

## ORIGINAL ARTICLE

# Indo-Tibetan Philosophical and Medical Systems: Perspectives on the Biofield

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## ABSTRACT

The word *biofield* is a term that Western scientists have used to describe various aspects of energy and information fields that guide health processes. Similar concepts and descriptions of energy and information patterns exist in various cultures and have guided whole systems of medicine such as Ayurveda and Tibetan medicine. This article describes Vedic, Jain, and Tibetan philosophical and medical systems' concepts of consciousness and subtle energy and their relationships to health processes in order to foster deeper cross-cultural dialogue on the nature of the biofield. Similarities and differences within the 3 traditions are noted, and suggestions for considering these concepts to extend current biofield research are discussed.

## INTRODUCTION

*Biofield* is a term used by some scientists to describe a field of energy and information that regulates the homeodynamic function of living organisms and may play an important role in understanding basic biopsychosocial functions, especially those directing health, healing, and wellbeing (see Rubik et al, this issue, for a discussion on the history and current use of the term *biofield*). However, this concept of biofield is not new, as the foundations and practice of several ancient philosophical and medical systems are reflective of many contemporary biofield concepts and may serve as a means for more deeply understanding and developing these concepts.

Indo-Tibetan philosophical systems, based on the methods of introspective inquiry, have developed a knowledge of life and healing with surprising similar-

ity to contemporary findings in the modern sciences of biophysics, biology, psychoneuroimmunology, psychoneuroendocrinology, and psychosocial genomics. While Western science has primarily directed its inquiry outwards to observables in the physical world, Asian systems of thought have developed sophisticated meditative methods for inquiring internally into the nature of experience, including consciousness, the body, health, and healing. This form of introspective inquiry has brought forth a view of life and nature that has led to the development of many techniques for promoting health and spiritual growth. Many of the clinically effective "mind-body" therapies in use throughout the world today (such as meditation, yoga, tai-chi, and qigong) originated from Asian contemplative practices and healing systems. As we deepen our research of mind-body medicine and biofield science in terms of both exploring mechanisms and facilitating more nuanced clinical applications of these approaches, we may benefit from understanding the concepts, methods, and descriptions of these ancient systems. In addition, the combination of skilled first-person observation methods with third-person modern science research methods may contribute to a more comprehensive understanding of inherently subjective phenomena, including consciousness, energetic aspects of the body, and mechanisms of health and healing.

Here, we will describe the philosophical and medical concepts that arose from these traditional systems and discuss how these perspectives may inform biofield science. We recognize that there are a multitude of ancient systems that describe concepts related to the biofield and health. In order to form a starting point for dialogue, we focus on traditions that have their roots in Indic philosophical systems, including Vedic, Jain, and Tibetan Buddhist systems.<sup>1</sup>

While scripture and tradition played a significant role in defining the theory and practice of Tibetan medicine and Indian Ayurveda, equal emphasis was laid on an empirical approach based upon inference (Sanskrit [Skt]: *anumāna*; Tibetan [Tib]: *rjes dpag*) and direct experience (Skt: *pratyakṣa*; Tib: *mngon sum*)<sup>2</sup> as a means by which the contents of scripture and tradition were tested. These ancient systems provide detailed descriptions of consciousness, the body, health, healing, and other relevant concepts that may inform contemporary understanding of the nature and function of the biofield and its interactions with mental and physical function. This information is presented in hopes

that it may be useful in bridging ancient and modern concepts of the biofield and guide current and future research in the rapidly growing area of biofield science.

### CONSCIOUSNESS CONCEPTS

To gain an understanding of health and the biofield from the perspective of the philosophical and spiritual traditions of India and Tibet, it is essential to also understand the concepts of consciousness held by these traditions. A wide variety of viewpoints exist across and even within these traditions, yet one theme located in specific schools within these traditions distinguishes between ordinary dualistic consciousness and a primordial consciousness that is nondual, free of afflictive emotions, unconditioned, and continuous.<sup>3-6</sup> Consciousness is intimately related to notions of biofields or subtle energies that regulate health. Each tradition provides systems of spiritual practice that help to guide one to the realization of a nondual consciousness. Such practices involve the modulation of these subtle energies, which leads to greater levels of health and wellbeing.

#### Vedic Perspectives on Consciousness

In several schools of Vedic tradition including Advaita Vedanta, Kashmir Shaiva traditions, and some Upanishadic schools, *Brahman*, a primordial, unindividuated, unbounded Consciousness (capitalized here to distinguish the unbounded Consciousness from consciousness that is filtered through living systems) is held to be of primary existential importance.<sup>5,7</sup> This Consciousness is thought to give rise to all experience, including individual human identity. Implicit in this view is a holistic cosmology, in which all points in space and time and all beings are inherently connected, with the experience of existence arising from this unbounded Consciousness itself. From the Vedic perspective, the experience of the primordial Consciousness *Brahman* can be described as *Satchitānanda*, which includes an embodying universal Consciousness (Skt: *Sat*), a dynamic, comprehending Consciousness (Skt: *Cit*), and bliss Consciousness (Skt: *Ānanda*).<sup>8</sup> This boundless and inclusive view provides a sense of the dynamic creative power inherent in Indian conceptions of Consciousness as the source and substance of creation. From this viewpoint, there is an aspect of Consciousness that is primary and spans the cosmic and personal, rather than consciousness arising solely as an epiphenomenon of neural activity.

