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Via Kundalini: Psychosomatic Excursions in Transpersonal Psychology

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ABSTRACT: A model of psychosomatic mysticism (PM) is proposed that reintroduces the body into transpersonal psychology. The argument for PM develops links between transpersonal psychology and neuroimmunology and includes scientific notions of the mind as embodied not just in the brain but more widely throughout the body, as well as the comparative analyses of perspectives on the body in various spiritual traditions. PM is used to examine how transpersonal psychology can integrate the body, thus meeting the goals of the clinician, the standards of the researcher, and the emerging needs of psychosomatic medicine. The core principles of PM are explicated, such as: 1) decentralized consciousness, 2) structural phenomenological correlations between the psyche and the body, 3) in-depth understanding of energy as intentionality, and 4) the possibility of actualizing cosmic awareness in the individual psyche. Examples of the clinical use of psychospiritual practices of PM show practical applications of these principles. It is concluded that the studies of the embodied consciousness and subtle energies through PM can help to develop both transpersonal theory and applications.

The relationship between the body, spiritual experience, and the self is an area relatively ignored by transpersonal psychology. As noted by the Templeton Foundation, current scientific and psychological studies tend to dichotomize the human subject (Murphy, 1999a) and can be traced even in recently developed so-called holistic approaches in philosophy of mind such as "non-reductive phisicalism [*sic*]" (Murphy, 1999a, p.xxvii). In this approach, spirit via mind gets associated solely with the brain (Newberg, D'Aquili, & Rause, 2001), while the body remains interpreted as "matter" or "nature," inert to and separate from the manifestations of the spirit (Peters, 1999). Spiritual experience is either marginalized, as in conven-

tional psychology, or at best is considered as epiphenomenal to brain function. In contrast, transpersonal theory acknowledges the phenomenal nature of non-ordinary experiences (Grof, 1994; Leskowitz, 2000; Tart, 1998; Tart, 2000), but still focuses primarily on their possible connections with the brain (Goldberg, 1995; Tart, 1981). Somatic psychology, on the other hand, does recognize experiential connections between the psyche and the body (Caldwell, 1997), but does not either offer a convincing theory of mind-body connection or typically consider spiritual experiences. Contemporary neuroscience makes a sustained effort to show the embodiment (i.e., "embrainment") of the intellectual mind by finding the neuronal network correlates to mental properties (Peters, 1999). In summary, the attempts to demonstrate the neural basis for spiritual experience or even a sustained sense of self do not render a definite scientific account (O'Shaughnessy, 1998; Watts, 1999). Will, choice, desire, insight, revelation and capacity to act remain outside of the reach of inquiry, as if indeed belonging to the Cartesian transcendental thinking substance, "res cogitans" (isolated from "res extensa," the substance of the body).

Significant consonance also exists in the philosophical reflection on brain research and essential religious commitments to understanding of human reality. The new focus in philosophy of mind, the supervenience theory (Murphy, 1999b), suggests the nonhierarchical dialectic unity of brain and mind. But, since current scientific methodologies fail to explain religious experience, there is an emerging need for new theory (Wildman & Brothers, 1999). The need is augmented by incongruence between the perspective on the body as flesh in science, and the acknowledgement of the spiritual faculties of the body in the key Christian concept of resurrection (Peters, 1999) and in the notion of rainbow body in the Eastern religions (Jnanadeva, 1954; Wangyal, 1993; White, 1996).

In psychology, the body is first treated as an intentional or mental image and then reduced to its representation in the neuronal computations in the somatosensory complex in the brain. Lately the theory of representation has faced serious difficulties (Gallagher, 1998; O'Shaugnessy, 1998), opening space for other approaches. Authors, influenced by phenomenology of body-based perception, have made important contributions to understanding of spatial cognition and self-consciousness (Gallagher, 1998; Shapiro, 1985). The dual nature of the lived body is neither strictly mental (intentional) nor strictly physical (Gallagher, 1998). The process whereby the

phenomenological body becomes the suitable ground for spiritual experiences (Levin, 1988) challenges phenomenological research approaches, opening the possibilities for the development of the transpersonal body-theory (Welwood, 1979). This is particularly noteworthy in that the ignorance of the body in transpersonal theory contrasts with the largely body-oriented nature of transpersonal praxis, such as in various transpersonal therapies.

