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ARTICLE

Placing well-being: The role of ecology in *Āyurveda* and *Māvilan* healing traditions

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Abstract
The role of ecology in shaping notions of well-being in indigenous healing traditions is often overlooked in contemporary well-being discourse. This study examines how ecological systems contribute to notions of well-being in two Indic healing traditions– *Āyurveda* and the *Māvilan* healing traditions. We focus on the ecological place (or eco-place) as a living and dynamic space within which cultures of knowledge emerge, and healing identities become constructed, fostering multiple somatic, psychological, social, and spiritual correspondences between its human and other-than-human members, and through which a variety of well-being experiences emerge. Three lenses are used for this purpose (i) a narrative ecology of healing, (ii) agentic herbs and co-creative healing, and (iii) healing of natural ecological systems. For the first, the concept of narrative ecology is examined, alongside how healing knowledge emerges in both *Āyurveda* and the *Māvilan* healing traditions from human and other-than-human understandings of the world; for the second, we examine how, despite significantly differing engagements with forest ecosystems, the notion of plant-agency can recast healing as a co-creative process in both traditions. For the third, we explore ideas regarding other-than-human illness and therapeutics in *Āyurveda* and the *Māvilan* healing traditions.

Keywords Ecology · *Āyurveda* · *Māvilan* · Well-being · Healing

1 Introduction

The role of ecology in conceptions of well-being in Indian and other indigenous healing traditions is often overlooked. As Thrift (1999) indicates, place is a living and dynamic presence that constructs behavior and engagement patterns. At the same time, place also situates and grounds subjective experiences of those engagements and behaviors. In this study, we examine the role that ecology plays in the enabling of well-being in the *Māvilan* and *Āyurveda* healing traditions and how, in each, the ecological place (or eco-place) facilitates and situates a multitude of emotions, possibilities, and correspondences of well-being experiences. Although both traditions have different epistemologies and cultures of healing and knowing, we found that both traditions, in their own ways, nested and situated well-being in individual, social, and spiritual spaces that are ultimately grounded in natural ecological places. The study attempts to understand the nature of networked conceptions of well-being in both the *Āyurveda* and *Māvilan* healing traditions. For the study, specific sections of the *Āyurveda* texts, *Caraka Saṃhitā* (CS), and *Surapāla*'s *Vṛkṣhāyurveda* have been examined, analyzed and carefully interpreted alongside primary data collected from ethnographic fieldwork (observations, interviews, and field notes) carried out in selected *Māvilan* settlements in the Kasargod district of Kerala from October 2020 to December 2020.

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2 Methodology

This study is a summative presentation of interdisciplinary perspectives on the role of natural ecologies in shaping well-being notions within two different Indic healing traditions, and as such, draws from two methodological approaches. The sections of this study that focus on *Āyurveda* have been primarily derived from selected parts of the CS and *Surapāla*'s *Vṛkṣhāyurveda*. The data from both texts was initially examined through content analysis and consequently classified using the thematic analysis method. We also reviewed relevant literature about the contemporary status and evolution of *Āyurveda* contributed to by both practicing physicians and interdisciplinary scholars of *Āyurveda*. Further, numerous formal and informal interactions with *Āyurveda* experts over ten years have enriched the perspectives presented in this study. The sections of the study that focus on *Māvilan* healing traditions have been sourced from primary data collected through ethnographic fieldwork (semi-structured interviews, field notes, observation) conducted in selected *Māvilan* settlements in the Kasargod district of Kerala from October 2020 to December 2020. A total of eight interviews were conducted amongst *Māvilan* healers. These were transcribed verbatim, and emerging narratives were thematically examined and classified. Additionally, quasi-participant observations and field notes were drawn from extensively during the drafting of this manuscript.

3 Brief historical context

Two important contextual clarifications are presented in this section. First, the scope of the term '*Āyurveda*' as it is used in this study is discussed in the background of its post-colonial evolution. Second, a brief enumeration of the different socio-political, and economic situations of *Āyurveda* and the *Māvilan* healing traditions in contemporary India is presented, which is followed by the rationale for the current study.

3.1 Of *Āyurveda* and *Āyurveda*(s)

It has been suggested that terms such as 'traditional healing' often refer, in one overarching denomination, to diverse indigenous healing traditions and represent a continued process of colonization of indigenous cultures and knowledge systems (Hartmann, 2016). Though *Āyurveda* and tribal healing traditions have historically been homogenized under the umbrella of 'traditional Indian medicine' (Sen and Chakraborty, 2015), attempts have been made over the last decade to cognize their distinct identities that are based on unique episteme and praxis paradigms (Pesek et. al., 2008). While such inter-tradition distinctions are important to establish, multiple intra-tradition variations are often harder to delineate. *Āyurveda*, for instance, has come to possess numerous region, language, and culture-specific variations in practice. Even within the state of Kerala, there are numerous traditions of *Āyurveda* in practice, possessing distinct therapeutic lineages, unique methods of transmission, etc (Menon & Spudich, 2010).