#### Tibetan Buddhist Perspective on Consciousness

Tibetan Buddhist traditions also speak of a primordial consciousness or wisdom (Tib: *ye shes*).<sup>9(p32)</sup> To understand this ultimate consciousness, it is first helpful to understand general principles of the doctrine of the 2 truths that are accepted across the Tibetan Buddhist schools (Tib: *bden pa ngvis*).<sup>10</sup> The 2 truths are actually 2 types of existing phenomena: relative or conventional phenomena and ultimate phenomena. Relative phenomena are perceived by a dualistic consciousness by ordinary sentient beings (Tib: *so so'i skye bu*; those who

have not yet directly experienced ultimate reality). Such perception is (wrongly) interpreted to be evidence of a permanent and independent self, which is the “user” or “owner” of other relative conventional phenomena. These phenomena are relative in the sense they have no inherent existence of their own but are completely based on causes and conditions, as well as on their constituent parts and also according to the widely prevalent Middle Way (*Mahāyānaka*) system, based on the individual mind that perceives them, as well as social consensus. Yet when one investigates the true nature of phenomena, including the “self,” using various forms of experience-based analysis, one discovers that one cannot actually find any self-sufficient, independent, or permanent entities. Instead, all these arise through a process known as dependent-origination (Tib: *rten 'brel*).<sup>10,11</sup> Thus, one discovers the ultimate reality.

The consciousness that recognizes the nondual nature of reality, referred to in Middle Way texts as “emptiness,” is known as the wisdom realizing emptiness or in Buddhist tantric contexts, the nondual experience of primordial wisdom itself (Tib: *ye shes*) that has no object.<sup>10</sup> This wisdom is nonconceptual, free of subject/object duality and all conceptual elaborations, and is empty of inherent existence. It is said to have the quality of luminous clarity (Tib: *'od gsal*) and great bliss (Tib: *bde ba chen po*).<sup>10</sup> Some schools emphasize that primordial wisdom is naturally present, though not necessarily manifest or accessible, in all sentient beings.<sup>12</sup> It exists continuously, without beginning or end, beyond birth and death. It is the potential or seed for becoming a fully Enlightened Buddha, but only Buddhas fully recognize it continuously.<sup>13</sup>

Similar to the Vedic perspectives, Tibetan Buddhist perspectives state that ordinary sentient beings are not able to experience primordial wisdom because of dualistic perception. This perceptual habit gives rise to attachment and aversion towards perceived objects and persons. This type of consciousness acts as a cause leading to specific effects—negative in the case of harmful actions and positive in the case of helpful actions. It is the process known, as in other Indian traditions, as *karma*. Ignorance (Tib: *ma rig pa*) regarding the nature of the self and reality is considered the root cause of all suffering, mental and physical. Yet with spiritual training, an individual can fully realize primordial wisdom. The primordial consciousness in Tibetan Buddhist traditions is also viewed as inherently empty of an independent existence and inseparable from the appearance of phenomena vs a self-existing soul or consciousness as described in the Vedic and Jain traditions.

#### Jain Perspective on Consciousness

From the Jain perspective, pure, unbounded Consciousness is described as the natural state of the Soul, which is nonphysical, eternal, immutable, all-knowing, and individual.<sup>4,14</sup> Similar to Vedic traditions, Jain doctrines hold that unbounded Consciousness cannot be fully ever-present in an embodied being, includ-

ing a human being. Unbounded Consciousness is constricted in humans due to our tendencies to perceive subject/object dualism, which causes individuals to engage in habitual patterns of attachment, aversion, and ignorance. This leads to the creation of karma. In the Jain tradition, karma may be most simply defined as a highly subtle matter that arises from our thoughts, words, and deeds and occludes unbounded Consciousness from full manifestation.<sup>7</sup>

Jain traditions describe bounded consciousness (*chetana*), as well as its manifestation (*upayoga*, which consists of 2 generalized elements: cognition and sensation) as essential aspects of the embodied soul.<sup>4,14</sup> From the Jain (as well as Vedic) perspective, soul is different from mind, and in fact, soul gives rise to mind through manifested consciousness. This occurs through the interaction of consciousness with *karma*, and it is the interaction of consciousness with *karma* that determines aspects of mind, subtle energy fields, and the physical body.<sup>6</sup>

Thus, Vedic, Jain, and Tibetan Buddhist perspectives, despite some differences, provide descriptions of a primordial consciousness that is nondual and blissful in nature, as well as an ordinary dualistic consciousness that produces negative habitual patterns and is a cause of ill health. As will be discussed in more detail below, ignorance of primordial consciousness results in disturbances of subtle energy patterns that lead to poor health and wellbeing, while redirecting the subtle energy patterns in prescribed ways can restore health and promote the possibility of nondual experiences.