To address this issue, we discuss our model of psychosomatic mysticism (PM) that reintroduces the body into transpersonal psychology. This designates the dimension of spiritual traditions that observe, utilize, and focus on the various forms of spiritual insight associated with the awareness of the lived body. Or better, it relates to the parts of the mystical traditions that recognize the broad body-related manifestations of spirituality. PM is construed via several lines of argument. Firstly, the comparative analyses of spiritual traditions lead to explication of common principles of somatospiritual anthropology; secondly, neuroimmunology shows that the body possesses the material faculties which can mediate the higher expressions of consciousness; and thirdly, the traditional transpersonal systems emphasize the development and use of these faculties. In building our argument, we follow the methodology of the Templeton Foundation series on dialog between science and religion (Murphy, 1999a). According to this approach, insights from the neurosciences, on one hand, and from the integral anthropology of religion, on the other, converge into a theory of human nature (Peters, 1999). To that end, this article examines how body-related phenomenology of consciousness (expressed as spiritual experiences and a spectrum of subtle energies) and neuroimmunological findings complement each other and open an avenue to understanding the wholeness of the self. The PM model can also explain the sizeable and confusing body of findings demonstrating a salutary relationship between religious involvement and health status (Levin & Chatters, 1998) important for wider theory development. This can lead to the potential alliance between transpersonal psychology and medicine in a way that has profound implications. Thus we envision the following flow of argument: the phenomenology of PM in traditional systems plus the molecular biology of neurotransmitters and cytokines both contribute to a psychosomatic theory of consciousness that, in turn, leads to clinical and research approaches based on the knowledge of the embodied structures of consciousness.

We maintain that the theory of consciousness in PM serves as a foundation for many psychospiritual practices in which the psyche is transformed through skillful work with the embodied awareness. These practices can become a part of the healing arsenal of transpersonal psychology. This article also shows how the findings of PM can re-vitalize the progress of the neurosciences by validation of phenomenological insights that highlight connections between health, disease and spirituality, potentially leading to re-evaluation of significant realms of scientific evidence and encouraging new areas of prospective research.

This article is based on approaches used in studying PM by the first author (Louchakova) over 15 years of participatory and ethnographic style research focused on traditional teachers of Hesychasm, Taoist Alchemy, Kundalini Yoga, Shakta Vedanta, and Bektashi Sufism in Russia, India and Turkey. Research involved extensive interviews with living practitioners and teachers of various traditions, as well as longitudinal surveys of students in training in such traditions. Accounts were treated both through content and phenomenological analyses with special attention paid to the relationship between the emerging essential structures, the positioning of bodily awareness, and the developmental dynamics of experience. The authors also analyzed many principal texts of psychosomatic forms of mysticism and used a reference panel of experts to verify conclusions and limit the possibility of biased interpretations. The neuroimmunological part of this analysis is based on literature review and the personal work of the authors.

Spiritual Traditions and the Body

In contrast to psychology and neuroscience, the practice of many spiritual traditions have long understood the body both as a locus of transformations of consciousness (Tirumular, trans. 1991), and as a field of ordinary and non-ordinary experience (Srimad Bhagavad Gita, trans. 1983). In Christianity, this knowledge pertains, of course, to the experience-oriented mysticism, different from and opposed to the traditions rooted in theological formulations or speculative philosophy (Lossky, 1944/1976). Maintaining that the original spiritual systems were the way to understand the mysteries of life and the universe, Bhattaracharyya (1999) in his classic work on the history of Tantra differentiated this body/praxis-oriented tradition as "parallel" to purely knowledge based Vedic forms of spiritual life.

Present to some extent in Catholic and Protestant cultures (Wright, 2000), this "parallel" tradition can certainly be observed in the territories of Eastern Christendom such as in, Crimea, Caucasus, Ural, Siberia, Middle and Central Asia, and India (Kungurtsev & Luchakova, 1997). Gurdjieff (Ouspenski, 1949/1976), Antonov (1992), Harrigan (2000) and Lama Kunzang Rinpoche (personal communication, August 25, 2002) consider that it is the body-based mysticism that contains the "know how" or common base for praxis of spirituality in all developed religious systems. PM addresses those parts of religious traditions that emphasize the whole body as a sum of possibilities of consciousness.