Cerulli posits that these, far from being sub-traditions (a term implying a sort of reconciliation amongst lineages of practice, based on an overarching textual homogeneity), are, in fact, 'neo-traditions' of *Āyurveda*, characterized by the diversification of healers' praxes, epistemological shifts in response to biomedical proximity and consequently, the use of the 'traditional' to legitimize new ideas and practices (Cerulli, 2022, p. 89). The apparent homogeneity of ancient Sanskrit textual sources amongst *Āyurveda* traditions is further refuted by abundant vernacular literature incorporated into multiple traditions of practice. For instance, as Menon and Spudich (2010, p. 246) write of the *aṣhtavaidya*[1] physicians of Kerala, they not only "enriched (existing) *Āyurveda* literature through their commentaries on the *Aṣṭāṅga Hṛdaya* such as *Vākyapradīpikā*", but also authored well-known compendiums in Malayalam such as the *Ālattūr maṇipravālam*, *Cikitsāmañjarī*, *Sahasrayogam,* and the *Sindhumañjarī* that today are nodal textual sources for practitioners.

In light of the multiplicity of *Āyurveda* traditions in practice today, or as Girija (2021, p. 3) refers to them, 'heterogenous *Āyurveda*s', it is incumbent upon us to delineate what exactly we are speaking of, when we use the term '*Āyurveda*', and why we have chosen to do so. Despite the abundance of *Āyurveda* neo-traditions, it may be argued that in most, textual sources form important sites upon which cultures of knowing and healing are explored, and identities of physician and healer are formed. In keeping with this view, this study has focused primarily on the *Caraka Saṃhitā*, a nodal Sanskrit *Āyurveda* text dating back to the first century BCE; and consequently restricts its use of the term '*Āyurveda*' to the literary limits of the *CS*. The *CS* was selected for two reasons: (i) the oldest and arguably the most comprehensive epistemological elaborations on *Āyurveda* are found in the *CS*, making it an important site of exploration for the current study; (ii) compatible epistemological considerations in the *CS* and *Surapāla*'s *Vṛkṣhāyurveda*, in particular, pertaining to the *tridoṣa*-theory of disease origin[2], provide reasonable rationale for their joint consideration in this study. While such an endeavor is avowedly constrained

[1] A family of eight well-known Brahmin physicians in Kerala with unique therapeutic lineages

[2] According to this theory, the primordial five elements (earth, fire, wind, water and ether) unite in specific combinations within the embodied individual (human and other-than-human), to form three '*doṣa*s' - *vāta*, *pitta*, and *kapha*, that in turn make up and sustain the human body through a complex network of somatic, psychological, social and ecological correspondences with the world.

by the 'variance' produced by the authors' contemporary reading and interpretation of texts over two-thousand-years old, at the very least, we do not venture into the translational domain of *Āyurveda* neo-traditions, which significantly complicate the use of the term, '*Āyurveda*'.

3.2 Plural healthcare in unequal healing spaces

A discussion on the importance of eco-places in the *Māvilan* and *Āyurveda* healing traditions would be incomplete without, at the very least, a brief exposition of their very different social, political, and economic situations in the country today and why, despite this, such a study is being attempted. While *Āyurveda* is often considered a symbol of abiding Hindu cultural and intellectual prowess (Rai, 2019) sourced in an idealized Vedic era the essence of which is considered to be preserved in three primary Sanskrit texts (the *Caraka Saṃhitā* , *Suśruta Saṃhitā* and *Aṣṭāṅga Hṛdaya*), tribal healing traditions, sourced as they are in indigenous ways of life and local cultural/religious anchorings, do not presume to lay claim to any such singular cultural representation, and consequently do not enjoy any of the social/economic privileges afforded to systems such as *Āyurveda*.

The *Māvilan-s* are an indigenous tribal community residing in the Kannur and Kasargod districts of northern Kerala, India (Suresh, 2010). They have been included among the State's Scheduled Tribe community and have an estimated population of 29,590 (Census of India, 2011). The community's traditional occupations include collecting and selling medicinal plants, basket making, and agricultural labor (Singh, 1993). The *Māvilan* language is unscripted and draws from Malayalam, Tulu, and Kannada (Jayan, 2016). While a few systems of 'traditional' healthcare[3] have been institutionalized, formally recognized by the Government of India, and even possess their own systemic representation in the form of the Central Ayush Ministry, there are several non-institutional healers and healing traditions (including tribal healing systems) that continue to occupy the literal and figurative margins of the healthcare industry. The diverse approaches to healing amongst tribes (Hardiman, 2007) and the largely oral nature of their knowledge traditions have further marginalized their healthcare approaches. The extremely diverse, often community-specific *Āyurveda* traditions would appear to be constrained by similar factors, as discussed above, but for their apparent reconciliation in homogenous textual sources. Further, there have been numerous records, both historically but particularly in post-colonial times, wherein certain proponents and practitioners of *Āyurveda* have sought to distance what they termed a 'pure Hindu science' from the 'quack practices' of lower-caste and tribal practitioners (Panikkar, 1995) (Rai, 2019), views that were instrumental to the relative privileging of institutional *Āyurveda* above other informal healing traditions.

4 Why this study

Notwithstanding their deeply unequal contexts and cultures, certain themes surrounding the role of natural ecological systems seem to be foundational to well-being discourses in both *Āyurveda* and the narratives of *Māvilan* healers. A further examination of these themes seemed a worthwhile endeavor.