## INDO-TIBETAN PERSPECTIVES ON THE BIOFIELD

### Metaphysical Descriptions and Relevance to Mind-body Health

Perhaps an analogue that at least partially corresponds to the more modern concept of the biofield is the term *subtle body* used by Western scholars to refer to a nondual ontological category of mind and body found in Asian and non-Asian philosophical and medical traditions.<sup>15</sup> Although exact translations of the term *subtle body* may not exist in these traditions, the term has been useful for Western scholars to denote a novel category of mind-body not found in Western-based models of Cartesian mind-body dualism.<sup>15</sup> Subtle body concepts in these traditions assume a common basis or substance on which both mind and matter depend. From this framework, mind and matter exist along a continuum, with certain levels of consciousness having aspects that are subtler, or more refined, than solid physical matter. These aspects of consciousness allow consciousness to interact with grosser levels of the physical body and material reality more generally. Therefore, concepts of the subtle body provide a model for the interpretation of phenomena that cannot be readily explained from the perspective of Cartesian mind-matter dichotomy.<sup>15</sup> Yet this framework of bidirectional communication with thoughts, emotions, and physical function is aligned with current findings in the areas of psychophysiology,

psychoneuroendocrinology, and psychoneuroimmunology, which uncover important relationships among thoughts, emotions, and autonomic, endocrine, and immune functions that guide health and disease process.

Vedic, Jain, and Tibetan Buddhist traditions have described in great detail anatomically based systems wherein the individuated gross physical body and mind are joined or connected through an intermediate subtle body that is described in energetic terms. The earliest known written origin for many of these concepts appears to be from the Taittiriya-Upanisad and Māndukya Upanisad.<sup>16,17</sup> These energetic concepts of the body may overlap with those described by biofield healers and scientists. We now provide brief descriptions of subtle body concepts in each of the 3 traditions below. However, we note that these are general presentations, as details of the subtle body can vary within each tradition. As its substrate contains both consciousness and matter, the subtle body can be shaped by conscious imagery of the anatomy, giving rise to different descriptions of the anatomy.<sup>18</sup> Such descriptions are primarily used for practical purposes of spiritual attainment and not theoretical ones<sup>19,20</sup>; thus, discrepancies across traditions should not be used to discount the validity of subtle body phenomena. The Table delineates key concepts related to the biofield across each tradition.

### Vedic Perspective

Vedic texts have a richly detailed cartography of subtle energy concepts and energy flow through the body that determine both physical and spiritual wellbeing. In the Vedic tradition, a sophisticated cartography of the *panchakoṣa*, literally “5 bodies,” maps the connections between individuated consciousness and the larger whole. While *koṣa* is usually interpreted as “sheath” or “covering,” the subtleties of the Sanskrit language also allow for multiple meanings and use in multiple contexts, including, “case,” “cask,” “vessel,” “scabbard,” and “treasury.”<sup>21</sup> The 5 bodies, or sheaths, are understood to coexist and interpenetrate, forming 5 basic levels at which human life functions: *ānamayakoṣa* (gross physical body), *prānamayakoṣa* (vital energy or *prana*-body), *manomayakoṣa* (mental body), *vijñānamayakoṣa* (intellectual body), and *ānandamayakoṣa* (causal bliss-body). The description of these bodies and their functions is vast, so a full description of their functions is beyond the scope of this paper; however, they are described elsewhere.<sup>22</sup>

Vedic maps of the body also describe a complex network of energy pathways, called *nāḍīs* (Figure 1), through which different types of energy flow. The earliest mention of the *nāḍīs* system is found in the Chāndogya-Upanisad (8.6).<sup>23</sup> In a manner similar to the traditional Chinese medicine concept of acupuncture meridians, from the Vedic perspective, the body is held to be criss-crossed with *nāḍīs*, reported to be 72,000 in number. There are 2 primary *nāḍīs* that channel the energies of *idā* (the passive energy, associated with the moon and the parasympathetic nervous system) and *piṅgalā* (the

**Table Description of Biofield-related Concepts in Vedic, Tibetan, and Jain Traditions<sup>a</sup>**

Concept	Vedic	Tibetan	Jain
Subtle body term(s)	<i>Pañcakosa</i> (5 sheaths): <i>ānāmaya koṣa</i> (physical body); <i>prāṇamayaya koṣa</i> (pranic or bioplasmic body); <i>manomaya koṣa</i> (mental body); <i>vijñānamaya koṣa</i> (intuitive body); <i>ānandamaya koṣa</i> (blissful body) (Sanskrit)	<i>sku rdor je</i> or <i>rdo rje lus</i> (Tibetan)	<i>Kārman sarir</i> (karma body), <i>Tejas Sarir</i> (fiery body), <i>Āhāraka Sarir</i> (translocation body), <i>Vaikriya sarir</i> (transformation body), <i>Audārīka sarir</i> (physical body) (Sanskrit)
Subtle energy/vital force channels; major subtle energy/vital force channels (left/passive, right/active, central); general term for vital force; vital force/subtle energy hubs	<i>nāḍīs</i> ; <i>idā</i> , <i>piṅgalā</i> , <i>sushumna</i> ; <i>prāṇa</i> ; <i>cakras</i> (Sanskrit)	<i>Rtsa</i> ; <i>ro ma</i> , <i>rkyang ma</i> , <i>dbu ma</i> ; <i>rlung</i> ; <i>'khor lo</i> (Tibetan)	<i>nāḍīs</i> ; <i>idā</i> , <i>piṅgalā</i> , <i>sushumna</i> ; <i>prāṇa</i> ; <i>cakras</i> (Sanskrit)
Five elements	<i>Mahabhuta</i> : earth ( <i>prītvī</i> ), water ( <i>apas</i> ), fire ( <i>agni</i> ), air ( <i>vāyu</i> ), and space ( <i>ākāśha</i> ) (Sanskrit)	<i>'byung ba lnga</i> : earth ( <i>sa</i> ), water ( <i>chu</i> ), fire ( <i>me</i> ), air ( <i>rlung</i> ), and space ( <i>nam mkha'</i> ) (Tibetan)	<i>Mahabhuta</i> : earth ( <i>prītvī</i> ), water ( <i>apas</i> ), fire ( <i>agni</i> ), air ( <i>vāyu</i> ), and space ( <i>ākāśha</i> ) (Sanskrit)
Five winds (particularly associated with subtle energy flow): inward moving, descending, equalizing, ascending, diffusive	<i>Vayus</i> : <i>Prana vāyu</i> , <i>apāna vāyu</i> , <i>samāna vāyu</i> , <i>udana vāyu</i> , <i>vyana vāyu</i> (Sanskrit)	<i>Rlung</i> : <i>srog 'dzin rlung</i> ; <i>thur sel rlung</i> ; <i>gyen rgyu rlung</i> ; <i>kyab byed rlung</i> (Tibetan)	<i>Vayus</i> : <i>Prana vāyu</i> , <i>apāna vāyu</i> , <i>samāna vāyu</i> , <i>udana vāyu</i> , <i>vyana vāyu</i> (Sanskrit)