The use of the term "psychosomatic" in regard to mysticism differs from the ways it is used in regard to medicine. Psychosomatic medicine emphasizes the bilateral body-psyche influences, whereas psychosomatic mysticism posits that the spirit, psyche and the body are but the various expressions of one undivided substratum of consciousness. The novelty of the suggested approach for transpersonal psychology does not consist of the validation of the psychological influences on bodily function and health, since these are already well documented. Instead, it consists of bringing attention to the possibility that the altered and spiritual states of consciousness, personality structures and developmental changes can be associated with the particular forms of embodied awareness, mainly the awareness of the subtle energies of the body--and be biochemically and anatomically associated with the body.

PM offers an original way to view the complete structural, operational and essential identity of consciousness with the body. They are the "sides of one coin," mediated by the spectrum of subtle energies. This vision is also radically different from all the modalities in somatic psychology: PM is not about the connection and integration of the two entities, the mind and the body. Neither it is about the connection between the brain-centered mind and the body which is "nature" or "matter." In PM, mental functions, traditionally connected with the brain, are seen as in the body, or are shared between the body and the brain. According to PM, consciousness is the body (not only the brain) and the body is consciousness via the spectrum of subtle energies.

The deliberate theoretical orientation of PM is that the structures of the body and the structures of the objective world are identical, and that the key to the knowledge of nature is to be found in the body (Bhattacharyya, 1999). As we show further in the analyses of

the various forms of PM, this epistemological stance proves to be very effective in development of the forms of practice which cultivate the healthy human being, that is systems such as Hatha yoga (Desai & Gharote, 1990; Gimbel, 1998; Nandoo, 1989; Schell, Allolio & Schonecke, 1994) or Chi Gong (Fukushima, Kataoka, Hamada & Matsumoto, 2001; Trieschmann, 1999; Sancier, 1996). It also results in the prescriptive efficiency of the context embedded psychospiritual practice, sensitive to individual variables of mental health (Bader, 1990; Lake, 2002; Vijnanabhairava, 1979). From the current state of knowledge about PM, effects of such a practice are largely hard to explain. For example, the individualized tantrik practice of "microcosmic orbit" (Yu, 1860/1973) and the breath exercises of Caucasus "kebza" (Yagan, 2000) lead to psychospiritual changes claimed to cause longevity (Gerasimov, personal communication, October 17, 1988). Likewise, the PM based approaches of Ivanov (Hesychasm and Kundalini Yoga), Garmaev (Buddhist tantra and Hesychasm), Gerasimov (Taoist alchemy), and Antonov (Kundalini Tantra, Paganism, and Hesychasm) in Russia claim to cause powerful changes of emotions and meaning, especially helpful to many people during the "perestroika" times (Kungurtsev & Luchakova, 1997; Luchakova, 1998). The knowledge of "ensouled" spiritual body can lead to the understanding of subtle mechanisms underlying spiritual changes in perception, transformations of awareness, emergence of altered states, non-pathologizing characterological transformations, and developmental shifts in self-identity constituting the core of spiritual growth and human completion (Harrigan, 2000; Sovatski, 1998).

Assuming that the praxis of PM comprises a viable base for psychospiritual transformation, the study of PM includes tangible challenges. In the oral tradition, systems such as Kundalini Tantra or Taoist Alchemy were considered as especially powerful, esoteric and secreted from the uninitiated (Briggs, 1938/1998). This gave rise to various misinterpretations in Western literature (e.g., the association of Tantra exclusively with sexual activity and crisis-like spiritual states). Neither of these associations is strictly accurate, as practices involving sexuality or the emergence of crisis-like states represent a very small portion of the experiences associated with Tantra. However, Tantrik practices do potentially provide swift access to the subconscious material that can then be brought to consciousness and transformed.