Several studies over the last two decades have examined therapeutic landscapes (Gesler, 1992), restorative places (Hartig & Staats, 2003), and medical geographies (Smyth, 2005). However, these categories become restrictive when applied to both traditions being explored in this study. Although healing, illness, and therapy occur within such places, characterizing them as 'therapeutic landscapes' incompletely represents the vital role they play in the situation and construction of communities' cultures and beliefs or the porous world-hoods thus created within which networked well-beings are co-created and relationally enabled. Both the *CS* and the *Māvilan* healers emphasize the importance of a balanced engagement between self, community, and natural ecological systems. They situate their understandings of illness and navigation of well-being in such places. In the *CS*, this connection to place (*bhūmi-deśa*) relationally constructs subjective world-hoods (*kārya-deśa*)[4] that are transacted through an expansive 'body' (*śarīra*) formed from the natural elements. Well-being is construed as an evolving harmony (*samatva*) between the two that is based on an understanding of the self as a microcosm of the macrocosmic world, a daily engagement between whom, takes place in porous, living eco-places. The *CS* further indicates that it is in the interest of individuals and communities to foster sustainable engagements with their eco-places. In *Māvilan* thought, life is considered a continuum of abiding engagement between human and non-human members of the past, present, and future (Abraham, 2017). They believe that both animate and inanimate beings possess distinct selfhoods and worship numerous representations of natural elements in a sacred space called the *pati* (Arya, 2022). Natural elements find agentic representation in forest deities or spirits such as *Kappalātti,* who are capable of transformative

[3] These are - *Āyurveda*, *Unani, Yoga, Siddha, Sowa-Rigpa* and Homoeopathy, together known as the Ayush systems.

[4] *CS. Vimānasthāna* 8.92. *deśastu bhūmirāturaśca*| - "There are two types of place – the earth, and the person." The term used, *ātura*, literally means a 'patient', although, as indicated in the next verse this is only because the *ātura* is considered the text's primary 'site' of concern (*kārya)*.

engagement with the community and possess the potential to manifest well-being, prosperity, illness, and destruction.

The *CS* posits in the fifth chapter of the fourth book, the theory of – *loka-puruṣa sāmya* - 'the self as the world'[5]

> "Verily, this *puruṣa* is the same measure as the *loka*. However, many distinct beings possessing form there are in the *loka*, there are that many in the *puruṣa*. Whatever is in the *puruṣa* is in the *loka*. Those who are awake (*budha*) desire to see thusly." (Robertson trans., 2017, p.187)

In this view, the world (*loka*) is of the very nature of the self (*puruṣa*), and 'each is another that is nonetheless the same' (Robertson, 2017, p. 187). Between these 'others' that are essentially one, there exists a multiplicity of fluid somatic, mental, and cosmic correspondences that shape the identities, relationalities, and actions of each. However, in contrast to *Māvilan* healing, in the *CS*, five natural elements (earth, fire, wind, water, and ether) transform into embodied elemental composites that form the foundation of human (and indeed all) existence. Further, in the *CS*, it is not the elements that find embodied representation in deities, but rather agentic deities that find embodied (elemental) representation in human beings. For instance, the deity *Indra* is represented in the individual ego, *Śiva* is represented in anger, *Prajāpati* finds representation in the human mind, etc.

Both in *Āyurveda* and *Māvilan* healing traditions, eco-places are complex sites of belonging, security, and identity while also being manifestations of the earth itself, a notion elaborated further in the following sections. In this context, three themes are further explored in this study (i) a narrative ecology of healing, (ii) agentic herbs and co-creative healing, and (iii) healing natural ecological systems.

4.1 A narrative ecology of healing

Krippendorff (2000, p.13) posits that an ecology consists of numerous populations, both human and non-human, and arises "in the interactions among its many constituents that organize themselves into families, cultures, and species [that] enact their own local and positional understandings of their worlds". He makes the important argument that an ecology is not entirely theorizable from one particular standpoint within it and, therefore, cannot be exploited by a single species/constituent. Like Gonzales (2012) in this study, we define narrative ecology as one that "explores how knowledge comes from the natural world and how human knowledge emanates from other forms of peoplehood". While the communication of these narratives, whether textual or oral, is important for the sustenance and evolution of *Āyurveda* and *Māvilan* ecologies, we also posit that they are important reflections of notions of individual and community well-being and situated constructs of 'self' and its explorations of healing.

Amongst the *Māvilan* community, songs are an important medium of communication of such narratives, and ground cultural identity in eco-places. As discussed in Konyak and Das'(2023), exploration of folk songs amongst the eastern Naga tribes, to the *Māvilan* community as well, songs may be means by which individual and community relatedness to land is rediscovered. The traditional *Māvilan* folk song of *Kariṃpuli Kaṇṇan* (Abraham, 2013) describes the journey of a young man named Kaṇṇan who seeks to cross the Kariṃpuli river to meet his betrothed and the ensuing conversation between him and the mango tree on the river bank that he seeks to cut down to carve a boat on which to cross the river, finds expression in the following verses of the song:

> "'Where are you going Kaṇṇan?' asks the mango tree to Kaṇṇan.
> 'I need to cut you down to build a boat to cross the Kariṃpuli river,' replies Kaṇṇan.
> 'You're not wise enough to cut me down, Oh Kaṇṇan,' cries the mango tree.
> 'Older than your father am I, older than your mother. Older than your ancestors am I.'
> 'Deceive me, and you will be deceived.'"[6]

The song proceeds to describe how, paying no heed to the tree, Kaṇṇan cuts down the mango tree, and in grief, the tree falls. The song then tells how, on the day of his betrothal, as Kaṇṇan and his family joyfully cross the river on his new boat, the boat capsizes mid-river, killing them all (Abraham, 2013).