<sup>a</sup> Note that Jain terms follow Vedic terms for many concepts, as the earliest known written origin for many of these concepts appears to be from the Taittirīya-Upaniṣad and Māṇḍūkya Upaniṣad.<sup>16,17</sup>

active energy, associated with the sun and the sympathetic nervous system). According to some yoga traditions, *idā* and *piṅgalā* flow in their respective channels, crossing the central channel (or *sushumna*, located in the region of the spinal cord) at the major energy centers called *cakras* (Skt: *cakra*, “wheel”). In other theories, they simply flow along the left and right side of the spine respectively. But in many yoga traditions, it is the balance of left and right, active and passive, sun and moon, that leads to an inner flow of energy benefiting spiritual progress and physical health.<sup>24</sup>

*Prāna*, an all-pervading life force in living beings and matter, manifests in different ways in the body. *Prāna* manifests in the physical body as the *pancha vāyu*, or “5 winds,” regulating physical processes: *prana vāyu*, *apāna vāyu*, *udana vāyu*, *samana vāyu*, and *vyana vāyu*.<sup>22</sup> The *pancha vāyu* regulate functions at physical, mental, emotional, and spiritual levels and are fundamental to healing and wellbeing in Vedic medicine and Hatha yoga.<sup>22</sup> Dynamic in nature, each *vāyu* moves in a particular manner in specific regions of the body: *prāna vāyu* moves between the base of the throat and the navel and regulates swallowing and mental energization; *apāna vāyu* moves from the navel to the pelvic floor and regulates elimination, reproduction, and immunity; *udana vāyu* moves from the throat to the head and regulates speech, exhalation, and mental effort; *samāna vāyu* moves from the periphery of the body towards the core and regulates digestion, metabolism, and homeostasis; *vyana vāyu* moves from the core outwards to the periphery and regulates movement and circulation.<sup>22,25</sup> The *pancha vāyu* are also associated with a broad variety of physical and psychospiritual functions, and particular Ayurvedic treatments and prescriptions as well as yoga practices are used to enhance health and wellbeing through balancing flow of prana in the *pancha vāyu*.<sup>25</sup>

### Tibetan Buddhist Perspective

Tibetan Buddhist tantra texts view the human body also as consisting of an invisible subtle anatomy interpenetrating both the gross physical body and mental consciousness that serves as the mechanism underlying mind-body processes. In order to understand the existence and function of such a subtle body, it may be helpful to understand Indo-Tibetan cosmology. In this view, there is a primordial energy, though inherently empty of intrinsic existence, that can be discriminated into 5 aspects, symbolically referred to as the 5 elements (Skt: *mahabhuta*; Tib: *'byung ba lnga*): earth (Tib: *sa*), water (Tib: *chu*), fire (Tib: *me*), air (Tib: *rlung*), and space (Tib: *nam mkha'*); though technically not an energy, space allows the other elements to function.<sup>26</sup> These concepts of the five elements also exist in Vedic teachings and are espoused by Jainism (see Table 1 for details).<sup>27,28</sup> The elements and their functions underlie all aspects of phenomena from external forms in the environment to gross physical anatomy to subtle anatomy to psychological states and to the subtlest levels of consciousness. As these elemental energies form the basis of all dimensions of reality, these dimensions are related whereby grosser levels can influence more subtle levels and vice versa.<sup>26</sup>