As a full-being experience-based system of knowledge, PM necessitates participatory research. It derives its theoretical maxims not from discursive thought alone, but also from the direct unbiased apperception of the subtle forms of awareness known as knowledge by presence (Antonov, personal communication, February 6, 1990; Yazdi, 1992). The capacity of the "direct seeing" of the structures of awareness requires for its development specific and predictable forms of ego-transcendence (Antonov, personal communication, September 4, 1990). This practice assumes the characterological transformation of narcissistic traits, the explication of archetypes, and the integration of the collective unconscious. Consequently, researchers must allow themselves to be thrust into a process of intense transformation in order to access the principal findings of these systems.

It should also be noted that PM is primarily based on oral traditions. The few written sources, such as Shakta-Vedanta and Taoist alchemical texts (Avalon, 1922/1974; Yu, 1860/1973), express the developmental transformation of consciousness through the specific use of metaphoric language. Akin to the types of mysticism, mystical language is either positive (cataphatic), descriptive of the phenomena experienced by the mystic, or negative (apophatic), suited for the description of the ineffable subjectivity of pure awareness (Sells, 1994). In PM, the subject of description is "in between" manifestation and transcendence (i.e., consciousness in "becoming"). Therefore, PM largely uses metaphors suitable to describe the subtle events of consciousness but impossible to decipher without having access to the particular "code" of the lineage.

On the other hand, the indications to the original experience of embodied consciousness, which gave rise to particular knowledge, are easily lost in the second hand renditions of the original teachings. For example, the chest-centered embodied form of self-inquiry is found only in the word-for-word direct recordings of the teachings of Sri Ramana Maharshi (Ramana, 1996) and is noticeably absent in all Western written versions of his teachings. Due to these difficulties, researchers tend to notice only the easily available secondary outcomes of the body based mysticisms, such as supposed health benefits of Chi-Gong or Hatha Yoga, possible tantrik enhancements of sexual practices, and the alleged implications of chakra systems. The major attainments of PM (such as the unique phenomenology of *Shaktis* [Sanskrit, powers of consciousness, plural], detailed life-span

views of human development, and the potential for characterological transformation) have remained, until now, relatively unavailable to transpersonal psychology. The authors hope that this understanding of consciousness as embodied helps to overcome the hidden dualism in transpersonal discourse, as critiqued by Ferrer (2000). Through analysis of psychosomatic forms of mysticism, this article examines how the transpersonal can integrate the body, thus meeting the goals of the clinician, the standards of the researcher, and the emerging needs of psychosomatic medicine.

Common Features of Systems of PM

Having their source in the commonality of empirical findings regarding body-consciousness among various traditions, the core principles of PM include decentralized consciousness, structural correlations between the psyche and the body (namely the map of meaningful and essential elements of the psyche and spiritual experiences pertaining to the bodily centers of consciousness), in-depth understanding of subtle energy as intentionality, and the possibility of actualizing cosmic awareness in the individual psyche. In Table 1, we present the summary of the essential features of the various forms of PM. These systems are the integral parts of major religions and are immediately connected with the attainment of the grand goals of human fulfillment--such as Enlightenment, Liberation or Union. This includes Hesychasm in Christianity (Dubrovin, 1990; Spidlík, 1986; Ware, 1986), Sufism in general (Renard, 1985), and especially particular systems including the knowledge of lataif (subtle body centers), such as of Simnani (Elias, 1995) and some sections in the work of al-Ghazzali (Gairdner, 1924/1952) in Islam, Shakta-Vedanta with Kundalini Yoga and Kashmir Shaivism (Briggs, 1938/1998; Muller-Ortega, 1989; Vijnanabhairava, 1979; Woodroffe, 1981) in Hinduism, Buddhist Tantra Vajrayana (Bhattaracharyya, 1999; Lama Kunzang Rinpoche, August 24, 2002, personal communication), Zen and Ch'an Buddhism (Durkheim, 1962; Hershock, 1996), alchemical yoga in Taoism (Yu, 1973), and developed forms of paganism (Johnson, 1998; Yagan, 1984). The use of the bodily centers of awareness is also found in Gnosticism (The Papyrus of Ani, 1998). Health or particular skills-oriented systems of body and energy-work (e.g., Tai Chi, martial arts, Hatha yoga, or Chi-Gong) appear to have developed after, and as the outcrops of, the forms of PM that are