The dialogue between Kaṇṇan and the mango tree is reflective of *Māvilan* views on the sentience, experience, and agency of nature represented in the mango tree. As symbolized in Kaṇṇan, the body can be viewed as a porous and open composite whose well-being and illness are not isolated but relational aspects of 'inter-animation' (Devisch, 1998) with both its human and non-human environments. It emphasizes the body/self's permeability to agentic others within its eco-place and the diffuse nature of engagement between the self and its world. Consequently, the flow of life is grounded not only in internal biological processes but also in and through continuous engagements with 'others' in the eco-place that contribute to the self's actions and experiences. Much like Geissler and Prince (2010, p.193) posit in their study of healing traditions amongst the Luo tribe in

[5] *CS. Śārīrasthāna 4.13 - evamayaṃ lokasammitaḥ puruṣaḥ| yāvanto hi loke mūrtimanto bhāvaviśeṣāstāvantaḥ puruṣe, yāvantaḥ puruṣe tāvanto loke iti; budhāstvevaṃ draṣṭumicchanti‖*

[6] This verse has been quoted from a secondary source – (Abraham, 2013)

Kenya, it appears that in *Māvilan* thought as well, "herbs are not considered as inert medical tools, but others with whom one engages", "the ambiguity of whose effects bears witness to their agency". The song explores the consequences of human disregard for such 'others' and explores how human morality influences the nature of the body's porosity and the outcome of its engagement with agentic others within its eco-place. Its conclusion reiterates the relational nature of engagements within an eco-place, emphasizing their moral, social, and ecological foundations.

References to such interrelationships are also found in some sections of the *CS*. As mentioned above, the *CS* refers to two 'places' (*deśa*)– the eco-place as the *bhūmi-deśa* and the human body/self as the *kārya-deśa.* The porous engagement between the two is highlighted by their mutual constitution from the five primordial elements (*pañcamahābhūtas*)[7] that come together in diverse combinations to create a relational 'world'. In the person, these further diversify into three '*doṣas'* or the dynamic constituents of the phenomenal self (*vāta, pitta, and kapha*), which in the world, find representation in the elemental forces of the air, the sun, and water respectively. This five-fold primary elemental matrix is also the foundation for all therapeutic considerations in the *CS*, wherein the deficit or increase of one or more elements in the body may be compensated by suitable entities in the eco-place possessing the desired elemental composition. It may be argued, therefore, that, according to the *CS*, although the two *deśas* possess bounded identities and carry out different functions, the distinction between the eco-place and subjective personhood ultimately collapses into a single person-place composite, as shown in the verse below, where the *CS* describes an eco-place called the '*jāṅgala deśa*' that is characterized by the predominance of the *vāta doṣa*.

> "...The *jāṅgala deśa* is filled with spaces open to the sky. Dense forests of the *kadara*, *khadira*, *asana*, *asvakarna*, *dhava*, *tinisa*, *shallaki*, *sāla*, *somavalka*, *badarī*, *tinduka*, *aśvattha*, *vaṭa*, and *āmalakī* trees are also to be found in it. Many *śamī*, *kakubha* and *śiṃśapa* trees also grow there. Hardy dry trees whose leaves dance in the gusty winds grow abundantly. Mirages abound in the thin, hard, rough sandy land. On such land, birds like the *lāva*, *tittira* and *cakora* roam freely. An abundance of the *vāta* and *pitta doṣas* is present. It is known that strong, hardy men people the land."[8]

Within the *jāṅgala deśa*, well-being is a function of the interrelationship between the individual and the natural ecosystem. Consequently, an individual/community's well-being depends on the well-being of the natural ecosystem. The verse highlights an interesting dichotomy – on the one hand, it points to numerous interpenetrating threads of human and other-than-human relatedness, while on the other, as the '*vāta*' *doṣa* is the intersubjective core of the *jāṅgala deśa*, breaks down the self-other binary into one living composite. The *CS* also posits that a harmonious network of engagements (*samatva*) within this dynamic unity is not merely an important constituent of well-being, but *is* well-being.[9] The *CS* emphatically states that *samatva* is its primary preoccupation and the ultimate goal of all its therapeutic and diagnostic considerations.[10]

Interestingly, the *CS* nuances its discussion of eco-places by prioritizing them anthropocentrically in terms of how readily individuals/communities can find well-being within them. Three kinds of eco-place are described in the *CS*, each characterized by the predominance of one of the three *doṣas*—(i) the first is the *jāṅgala deśa* that is associated with the *vāta doṣa;* (ii) the second is the *ānūpa deśa* that is associated with the *kapha doṣa,* and (iii) the third is the *sādhāraṇa deśa,* that is associated with a harmonious balance of all three *doṣas.* According to the *CS*, the former two are not as ideal for preserving human health as the latter which (as a result of the natural doṣa equilibrium within it) is the most conducive to establishing abiding and harmonious well-being. Despite this, the *CS* offers several ways of assessing the nature of individual relatedness with the eco-place, including an elaborate skein of daily and seasonal regimens that depend extensively on the local particularities of the eco-place,[11] demonstrating its willingness to explore ways of finding well-being even in less-than-ideal eco-places.

