibility was valued more than precision in translation.

The conception of life that emerges within this context of "moderate relativism" is expectedly then, a somewhat plastic, rather than precise, concept. It recognized a gradation of types or modes of life through the increasing dismemberment of the unified idea of the World Soul into the idea of distinct types of souls. It also tended to connect life to heat, light and air. Of these, the latter especially, in its many and myriad forms as breath, breeze, wind, bodily air and non-material self, gradually grew in importance. Yet it never emerged as the sole or discrete figure of life.

7. MATERIAL METAPHORS

We have noticed above that despite the conceptual plasticity of "life," the actual longevity practices that were recommended did to some extent persist for a century or more. I will argue that what allowed and even sustained the persistence of these practices was not the underlying conceptual coherence but rather the practical legibility of the images and figures through which longevity practices were imagined.

63 Latour 2017: 404.

My argument is that images such as not letting a furnace go cold or a lamp burn out, or indeed, keeping a room well-aired, were all images sixteenth- and seventeenth-century Bengalis well understood. The doctrinal or lexical minutiae were perhaps not as important as the consistency of the images and their general legibility. By drawing attention to the historico-material culture in which metaphors became meaningful, I do not wish to claim that the metaphors were in themselves new or novel. Throughout the world and in the many different traditions to which our authors had access, no doubt images of forges, lamps, divers and so forth would be legion. We do, for instance, find the metaphor of the forge in some Vedic texts, just as the metaphor of the lamp appears in some South Indian inscriptions. What I want to emphasize is that people choose metaphors and do so, because certain figures or metaphors make more sense to them and their audiences than others. They prefer some that are legible to them and ignore others. This choice is shaped by the lived experience of the authors and their audiences. In Bengali oral traditions, for instance, there are frequent references to the "life-breath-bumblebee" (*prāṇa-bhramara*) as well as to the "life-breath-bird" (*prāṇa-pakśī*). Yet, none of our authors used these metaphors. The point I am trying to argue is that there is always more than one image or metaphor to choose from, and the choice authors make reflects what they and their audiences find more familiar. Therefore, even though the figures of a forge, a lamp or a diver may not be utterly novel, their appeal for our authors must be related to aspects of their lived experience of historico-material culture.

This, in my view, should also encourage us to take a closer look at the basis of these images. Why were these images chosen and why were they so easily legible? This is where a history of material culture can illuminate our path. In the *Joga Kalandara*, which, as I have already mentioned, is widely believed to be the oldest of the texts, we find, for instance, a fascinating reference to a smithy in connection to the furnaces that is absent in the later texts. Referring to the furnaces at the *nāsuta mokām*, the text stated that,

> As the fire lit in the smithy.
>
> কামার শালেত যেন অনল জ্বালন[64]

I would argue that this reference to a smithy was not accidental. Metal-working was a widespread and serious industry in Chittagong and it was this widespread material culture of metal-working that rendered the image of multiple, almost perpetually burning furnaces legible to the readers of these texts.

64 Sharif 1969: 101.

A component of this metal-working was connected to silver coinage. John Deyell has argued that the sixteenth century witnessed a great expansion in metal coinage in Bengal. This was engendered by the expansion of the Sultanate state and the growing maturity of the state system itself. It was eventually the silver coinage of the Bengal Sultanate that was adopted across South Asia.[65] Even more importantly, the Chittagong region, where all our authors and texts are based, was the entry point for Burmese and Yunnanese silver into South Asia proper. Even small kingdoms around the region, such as Kamta and Tripura, issued silver coinage, and the kingdom of Roshang itself issued coins, mainly from external trade, from Chittagong itself.[66] Moreover, the silver actually circulated in Burma, Thailand, Laos etc. as ingots known as "Shan Shell Money".[67] It was only molten down and worked into coins upon entering Chittagong and its neighboring regions. Metal-working and state systems thus went hand in hand in the region.