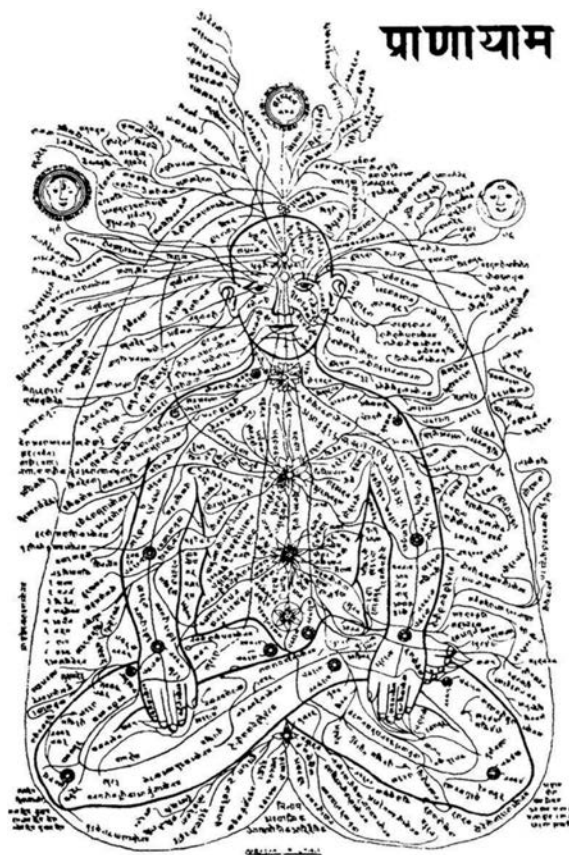
Tibetan medical texts briefly refer to a subtle level of anatomy composed of the 5 elements akin to aspects of a subtle body,<sup>29</sup> though such concepts rely heavily on Tibetan Buddhist tantric texts where they are more fully developed.<sup>30-32</sup> For example, in Tibetan Buddhist tantra, descriptions of a subtle body known as “vajra body” or indestructible body (Skt: *vajradeha*; Tib: *sku rdorje* or *rdo rje lus*)<sup>33</sup> refer to a network of invisible energy channels (Tib: *rtsa*), of which there are said to be 72,000,<sup>33,34</sup> which echoes Vedic teachings on *nadis*. *Rtsa* literally means “root” in the Tibetan context.<sup>30</sup> These channels do not

necessarily resemble a closed circulatory system that one might imagine in the case of the blood circulation system but may more accurately be thought of as an open system with the channels having open endings or ducts, much like a tree root system that can receive water and nutrients from the outside to sustain the life of the tree.<sup>30</sup> In fact, it is said that the channels are the “roots of life” and function “to sustain the life of the person.”<sup>30</sup> Similar to Vedic descriptions, Tibetan Buddhist tantra describes 3 primary invisible channels called the right (Tib: *ro ma*), left (Tib: *rkyang ma*), and central (Tib: *dbu ma*) channels that are the focus of meditation practices. Similar to Vedic teachings of *cakras*, Tibetan Buddhism describes the formation of energy nodes or “wheels” (Tib: *'khor lo*) at strategic locations along the channels, from which other channels branch off.<sup>35</sup>

*Rlung* (pronounced “loong”) is the principle aspect of energy that flows through the channels, and vital essence energy-drops (Tib: *thig le*) flow through the *rlung*. This subtle level of *rlung* is closely linked to mental consciousness. *Rlung* in general refers to forces that manifest themselves physically with characteristics of the wind element, including movement.<sup>30</sup> On a gross subtle level, the Tibetan medical system describes 5 subtle “winds” in a manner similar to the Vedic teachings on *vayus*. The 5 main types of *rlung* in the body organize functions related to movement, including blood, nerves, muscles, breath, bowels, food, and thoughts, and the branch *rlung* support sensory perception.<sup>30</sup> At the more subtle level of the “vajra body,” *rlung* is able to move through the gross body without being obstructed by visible structures and is therefore considered subtle.<sup>30</sup> It is further said that the mind rides on the currents of *rlung*.<sup>30,36</sup> A traditional analogy relating mind and *rlung* is that the *rlung* is a blind horse and the mind is a lame rider and they always move together and affect one another.<sup>36</sup> Therefore, meditation practices, as well as ordinary thought patterns and emotions, have a direct impact on the flow of *rlung* and thereby affect the physical health of an individual. The modulation of *rlung* during meditation practice may be a key mechanism of action for the calming effects on the physical body.<sup>36</sup> This more subtle level of the elements, or subtle body, can be detected through direct experience of practitioners engaged in meditative practices. Research has begun to examine the impact of Tibetan meditation practices that explicitly engage the subtle body on clinical and physiological outcomes.<sup>20,37,38</sup>

### Jain Perspective

Jain understanding on aspects and movement of subtle energy such as *prāna*, *vāyus*, the *nāḍīs*, and *cakras* parallel those of Vedic literature and so will not be rediscussed here. Similar to Vedanta, Jainism also describes different subtle bodies that result from the interaction of consciousness with karma and which guide mental, emotional, and physical health. From the Jain perspective, the constitution and function of the organism ultimately relates to the interactions of



**Figure 1** Graphical depiction of the *nāḍī* system from Vedic teachings. Early descriptions of the *nāḍīs* were described in the Chandogya Upanishad (8.6), estimated in the early part of the first millennium BCE.<sup>22</sup>

consciousness with karma and the resulting vibration through specific energetic bodies.

Jains describe a highly subtle body, the *kārman sarir*, that surrounds the soul and with which consciousness emanating from the soul interacts (Figure 2). Jain teachings describe the interaction of the soul’s consciousness with the karmic field, producing emanations termed *adhyavasāya*. *Adhyavasāya* are described as 2 types: psychical and physiological. These *adhyavasāya* are thought to be energetic in nature and are described in a manner that bears resemblance to descriptions of electromagnetic fields.