[7] The *pañcamahābhūtas,* literally the 'five great beings', may be considered the five primordial 'elements' that constitute the foundation of all material existence, including the body. They are – the 'elements' of earth, fire, wind, water and *ākāśa.*

[8] *CS Kalpasthāna* 1.8 - *tatra jāṅgalaḥ paryākāśabhūyiṣṭhaḥ, tarubhirapi ca kadara-khadirāsanāśvakarṇa-dhava-tiniśa-śallakī-sāla-somavalka-badarī-tindukāśvattha-vaṭāmalakīvanagahanaḥ, anekaśamī-kakubha-śiṃśapāprāyaḥ, sthiraśuṣkapavanabalavidhūya mānapranṛtyattaruṇaviṭapaḥ, pratatamṛgatṛṣṇikopagūḍhatanukhara paruṣasikatāśarkarābahulaḥ, lāvatittiricakorānucaritabhūmibhāgaḥ, vātapittabahulaḥ, sthirakaṭhinamanuṣyaprāyo jñeyaḥ* |

[9] *CS Sūtrasthāna* 9.4 - *vikāro dhātuvaiṣamyaṃ, sāmyaṃ prakṛtirucyate| sukhasañjñakamārogyaṃ, vikāro duḥkhameva ca||* "Illness is derangement of *dhātus*, their equilibrium is well-being." The *dhātus* refer to a fluid and expansive network of seven elements that 'hold up' the person.

[10] *CS Sūtrasthāna* 1.53. *dhātusāmyakriyā coktā tantrasyāsya prayojanam||* "It is said, the purpose of this *tantra* is the practice of *dhātu sāmya*."

[11] These are termed '*dinacarya'* and '*ṛtucarya'* respectively and are elaborated in the first book of the *CS*.

4.2 Agentic herbs and co-creative healing

Although plants and herbs may constitute the foundation of *Āyurveda* and *Māvilan* therapeutics, anthropological inquiry into the social, ecological, and cosmological dimensions of communities' and cultures' engagements with them has remained remarkably understudied. Nonetheless, scholarship in this area has revealed novel insights. Herdt (1981) found in his study of the Sambia people of New Guinea, that plants, in addition to their nutritive and therapeutic value, were vital metaphors for the Sambia peoples' notions of sexual and ritual symbolism, what Shepard and Daly (2021, p. 3) refer to as "the physical context, intellectual framework, and emotional disposition for Sambia ritual life." Santos-Granero (2012) suggests in his study on 'beinghood' in native Amazonia, that human-plant engagements often involve an exchange of 'substances' through which plants' attributes, potentials, and subjectivities are acquired into the human body through the process of incorporation. In our study, we find that in both the *Māvilan* and *Āyurveda* traditions, healing can, in certain contexts, be understood as a co-creative process involving human and non-human agencies and subjectivities within complex eco-places consisting of diffuse people-hoods in constant relationality.

We now describe two examples from the *CS* that demonstrate different dimensions of human-plant relationships in *Āyurveda*. In the first chapter of the seventh book of the *CS* which deals with 12 emetic and purgative herbs and their formulations, is found an elaborate description of the collection of the drug '*madanaphala'* (*Randia dumetorum,* primary amongst drugs used for emetic therapy). Interestingly, the verse elaborates not only the traits of the plant and fruit to be selected, but also the characteristics of the individual who should collect it.

> "... (He who) has conducted the auspicious rituals, is clean, wearing white clothes, has propitiated the *Aśvini* twins, cows and brahmins, and held his fast, must collect the herb facing east or north..."[12]

The sixth book of the *CS* begins with a description of '*rasāyanas'*, or herbs and formulations with the potential to rejuvenate and invigorate an individual. The first chapter of this book describes the *kevalāmalaka rasāyana* prepared from the fruit of *āmalaka* or Indian gooseberry. It begins with instructions to the seeker to undergo an elaborate year-long set of rigorous personal disciplines, following which they may enter the forest of *āmalaka* trees, grasp the fruit and pluck it.[13] It is this fruit, when consumed, that becomes a *rasāyana*. One of the key points of interest in the above verses is what Kohn (2013, p. 225), in his pathbreaking work on beyond human anthropologies, refers to as 'modes of communication' that emerge across species. Whether it is being open to plant-'others' as Geissler and Prince (2010, p. 193) refer to them, or what Myers (2015, p. 59), in her work on 'sensing' plants, terms the 'plantification' of humans in their relationship with plants, in this instance, the engagement between the person and the herb appears important for the experience and achievement of its therapeutic/*'rasāyana*' potential. However, one may question whether the fruit is capable of transforming into an agent of therapy (as in the case of *madanaphala*), or *rasāyana* (as in the case of *Āāmalaka*), in the absence of its association with the human seeker, or whether its inherent potential becomes accessible to a person only through their own subjective quest for the therapeutic/*rasāyana experience*. Elsewhere in the *CS*, and particularly in the words of its most famous commentator, *Cakrapāṇidatta*, it is mentioned that plants are sentient (*sendriya*), and, also importantly, that their sentience is reflective of their consciousness (*caitanya*). By suggesting that plants are conscious beings capable of subjective sensory experiences, the *CS*, at the very least, opens up the possibility that the *rasāyana* (and some therapeutic) experiences are transpersonal and co-creative.