But coinage was far from being the only use to which molten silver was put. Silver inscription plates dating from the middle of the sixteenth century for instance have been found in Chittagong.[68] Metal images have also long been produced in the region. Particularly well-known are the large number of Bronze images of the Buddha found at Jhewari in Chittagong. These images long predate our authors and testify to the depth of the local metal-working tradition.[69] These metal images are particularly redolent with the comments made in the *Joga Kalandara* that,

> Golden doll looks like (?) body of fire
> Silver doll looks like (?) the shadow in a mirror.
>
> সোনার পুতলী মন আগুনের কায়া
> রূপার পুতলী মন দর্পণের ছায়া।[70]

If metal-working was connected to the political economy of Roshang, lighting lamps and keeping them burning was one of the most conspicuous acts of Islamic piety performed at shrines. The nineteenth-century observer and ethnographer James Wise mentioned the practice of lighting lamps at the Dargah of Pir Badr that stood at the center of Chittagong town. "On the walls of the cenotaph," Wise wrote,

> are ten niches for ten oil lamps, which are lighted every evening and burn all night. Pilgrims from all parts of Bengal visit the Dargah

65 Deyell 2011.
66 Deyell 2011.
67 Deyell 1994.
68 Kānunago 1988: 183, 187 f.
69 Huntington 1984: 190–92.
70 Sharif 1969: 106.

Figure 1: "An Experiment on a Bird in an Air Pump," By Joseph Wright of Derby. National Gallery, London, Public Domain.

> in fulfillment of vows, or to obtain the favor and intercession of the saint, while Hindu fishermen regard him with as much awe as the Muhammadans.[71]

Though the mosque lacks an inscription that would help date it firmly, on the basis of local traditions and its links to neighboring buildings, the edifice is usually dated to the fifteenth century.[72]

More intriguing than these images of furnaces and lamps are the images of "life" being extinguished or suffocated within a vessel through the exhaustion of air/ breath within. It is an image that almost calls to mind Joseph Wright's famous 1794 painting, "An Experiment on a Bird in an Air Pump" (Fig. 1).[73] It is easy to assume that the link between breath and life is so ubiquitous as to be "natural" or ahistorical. I would, however, argue that this seemingly self-evident image too was connected to a material culture within which it appeared

71 Wise 1883: 14 f.

72 Hasan 2007: 109 f. While the presence of this imposing structure and its institution of lighting lamps right in the heart of sixteenth-century Chittagong is useful supporting evidence for my argument, it is not absolutely essential. Even if this particular mosque does not date from our period, the practice of lighting lamps at shrines in the evening would have been fairly widely known.

73 On this painting see Raymo 2007.

obvious. Once again, the clues to such a reading, I will argue, are given in the *Joga Kalandara* itself.

The four lines just preceding the lines about the golden and silver dolls went thus:

> Clear crystal shines within
> Necklace of pearls that looks bright
> Pieces of gems shine within the crystal
> That is the ultimate knowledge known to sages.
>
> শুদ্ধ ফটিকের মধ্যে করে ঝলমল
> মুকুতার হার জিনি দেখিতে উঝল।
>
> শুদ্ধ ফটিকের মধ্যে মাণিক্যের কণা
> সেই যে পরম তত্ত্ব ভেদ মুনি জনা।[74]

I would argue that these references to crystals, gems and pearls are not at all accidental glosses. Rather they are the material basis that sustains and explains the images of breathing, breath-control and the exhaustion of breath. European travellers to Roshang, such as the Dutchman Walter van Schouten and the Portuguese Sebastian Manrique are awash with lavish descriptions of resplendent pearls and luscious gems at the Arakanese court. While unfortunately little information exists about the local pearl fishery of the Arakan/Chittagong region, we do know that a couple of small pearl fisheries still existed in the region by the end of the nineteenth century.[75] Also in existence was a much more robust and related industry of conch fishing.[76] Chittagong remained a major arena for the production of conch jewelry. This jewelry was in particularly high demand amongst the Buddhist population of Arakan. Interestingly, Muslim craftsmen of Chittagong monopolized the production of this jewelry.[77] The pearl and conch industries were connected, since both involved diving deep into the sea to recover their objects. This would naturally also mean having to hold one's breath for a fixed amount of time. In fact, once again the *Joga Kalandara* made a direct reference to diving, when it stated that,

> Diving into that pool all the time
> Keep your mind focused on meditation.
>
> সেই সরোবরে ডুব দিয়া সর্বক্ষণ
> ধেয়ানে ধেয়াই রহ নিযোজিয়া মন।[78]

74 Sharif 1969: 106.
75 O'Malley 1908: 119.
76 Milburn 1813: 1: 357.
77 Hornell 1914: 77.
78 Sharif 1969: 103.

These references to diving and meditating in the water, of finding pearls and gems, etc., were not merely accidental references. They reflected the material context of the times and rendered the images legible and meaningful. It is therefore not at all surprising that the images of pearls and gems found embedded in crystals were strung together to explain meditative practices that involved breath control. Arakan and its neighboring regions had long been known for its ruby, sapphire and jade mines. The threat of suffocation and the need to be able to hold one's breath in a mine or under water would be very similar and would make the image of life as something sustained by a fixed amount of air in a vessel immediately meaningful. Statements such as the following, I would argue, resonate on at least two levels:

> Upon arising from the depths you will receive the light.
>
> পাতালেথু উঠি জোত মিলিব তখন[79]

While the statement undoubtedly refers to the process of raising the biocosmic fire or energy vertically up the body's multiple stations, it cannot but also resonate with the experience of miners and divers coming up to the light and air from their respective downward journeys.