The physiological *adhyavasāya* are described as regulating the physical body, including the body’s general makeup and functions understood in Western medicine to be governed by the genetic, endocrine, and autonomic nervous systems. In Jain texts, *adhyavasāya*, as it reflects the morphological and emotion-producing *karma* radiations, reflects an intelligence that is instantiated in and facilitates the regulation of bodily functions down to the cellular level.<sup>14</sup> These descriptions may provide a theoretical framework for understanding what some healers and body workers have described as “cellular” and “physical” memory, particularly as it relates to trauma.<sup>14</sup>

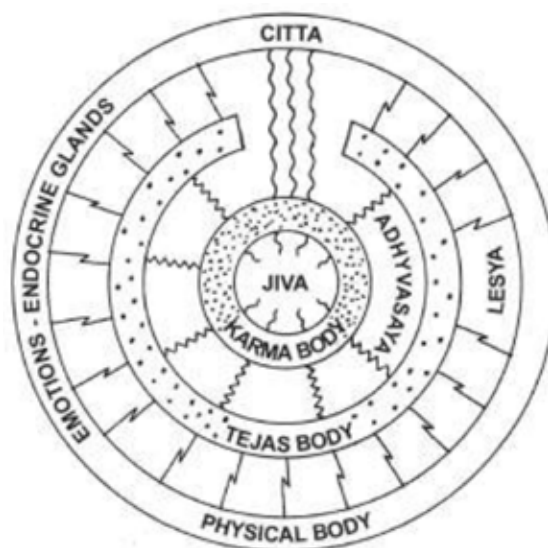
Jain philosophy also describes another form of karmic vibrations termed “psychical” *adhyavasāya*. These psychical *adhyavasāya* interact with another subtle

body called the *tejas sarir* (“fiery body”). The *tejas* body primarily functions to support and manage mental and physical health and does so through the help of *prāna* or life-force energy. The *tejas* body uptakes *prāna* through activities such as breathing, direction of awareness, visualization, and the cultivation of specific emotions.<sup>22</sup>

The *tejas* body and *kārman* body are described as forever interacting while the soul is embodied and are often called together, the *suksma sarir*, or subtle body, which is described as luminous by nature. The *suksma sarir* as described in Jainism appears to be similar to the *suksma sarir* as described in Vedanta.<sup>39</sup> This subtle body is described as being bound to the soul until the soul is liberated. Therefore the subtle body, informed by and interacting with *karma* (our thoughts, words, and deeds), exists to guide the mental, emotional, and physical activity of our being.<sup>14</sup> The *suksma sarir* may bear the greatest correspondence in Jain tradition to what is currently described as the “etheric body” in Western teachings and particularly relevant to current concepts of the biofield.

Jain further describes the psychical soul emanations (*adhyavasāya*) interacting with the fiery (*tejas*) body, to produce a set of vibrations termed *lesya*. *Lesya*, often described as the “colors of the soul,” are said to reflect the mental and emotional state of the person and are considered dynamic in nature. Jain writings describe *lesya* as providing bidirectional communication between the subtle and physical bodies, linking the vibrations of the soul to thoughts, emotions, and physical manifestation. In Jain texts, *lesya* radiations have been specifically described as interacting with the endocrine system and the central nervous system. There may also be a correspondence between the Jain concept of *lesya* and what medical intuitives have described as the “auric field,” although this has not been empirically investigated. In addition, other subtle bodies are described in Jainism and Vedanta (ie, *Vaikriya* and *Āhāraka* bodies), which may provide an ancient theoretical, observer-based framework for understanding the phenomenon described in the West as distant healing.<sup>6,22</sup>

In summary, while there are differences among the Vedic, Jain, and Tibetan systems of subtle body anatomy, it is noteworthy that all traditions speak of subtle body concepts and that the *prānamayakoṣa* (Vedic), *tejas sarir* (Jain), or *rdo rje lus* (Tib) are particularly described as subtle energy bodies that regulate the body and mind. All traditions also delineate subtle energy pathways (Skt: *nāḍīs*; Tib: *rtsa*), and centers (Skt: *cakras*; Tib: *khor lo*) that play a large role in maintaining the function of the physical, emotional, spiritual, and mental state of the person. Finally, all traditions point to the importance of regulating subtle “winds” (Skt: *vāyus*; Tib: *rlung*) through spiritual practices (such as meditation and yoga) for mental, emotional, physical, and spiritual health and development. In this way, each tradition notes the importance of these subtle energy bodies and pathways to connect consciousness with mind-body health.



**Figure 2** Simplistic description of Jain theories regarding the relationship between the embodied soul (*jiva*), consciousness (*citta*), and the interaction of consciousness with the subtle bodies (*karma* body, *tejas* body, physical body): Jains describe the rays of consciousness from the soul as interacting with the karma body to give rise to subtle vibrations (*adhyavasaya*) that influence the makeup and dynamics of the fiery (*tejas*) body and thus impact physical and emotional functioning. The interaction of *adhyavasaya* with the fiery body also gives rise to organized biofields of information that relay one’s psychospiritual state (*lesya*). Image source: <http://www.jainworld.com/jainbooks/karma/ch8.asp>