Another contention of interest in the above verse is the role that 'touch' and physical contact with the herb play in a person's experience of *rasāyana*. One relevant discussion on 'touch' (*sparśa*) is found in the final chapter of the first book of the *CS*, during a deliberation on the relationship between the mind and 'consciousness', where 'touch' is posited as being of two kinds—sensory and mental.[14] While the former refers to the *experience* of sensory perceptivity, the latter, as clarified by *Cakrapāṇi*, refers to the process of 'contact' between cognitive faculty and physical stimuli. It would not, therefore, be wrong to refer to *sparśa* as an experience born of multiple somatic and mental connections that originate in the individual and through which dynamic trans-physical and trans-psychological networks are formed that enable not only the comprehension of but also the creation of their 'world'. In this context, the role of touch between the plant and person may be understood as facilitating an embodied connection between the person and plant, and perhaps it is through such 'touch' that the *rasāyana* experience attains an embodied substantivity. Such a notion brings to mind Boke's (2019, p. 23) description of how herbalists come to

[12] *CS Kalpasthāna* 1.10 - *maṅgalācāraḥ kalyāṇavṛttaḥ śuciḥ śuklavāsāḥ sampūjya devatā aśvinau gobrāhmaṇāṃśca kṛtopavāsaḥ prāṅmukha udaṅmukho vā gṛhṇīyāt||*

[13] *CS Cikitsāsthāna* 1.3.9-14.

[14] *CS Sūtrasthāna* 30.3, commentary – *yaścaivaindriyakaḥ sparśaḥ sparśo mānasa eva ca| dvividhaḥ sukhaduḥkhānāṃ vedanānāṃ pravartakaḥ* - "In whomsoever there is *sparśa* of two kinds – sensory and mental. Together they create the dual experience of pleasant and unpleasant."

understand plants in terms of a 'personal, sensate, bodily attunement to (them)'.

In *Māvilan* thought, plants possess subjectivities and independent cosmologies that make them important mediums of relatedness between 'persons' whether these be ancestors, other-than-human personhoods, etc., grounding what could be termed the 'transcendental aspect' of human relations. Rituals pertaining to an ancestral association, such as the *tulām vāvu*, or the *karkkiḍaka vāvu* are typically transacted through plants and herbs, including bananas, coconuts, rice, plantain leaves, etc. (Arya, 2022). Forests and shared eco-places are important sites of engagement between *Māvilan* members and deities as well as spirits. These deities and spirits are capable of causing a variety of illnesses, such as madness, malaise, etc., and are also capable of possession. Such transpersonal and cosmological epistemologies are grounded in shared eco-places through plants that also act as media between the physical and transcendental realms. For instance, when a person is considered as having been possessed/afflicted by a spirit, threads made from coconut leaves are draped around them to particular chants. A wide spectrum of ailments, from mental illness (*buddhibhramam*), to conditions such as abdominal bloating (*vayarvīrppu*) are treated through rituals that are conducted using areca nuts, coconuts, turmeric, lemons, etc. (Arya, 2022). These also fashion plants into agents of healing through their porous association with physical and transcendental domains and, consequently, into the sole agents of substantive relatedness between the healer and patient.

In the *Māvilan* traditions, such notions are primarily 'situated' within the forests. Forests are integral to both *Āyurveda* and the *Māvilan* healing traditions, although their encounters and engagements with forest ecosystems are rather different. The *Māvilan* community has historically depended on the forest for basic subsistence, and consequently, forests have served as sites within which their many knowledges and ways of living have evolved (Arya, 2022). To the *Māvilan* community, forests are spaces that cannot be separated from the people themselves; it is inseparable from their cultures of being and knowing while also serving as the foundation upon which identities and livelihoods are constructed. Healing, illness, and well-being are conceived of within an ecology of forest networks, and human agency takes the culturally embedded form of the lived experiences of an 'agentic' forest. In a similar vein, Shepherd and Daly (2021), point out in their study on sensory ecologies in the Amazonia, that to the indigenous people of Amazonia, forests are considered spiritual, social, and intellectual strongholds that have not only shaped but have in turn been shaped by cultures and patterns of engagement by communities with human and other-than-human members, and as such may also be viewed as kindred places within which to optimally understand singular plant subjectivities and agencies.