8. CONCLUSION

Unlike the texts studied by Speziale and Langermann, our Bengali Muslim texts do not focus much upon the materia medica for extending life. Their focus is closer to the "personal meditative practices, passed on from teacher to disciple, that employ breathing techniques and visualisations of various life channels in the body in combination with mantras and deity practices, all of which are meant to enhance the life-forces" which Barbara Gerke found amongst contemporary Tibetans in Darjeeling.[80]

The conceptual underpinnings of these meditative practices drew, however, upon multiple different traditions, vocabularies and agendas. I have argued that these multiple sources were connected to each other with an eye to flexibility and accommodation rather than strict translation and precision.

What allowed the "moderate relativism" engendered in this flexibility to function, however, was the clarity, consistency and legibility of the images employed. These images in turn relied on the material culture of the polity and society in which our authors were based. The main industries and acts of piety were therefore material resources from which illustrative metaphors were crafted. It was the backdrop of the shared material culture upon which the metaphors relied that made stabilized them.

79 Sharif 1969: 107.

80 Gerke 2012: 9.

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REFERENCES

Bhattacharya, France (2003). "Un texte du Bengale médiéval: le yoga du kalandar Yoga-Kalandar)". In: *Bulletin de lEcole française dExtrême-Orient* 90.1, pp. 69–99. DOI: 10.3406/befeo.2003.3608.

Bouy, Christian (1994). *Les Natha-yogin et les Upanisads: étude d'histoire de la littérature hindoue*. Publications de l'Institut de civilisation indienne, Collège de France ; Série in-80 62. Paris: Boccard. ISBN: 2868030629.

Cerulli, Anthony (2016). "Body, Self and Embodiment in Sanskrit Classics of Ayurveda". In: *Refiguring the Body: Embodiment in South Asian Religions*. Ed. by Barbara A. Holdrege and Karen Pechilis. Albany, NY: SUNY Press. ISBN: 978-1-4384-6315-5.

Charney, Michael W. (2005). "Arakan, Min Yazagyi and the Portuguese: The Relationship between the Growth of Arakanese Imperial Power and the Portuguese Mercenaries on the Fringe of Mainland South East Asia, 1517–1617". In: *SOAS Bulletin of Burma Research* 3.2, pp. 974–1145. URL: https://www.soas.ac.uk/sbbr/editions/file64407.pdf (on 13 Feb. 2018). MA Thesis as submitted in 1993.

Cohen, Lawrence (1998). *No Aging in India. Alzheimer's, the Bad Family, and Other Modern Things*. Oakland, CA: University of California Press. ISBN: 9780585068800.

D'Hubert, Thibaut (2014). "Pirates, Poets and Merchants: Bengali Language and Literature in Seventeenth Century Mrauk-U". In: *Culture and Circulation: Literatures in Motion in Early Modern India*. Ed. by Thomas de Bruijn and Allison Busch. Brill's Indological Library. Leiden: Brill Academic Pub, pp. 47–74. ISBN: 9789004264472.

Deyell, John (1994). "The China Connection: Problems of Silver Supply in Medieval Bengal". In: *Money and the Market in India 1100-1700*. Ed. by Sanjay Subrahmanyam. Oxford in India Readings: Themes in Indian History. Delhi: Oxford University Press, pp. 112–36. ISBN: 0195633032.

— (2011). "Monetary and Financial Webs: The Regional and International Influence of Pre-Modern Bengali Coinage". In: *Pelagic Passageways: The Northern Bay of Bengal Before Colonialism*. Ed. by Rila Mukherjee. New Delhi: Primus Books, pp. 279–316. ISBN: 978-93-80607-20-7.

Ernst, Carl W. (2005). "Situating Sufism and Yoga". In: *Journal of the Royal Asiatic Society* 15.01, pp. 15–43. DOI: 10.1017/s1356186304004675.