## INFLUENCING HEALTH AND DISEASE: THE ROLE OF THE BIOFIELD

Concepts of health in Indo-Tibetan medical systems are deeply rooted in the cosmological and anatomical systems described above. Health is the dynamic balance of the spiritual, mental, emotional, physical, interpersonal, and environmental aspects of the organism. The fundamental significance of the interconnected nature of consciousness, primordial elements, subtle energy, and the physical body give rise to a concept of health based on a harmonious flow of life-energy. More specifically, the elements are considered the primary organizing factors in the body that can be thought of as energy patterns, with each individual having a unique combination at any given time and place. Differing combinations of the 5 elements form 3 main types of energetic patterns (referred to as *dosas* in Sanskrit and *nyes pa* in Tibetan) that make up an individual’s constitution and regulate mind-body processes.<sup>29</sup> The 3 types of *dosas* are commonly translated as wind, bile, and phlegm (Skt: *vata*, *pitta*, and *kapha*; Tib: *rlung*, *mkhris pa*, and *bad kan*). Diagnosis and treatment is highly individualized based on these energetic patterns. Emerging research on Ayurvedic and Tibetan medical practices suggest promise for a variety of health outcomes, including diabetes, rheumatoid arthritis, coronary artery disease, and peripheral arterial occlusive disease, although larger more rigorous clinical trials are needed.<sup>40-44</sup>

The imbalance of these energy patterns is what leads

to disease, and healing is the process of restoring the harmonious flow of subtle energy. The elemental energies are conjoined with basic psychological processes of attachment, aversion, and ignorance, which in turn impact the flow of *prāna* and the balance of the *dosas*. The flow of energy through the body directs the health of the organism, including mental and physical health.

For example, Vedic and Tibetan accounts describe the disturbance or the lack of free flow of *prāna* into the *sushumna* or central channel as not only causing psychic energy (*prāna*) imbalances but also possibly leading to severe psychiatric disorders. At a more fundamental level, Buddhists attribute the blockage of the nodes to a deep identification to a sense of self that is permanent, self-sufficient, and separate based on dualistic perception, which is held to be the source of all suffering<sup>45</sup> and rooted in cognitive-behavioral patterns of approach, avoidance, and ignorance.

In Buddhist theory, patterns of approach and avoidance originate in ignorance about reality. The organism is ignorant of nondualistic knowing, or primordial wisdom, thus the source of its suffering is the excessive attraction towards pleasant and excessive aversion of unpleasant objects. This is the root cause of an organism's antagonistic relationship with its environment. Impulses activate reactions at the gross level of *prāna* and mind: first, contact leads to pleasant, unpleasant, or indifferent sensations, which in turn activates feelings of attraction, aversion, or indifference. These in turn lead to approach, avoidance, or indifferent behaviors. Conditioning occurs which can lead to maladaptive patterns and eventual psychiatric or physical disorders. Vedic, Jain and Tibetan Buddhist texts describe these maladaptive patterns as "poisons" (Skt: *kleśas*, Tib: *nyon mong*s); they include greed, hatred, conceit, delusion, lust, and ill will.

An important aspect of these Indic and Tibetan traditions is the deep description of practices that are meant to cultivate mind-body health through practices that liberate consciousness from conditioning through facilitating a greater flow of life energy and therefore improving health. A variety of mind-body practices, both ancient and modern, have been developed to help restore health by harmonizing the flow of energies. Through a series of basic breathing practices to advanced yogic exercises, the practitioner seeks to unknot the blockages and facilitate the free flow of psychic energy into the central channel, resulting in the possibility of deconditioning negative patterns in the system. The flow of psychic energy freely into the central channel creates the concurrent consciousness to be free from dualism and abide in a state of nondual awareness.<sup>22,25,33</sup>

The use of meditation, yoga, and other related practices such as qigong and practitioner-assisted biofield healing practices serve a similar purpose in that they also facilitate the clearing of energy channels related to mental, emotional, and physical ailments. In freeing and balancing the energy, the mind, emotions, and body are then brought into greater harmony. Thus

these types of "mind-body" practices, as they are described in the West, are understood as practices that have direct influence on consciousness and the vital energy body and thus affect the mental and physical body as well as gross and subtle behavior that would serve to alter conditioning and habitual patterns on the deepest level to promote further health and wellbeing.

### Summary: From Consciousness to Physical Manifestation and Constitution

Regardless of the metaphysical differences in philosophy, these Indo-Tibetan perspectives hold the following points in common:

1. There exists a primordial, nondual consciousness that is not affected by conditioning.
2. All phenomena are understood to be composed of elemental energies ranging from gross to subtle levels, thus providing a basis connecting external phenomena, the physical body, subtle body, and consciousness.
3. The biofield is described using concepts of subtle body anatomy. Dualistic perception in interaction with the environment gives rise to psychological reactions (including attachment, aversion, and indifference) and influences the flow of subtle energies. Subtle energies in turn regulate the psychological and physiological functioning of the organism.
4. It is the interplay of these psychological patterns with the elements that form the individual's constitutional makeup, including the state of physical and mental health. Health and wellbeing correspond to harmonious energy flow. Disease corresponds to disruption or chronic imbalances in this harmony. Healing is the restoration of harmony.
5. Specific practices, including but not limited to meditation and yoga, are recommended to facilitate healing through influencing the practitioner's state of consciousness and subtle body.

### IMPLICATIONS OF INDO-TIBETAN PERSPECTIVES FOR BIOFIELD STUDIES

Whether or not one subscribes to the cosmology and metaphysical concepts described in this article, it is interesting to contemplate whether and how these first-person, observer-based knowledge systems present in Indo-Tibetan and other ancient systems of medicine may guide us to better understand the linkages of biofields and health. How may these philosophical systems be of value in the modern world of science and healthcare?