Māvilan members regularly consume honey-bee larvae (*kuññu tēnīcca*) both for subsistence and medicinally, which they collect directly from honeycombs. They ensure that only some parts of the combs are brought down and that sufficient eggs are present in the remnants for a new generation of bees to survive and flourish. Before a tree is cut for subsistence or medicinal purposes, a *Māvilan* tradition involves the following

> "The tree is visited a few days before it is cut to see which other birds or animals live on it. It is ensured that no eggs and nests are harmed. If any are found, they are gently taken and put on another suitable tree. A prayer is spoken to all the birds and animals that live in the tree. It is a prayer for them to safely leave the tree. It is a prayer for them to find another home. (Kāli, Personal interview, November 14th, 2020)."[15]

The *Māvilan* tribe also assists this transition process for the birds and animals in various ways. A similar process was followed on agricultural lands (the *Māvilan* tribes traditionally practiced slash-and-burn cultivation before it was banned) initially before the selected land was cleared of shrubs, animals, insects, etc., and before it was burnt post-harvest. Such care is also evident in *Māvilan* healers' approaches to herb collection.

> "Herbs are only collected in the early morning. They are never collected after the evening sunset as plants are resting at that time. Before entering the forest for herb collection, healers must be clean. They must chant certain prayers, and perform some rituals. Then they collect the herbs they require from the forest. They only collect as much as they need for the day. If roots of certain herbs are collected in excess, the collectors return the same day and bury the remaining roots. They make sure that they are returned to the earth." (Koori, Personal Interview, November 20th, 2020)."[16]

[15] The words in the original *Māvilan* language are as follows, as documented from an consenting community member during field work: "*ill keṭṭiyēṭṭā pēttoñci āveśyakā maṟaṁ kaṭuppkneykk minpe kāṭṭṭ pōt cūt ayitt pacciyā aytt nintippkṇa pētte jīvittēne ayna jīvk cāntḷa āyēnte nintippiye māttt jīvuṁ. maṟaṭṭ paccikkūṭ iṇṭōvṭṭala paccimoṭṭe iṇṭōvṭṭala at māttt jīvuṁ. acce māttt jīyenaka aykk cāla eṭaṅṅēṟā iṇṭōvṭṭā atēne iṇṭonte nintippiye pārttippuṁ. pētte maṟaṁ kaṭppknayykk minpe kūṭoyt pōyeḷa pārttippuṁ. aka ponaṁ kaṭuppenaka bīti aṭippanakaḷā accenne. ā kāṭṭṭ nintippkṇa jīvikḷene ōyit pōyeṭt pārttippuṁ*".

[16] The words in the original Māvilan language are as follows, as documented from a consenting community member during field work - "*maṟntna āveśyak bēṭt taina cappileyā taṇṭā peyyppuṁ. maṟkka maṟnt bēṟtte poritt eṟuṁ. beḷi bṟtālakk maṟnt peyyppal. int mātiri māvilanmārna iṭettela iṇṭ. pacce marnt beḷibṟnaka kālaṭṭenne āk peyyppal. aka sūryayy astamittāl at kayt marnt peyyppalinti. cāneṇṭ*

Interestingly, the *CS* offers a different view. From the time of the *CS*, the practice of *Āyurveda* has not been restricted to the forests. Therefore, the forest is not inseparable from those who seek or practice *Āyurveda*, although it is perhaps inseparable from the *Āyurveda* episteme in some ways. For instance, in the very first chapter of the first book, the *CS* acknowledges that an in-depth knowledge of the 'names and forms' of herbs is best learned from forest-dwellers (as opposed to, say, those, such as physicians, well versed in text).[17] Interestingly, however, such an avowal is immediately followed by a caution that the mere knowledge of herbs' names and forms is insufficient to grasp the true therapeutic potential of a herb[18], which, although logically consistent, does also serve to draw a clear hierarchic distinction between the forest dwellers' transactional herb-based knowledge, and the physicians' privileged, intangible knowledge. The verses, in painting forest-dwellers knowledge as transactional and transient, also clearly define the scope of the forest in terms of a pharmacopeial resource distinct from the knowledge of healing and its knower, a position that is echoed many times within the *CS*. In other words, the 'knowing' of the herb, while dependent upon physical and epistemic proximity to the forest eco-space, is elevated into therapeutic fruition only through the capacities of the 'knower'. The 'knower', thus possesses an identity independent of the forest eco-space, and holds the capacity to convert the tangible and transactional forest resource into a therapeutic agent through the transformational power of their own subjective knowledge networks. While evidently, this position does not represent all the *CS*' views on the forest eco-place, it nonetheless serves to show that contrary views on plant agencies are found within the *CS*, and also draws an important distinction between *Māvilan* and *Āyurveda* engagements with forest eco-spaces, one that is even more pronounced in today's context.

4.3 Healing of natural ecological systems

Since plants are considered as possessing their own agentic subjectivities in both the CS and in *Māvilan* thought and are situated within dynamic and adaptive eco-places, it follows that notions of illness, well-being, and healing extend beyond the human in both traditions. While human conceptions of other-than-human illness must invariably involve a degree of what Nitzke and Braunbeck (2021, p. 345) term 'anthropogenic modification', both systems also possess means by which to allow for non-human subjectivities that may at best be 'sensed', or remain incomprehensible.

Returning to the *CS*' theory of the 'self as the world', in the context of human engagements with other-than-human illnesses, it would follow that conceptions of disease and therapy are not entirely separate entities, but possess fluid definitions and substantive exchanges that take place across the network of correspondences that link the human and the 'other'. The inclusion of *Vṛkṣhāyurveda*, *Hastyāyurveda* (*Āyurveda* for elephants) (Murali, 2002), etc. under the purview of *Āyurveda*, and the use of similar diagnostic and therapeutic tools in humans, plants, trees, and animals may be epistemically traced back to the five-element theory, and the self-as world vision of the *CS*. Consequently, any signs and symptoms observed may be understood in terms of elemental fluctuations and redressed via substantive action.