Galen, Stephan Egbert Arie van (2008). "Arakan and Bengal : The Rise and Decline of the Mrauk U Kingdom (burma) from the Fifteenth to the Seventeeth Century AD". PhD thesis. Leiden University. URL: http://hdl.handle.net/1887/12637 (on 18 Mar. 2018).

Gerke, Barbara (2012). *Long Lives and Untimely Deaths: Life-span Concepts and Longevity Practices among Tibetans in the Darjeeling Hills, India*. Leiden, Boston: Brill. ISBN: 9789004217034. DOI: 10.1163/9789004217485.

Hasan, Perween (2007). *Sultans and Mosques: The Early Muslim Architecture of Bangladesh*. London: I. B. Tauris & Co. ISBN: 9781845113810.

Hatley, Shaman (2007). "Mapping the Esoteric Body in the Islamic Yoga of Bengal". In: *History of Religions* 46.4, pp. 351–68. DOI: 10.1086/518813.

Hawley, John Stratton (2014). *Krishna, The Butter Thief (Princeton Legacy Library)*. Princeton: Princeton University Press. ISBN: 978-0691613413.

Hornell, James (1914). *The Sacred Chank of India. A Monograph of the Indian Conch (Turbinella Pyrum)*. Madras Fisheries Bureau Bulletin 7. Madras: Superintendent, Goverment Press. URL: https://archive.org/details/sacredchankofind00horn (on 17 Mar. 2018).

Huntington, Susan L. (1984). *The Pala-Sena Schools of Sculpture)*. Studies in South Asian Culture 10. Leiden: Brill. ISBN: 9789004068568.

Huq, Muhammad Enamul (1993). *Muhammad Enamul Huq Rachanabali*. Dhaka: Bangla Academy,

Irani, Ayesha A. (2016). "The Prophetic Principle of Light and Love:Nūr Muḥammadin Early Modern Bengali Literature". In: *History of Religions* 55.4, pp. 391–428. DOI: 10.1086/685571.

Kānunago, Sunīti Bhūshaṇa (1988). *A History of Chittagong: Vol. 1, Chittagong*. Chittagong: The Author.

Langermann, Y. Tzvi (2018). "The Chapter on Rasāyana (Medications for Rejuvenation) in Miᶜrāj al-duᶜāʾ, a Shiᶜite Text from the 12th/18th Century". In: *Intellectual History of the Islamicate World* 6.1-2, pp. 144–183. DOI: 10.1163/2212943x-00601010.

Latour, Bruno (2017). *Facing Gaia: Eight Lectures on the New Climatic Regime*. New York: Polity Press. ISBN: 978-0745684345.

Leider, Jacques P. and Kyaw Minn Htin (2015). "King Maṅḥ Co Mvan's Exile in Bengal: Legend, History, and Context". In: *Journal of Burma Studies* 19.2, pp. 371–405. DOI: 10.1353/jbs.2015.0016.

Lorenzen, David and Adrian Munoz (2011). *Yogi Heroes and Poets: Histories and Legends of the Naths*. Albany: SUNY Press. ISBN: 978-1-4384-3891-7.

Mallik, Kalyani (1986). *Nāth Sampradayer Itihas, Darśan O Sadhan-pranali*. Calcutta: Calcutta University. URL: https://archive.org/details/in.ernet.dli.2015.300865 (on 18 Mar. 2018).

Mallinson, James and Mark Singleton (2017). *The Roots of Yoga*. Penguin Classics. London, etc.: Penguin. ISBN: 9780241253045.

Milburn, William (1813). *Oriental Commerce Containing a Geographical Description of the Principal POlaces in The East Indies, China, and Japan*. 2 vols. London: Black, Parry & Co. URL: https://archive.org/details/orientalcommerce01milb (on 17 Mar. 2018). V. 2 at https://archive.org/details/in.ernet.dli.2015.61192.

Nasr, Seyyed Hossein (1993). *An Introduction to Islamic Cosmological Doctrines*. Albany: SUNY Press. ISBN: 9780791415160. URL: https://goo.gl/9rfjvw (on 18 Mar. 2018). First edition 1964. The URL refers to the 1978 revised edition (London: Thames and Hudson).

O'Malley, Lewis Sydney Steward (1908). *Chittagong*. Eastern Bengal District Gazetteers 9. Calcutta: The Bengal Secr. Book Depôt. URL: https://archive.org/details/in.ernet.dli.2015.228204 (on 18 Mar. 2018).