On the physical level, a fruitful avenue will be to link these medical and philosophical systems of diagnosis and treatment to modern medical biomarkers. Because these systems of medicine are holistic by nature, systems-based biology approaches may be of significant promise to help link the "diagnostic" or constitutional types with modern medical biomarker patterns. This bridging of Eastern and Western concepts has been reflected in Ayurvedic research: scien-

tists have reported on medically relevant differences in Ayurvedic constitutional types based on genetic profiling.<sup>46</sup> Further, researchers at the Sino-Dutch Centre for Preventive and Personalized Medicine, Zeist, the Netherlands, have reported on differences in metabolomics profiles and apoptosis regulation in rheumatoid arthritis patients based on the Chinese medicine differentiation of “hot” and “cold.”<sup>47</sup> Importantly, this information may guide treatment options and thus the use of Chinese medicine concepts and relatively simple, low-cost methods of diagnosis may prove useful for health assessment and treatment even with allopathic approaches. A growing number of researchers are exploring the interface between “-omics” (eg, metabolomics, genomics) measures as a method of investigating traditional Chinese medicine herbal treatments (which are based on matching the herb with the existing constitution and imbalance) as a potential platform for further drug discovery.<sup>48</sup>

The marriage of systems-based metrics for evaluating traditional medicine treatments does not need to be limited to herbs alone. For example, researchers in our group are currently conducting a study examining short- and longer-term effects of a whole-systems, Ayurveda-based health treatment on health-related outcomes, including the microbiome, heart rate variability and electroencephalography, telomerase activity, epigenetic signaling, and inflammation. The study will include examining relationships of constitutional types themselves with biomarker patterns.

On a more direct level with respect to biofield studies, there is a richness of information from these traditions that could be applied to the further study of biofield interactions and health. For example, one can explore the premises of Indo-Tibetan philosophies in terms of certain emanations within the biofield being electromagnetic, the reportedly strong relationship of biofield fluctuations to mental and emotional states, and the subsequent relationships of these fluctuations to the endocrine and autonomic nervous system. Since the biofield is thought to reflect emotional states in a particularly salient way, aspects of the biofield that are amenable to reliable measurement (which may include but may not be limited to electromagnetic fluctuations from the body such as biophoton emission and novel applications of electrophysiology)<sup>49</sup> could be added to existing studies that examine neuroendocrine and autonomic responses to pleasant and unpleasant stimuli. Algorithms that connect biofield-based responses to these bodily functions in response to emotional states could be a valuable way to examine the relationship between emotions, vital energetic fluctuations in the biofield, and biological responses in the body. Furthermore, inclusion of first-person methodologies that take advantage of individuals trained in awareness of subtle energies may provide an important bridge in understanding how traditional theories of subtle energies relate to modern measures of biofield activity and biological systems. This pro-

posed research would, in essence, be an extension of the current work being done in the scientific fields of psychophysiology and psychoneuroendocrinology. As our technology and abilities to collect more “real-time” data on fluid markers grows (for review, see Sackmann et al, 2014<sup>50</sup>), this work may be even more feasible and fruitful in the near future.

Finally, several have noted the possibilities of examining biophoton emission as a potential measure of biofield activity, and at least one scholar suggests that biophotons are the intermediary between karmic vibrations and genetic control.<sup>14</sup> Cell-cell signaling via biophoton emission has been reported in several studies,<sup>51</sup> reflecting a concept of a subtle body of light that regulates the physical body. Coherent biophoton signaling has also been suggested to perform many regulatory functions,<sup>52</sup> including cell-cell orientation detection,<sup>53</sup> neurotransmitter release,<sup>54</sup> and long-range interactions observed for leukocyte respiration.<sup>55</sup> These data suggest the functionally important existence of a light body that operates in a manner quite similar to the Jain concept of the *tejas body* and the Vedic concept of *prānamayakoṣa*.

Examination of broad interdisciplinary goals such as testing the possibility of biophoton emission as a mediator of karma on functional genomics remains in the future. However, such a future may not be extremely distant, as biofield-based therapeutic approaches have been reported to change gene expression,<sup>56</sup> and these data have a strong basis in human psychosocial genomics.<sup>57</sup> Similarly, decreases in ultraweak photon emission in the hand after meditation have been reported,<sup>58</sup> suggesting one means of detecting physical correlates of spiritual practices that interact with the biofield. With appropriate funding, there are ample opportunities to design and conduct studies examining the potential links with biofield practices and biophotonic emissions in cell, plant, and human models.

To facilitate greater crosscultural understanding of biofield descriptions, qualitatively based studies that investigate and describe the *lesya* and similar psychic energy fields that are seen and reported by adept monks and nuns could be compared with the “aura” that is seen by Western clairvoyants to determine whether these auras are indeed seen reliably crossculturally and whether they correspond to and predict specific mental and/or emotional states. The initial dialogue between Eastern and Western spiritual practitioners around concepts and experiences of the biofield will be valuable in and of itself to generate deeper understanding and guide implications for further research.

Finally, the ultimate goal of the Eastern spiritual teachings is to guide us toward actualizing the depths of our deepest human potential and foster our reverence for all life. In as much as these teachings can educate and help us remember the possibilities of the healing potential within us, they will certainly move us toward a better understanding of our own consciousness, the biofield, and health.



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