Surapāla's Vṛkṣhāyurveda is a 10th century text that is primarily concerned with the illnesses of plants and trees and describes in detail the various stages involved in plant growth and sustenance, including land selection and preparation, seed planting, plant nourishment and fertilization, flowering, fruiting, and also diagnosis and treatment. The *tridoṣa* diagnostic framework described in the *CS* is also used to diagnose diseases of trees and plants and to devise suitable ways of treating them (Ramachandran, 1984). Treatments are described for large trees, tender plants, fruiting and vegetable plants, creepers, etc. (Sadhale & Nene, 2009), for conditions including rot, insect infestations, wounds, burns, dehydration, excessive watering, frost-bite and even lightning strikes (Sadhale, 1996).

The *Māvilan* community, too, use medicinal herbs to treat crops and plant diseases. For instance, the rhizome of the herb *Zingiber zerumbet* is used in the treatment of premature wilting of paddy wherein the juice extracted from the inflorescence of the herb is uniformly applied to the paddy crop (Thomas et al., 2017). An affliction called *'nīruveṃbu'* that spreads through water affects certain plants, for which the bark of the *punna* tree (*Calophyllum inophyllum*) is powdered, mixed in water, and applied. During heavy monsoons, the paddy crops frequently become afflicted with two diseases known in the *Māvilan* language as '*taṇuppuveṃbu*' and '*katirveṃbu*'. To treat them, a paste of a plant known locally as *'kayakkam'* is mixed with castor oil (*āvaṇekkeṇṇa*), and applied to the crops (Suresh, 2010). One respondent added that similar approaches are also used

Footnote 16 (continued)

paṇṭāl sūryayy astamittāl tai patte dēṟkṇa nēramakk. acce akṇat koṇṭ ā samayaṭṭ marnt paippalinti. at kaṇakke kāṭṭṭ pōt marntene peyyppkṇaykk minpe vaidyayy brttittala manārṭṭala pōṭuṁ. mantrane paṇṭ kaytālakk marnt paippknat. mantraṁ portttṭlla āḷek icce paṇṭ korlinti pētte marnt paiyppkṇaykk minpe icciyene, manāṟākkaṭu".

[17] *CS Sūtrasthāna* 1.120 - *oṣadhīrnāmarūpābhyāṁ jānate hyajapā vane| avipāścaiva gopāśca ye cānye vanavāsinaḥ||.*

[18] *CS Sūtrasthāna* 1.121 - *na nāmajñānamātreṇa rūpajñānena vā punaḥ| oṣadhīnāṁ parāṁ prāptiṁ kaścidveditumarhati||.*

in the treatment of animals and livestock. (Koori, Personal interview, November, 20th, 2020).[19]

The *Vṛkṣhāyurveda* text in places views plants and trees as the "children" of their healers/caretakers, a position that brings to mind what Salmon (2000), in his exploration of indigenous perceptions of the human-nature relationship, terms a 'kincentric ecology'. Consider the following prayer to a large tree before it is transplanted.

> "Oh tree, I shall take you to a better place from here and I shall water you in such a way that you shall be satisfied. You will grow there and shall have no fear from lightning etc. I shall look after you there, like a dear son." (Sadhale, 1996 translation, p. 47)[20]

As in the *CS*, this verse from *Vṛkṣhāyurveda* emphasizes trees' subjectivities and personhoods through an acknowledgment of their capacities for joy, sorrow, and fear while at the same time refraining from a total anthropomorphizing by remaining un-knowing of the nature of these/other experiences or the modes of relationality etc. However, even during and through (and despite) the process of such anthropomorphosis, it is possible that an intense examination of a plant's attributes and the nature of where it grows, etc. can be modes of knowing and understanding a plant's subjective core and its healing capacities.

5 Conclusion

In this study, we attempt to understand how eco-places contribute to notions of well-being in two Indic healing systems–*Āyurveda* and the healing traditions of the *Māvilan* tribe. In both traditions, ecological spaces are not solely sites of therapy or restoration but vital locations within which cultures of knowledge emerge, and healing identities become constructed. Healing, illness, and therapy take place within such layered places. Human and other-than-human porous world-hoods are shaped within these living spaces, yielding a network of well-beings that are co-created and relationally enabled. Both the *Caraka Saṃhitā* and the *Māvilan* healers, despite their different epistemic frameworks and socio-political situations in contemporary India, emphasize the importance of a balanced engagement between self, community, and the natural environment and situate, in their own ways, understandings of illness and well-being in such co-created 'eco-places'.

[19] The words in the original *Māvilan* language are as follows, as documented from an interview with a consenting community member during field work: "*pacci, kāli, acceḷḷa jīvikaḷeni patte marnt kort cūyyenekaḷa rōgaṁ patte oyit pōyṭet accanne pārttippuṁ".*

[20] *Vṛkṣhāyurvedā, 85-86 (*c.f. Sadhale 1996, p. 47)

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Declarations

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