Raymo, Chet (May 13, 2007). *A Light in the Darkness*. Science Musings Blog. URL: http://www.sciencemusings.com/2007/05/light-in-darkness.html (on 24 Jan. 2018).

Roy, Asim (1970). "Islam in the Environment of Medieval Bengal (With Special Reference to the Bengali Sources". PhD thesis. Australian National University. URL: http://hdl.handle.net/1885/11231 (on 18 Mar. 2018).

Samuel, Geoffrey (2012). "Amitayus and the Development of Tantric Practices for Longevity and Health in Tibet". In: *Transformations and Transfer of Tantra in Asia and Beyond*. Ed. by Istevan Keul. Berlin: Walter de Gruyter, pp. 263–86. ISBN: 9783110258103. URL: http://hdl.handle.net/10765/93891 (on 18 Mar. 2018).

Sena, Rāmakamala (1834). *A Dictionary in English and Bengalee Translated from Todd's Edition of Johnson's English Dictionary*. Vol. 1. 2 vols. Serampore: The Serampore Press. URL: https://archive.org/details/bub_gb_tXsxAQAAMAAJ (on 18 Mar. 2018).

Sharif, Ahmad, ed. (1969). *Banglar Sufi Sahitya: Alochana O Noykhani Grantha Sanbalita*. Dhaka: Dhaka. Samay Prakashan.

Speziale, Fabrizio (2006). "De zeven vrienden. Een Indo-Perzische verhandeling over alchemie". In: *Bronnen van kennis. Wetenschap, kunst en cultuur in de collectives van de Leidse Universiteitsbibliotheek*. Ed. by Paul Hoftijzer, Kasper van Ommen, Geert Warnar, and Jan Just Witkam. Leiden, pp. 23–31. URL: https://halshs.archives-ouvertes.fr/halshs-00584966.

Stewart, Tony K. (2001). "In Search of Equivalence: Conceiving Muslim-Hindu Encounter through Translation Theory". In: *History of Religions* 40.3, pp. 260–87. DOI: 10.1086/463635.

Subrahmanyam, Sanjay (1993). "Quisling or Cross-cultural Broker? – Notes on the Life and Worlds of Dom Martinho De Alemão, Prince of Arakan". In: *Mare Liberum* 5, pp. 77–89. URL: http://www.cidehusdigital.uevora.pt/mare_liberum/volume-5/quisling-or-cross-cultural-broker-notes-on-the-life-and-worlds-of-dom-martinho-de-alemao-prince-of-arakan/ (on 18 Mar. 2018).

— (1997). "Slaves and Tyrants: Dutch Tribulations in Seventeenth-Century Mrauk-U". In: *Journal of Early Modern History* 1.3, pp. 201–53. DOI: 10.1163/157006597x00028.

Sultana, Razia (2017). *Nurnama*. Ed. by Sirajul Islam, Sajahan Miah, et al. URL: http://en.banglapedia.org/index.php?title=Nurnama (on 24 Nov. 2017).

White, David Gordon (1996). *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago: University of Chicago Press. ISBN: 0-226-89497-5.

Wise, James (1883). *Notes on the Races, Castes and Trades of Eastern Bengal*. London: Harrison & Sons. URL: https://books.google.ca/books/about/Notes_on_the_Races_Castes_and_Trades_of.html (on 18 Mar. 2018).

Wujastyk, Dagmar (2015). "On Perfecting the Body. Rasāyana in Sanskrit Medical Literature". In: *AION: Annali dell'Università degli Studi di Napoli "L'Orientale". Elisir Mercuriale e Immortalità. Cpitoli per una Storia dellÁlchimia nellÁntica Eurasia. A cura di Giacomella Orofino, Amneris Roselli e Antonella Sannino* XXXVII, pp. 55–77. ISSN: 11128-7209. URL: https://www.libraweb.net/articoli.php?chiave=201509901&rivista=99 (on 16 Aug. 2017).

— (2017). "Acts of Improvement: On the Use of Tonics and Elixirs in Sanskrit Medical and Alchemical Literature". In: *History of Science in South Asia* 5.2, pp. 1–36. URL: http://hssa-journal.org. In press.

Zysk, Kenneth G. (1993). "The Science of Respiration and the Doctrine of the Bodily Winds in Ancient India". In: *Journal of the American Oriental Society* 113.2, pp. 198–213. DOI: 10.2307/603025.

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.