listed in Table 1. However, this is a preliminary classification not covering the diversity of all existing forms of PM. Classification questions regarding the genealogy of the various forms, their mutual enrichment, and relationship between PM and mystical philosophies, such as Persian philosophy of Illumination (Walbridge, 2000) or the neoplatonic thought of Pseudo-Dionisius (Pseudo-Dionisius, 1987), remain to be researched. Shamanism is also not covered here, as the forms of embodied awareness in shamanism are extremely complex and require special research attention. The material in Table 1 is based on the first author's (Louchakova's) field studies. Psychospiritual practices in all the forms of PM utilize awareness, concentration, devotion and worship, as well as imagination. Table 1 names only the specific forms of practice, targeting the main centers of embodied consciousness in particular traditions.

Table 1. Forms of Psychosomatic Mysticism.

Tradition and Methods	**Findings and Implications**
Hesychasm (Christianity). Focuses on the Spiritual Heart Center through practices of mindfulness, inner silence, and Prayer of the Heart.	Describes the association of thinking, imagination, archetypes, sense of self, emotions, various modes of awareness with the chest area. Developed specific methods of embodied contemplation and prayer which can be used in psychology for character transformation, and in medicine for prevention of heart diseases (Louchakova, 2002).
Sufism (Islam). Focuses on the centers of the chest through *dhikr*, specific psychosomatic contemplation of the aspects of God.	Developed spiritual psychology, healing systems and methods of "engineering" of character. Emphasizes community building practices, spiritual dialog and social healing with a significant cultural dimension

Tradition and Methods	Findings and Implications
Kashmir Shaivism (Hinduism). Includes system of subtle centers with the focus mainly on the brain and heart. Has broad spectrum of embodied practices (more than 100 methods) including unusual work with psychological opposites, sensory awareness, beauty, space/time constructs and group-guided practice.	Developed original epistemology and aesthetics, described spiritual developmental and salutary effects of beauty, and suggested individualized methods of meditation for the various types of psyche.
Shakta Vedanta (Hinduism). Focuses on the center of I-consciousness on the right side of the chest through method of introspective self-inquiry (atma-*vichara*) leading to experiential self-knowledge.	Describes practice of absorption in the non-dual consciousness, which has a potential for transformation of the psyche and healing of personality disorders.
Vajrayana (Tibetan Buddhism). Focus on the centers of abdomen, heart, and head with the practice involving breathing, concentration on the subtle forms of energy, visualization and worship.	Specific contribution include in-depth study of compassion, dream work (Stefik, 1999), and integrating of the self via the imagery and work with embodied structures of the subconscious.
Zen and Ch'an Buddhism. Focus on the *hara* center in the lower belly. General method of concentration, called *shou-i,* opens the mind to access the flow of universal energy.	Original psychology describing the "malformations" of the self with the potential for effective actualizing of high productivity, healthy self-esteem, adaptability, and stress resistance.

Tradition and Methods	**Findings and Implications**
Taoist Alchemy. Focuses on 3 *tan-tiens* of intellect, emotions and vitality related to centers in the lower, middle and upper body. Dynamic concentration on subtle energy transforms the whole embodied psyche in the direction of spontaneous perception of Reality.	Developed healing methods for energy-based medicine and transformative work with emotions. Similar to Ch'an Buddhism, Taoist alchemy and actualizes hidden potentialities such as longevity and martial arts prowess.
Contemporary eclectic esoteric schools (esoteric Christianity of Gurdjieff, psychophysical self-regulation of Antonov, Diamond Heart of Almaas, Kebza of Yagan, and Arika of Ichaso) use traditional practices and approaches of PM, adapting them to contemporary cultural environment.	Developed methods of healing, and transformation of the self in cultural contexts to restore its integrity and wholeness. Frequently emphasize relatedness, ethics and the ecological dimension of spirituality.

In agreement with the epistemological study of the Indian philosopher Bhattaracharyya (1999) on Tantra and the Persian philosophers Suhrawardi (1185/1999) and Yazdi (1992), our research indicates that PM builds on the phenomenological direct knowledge of the structures of consciousness through the perceptions associated with the in-depth awareness of the body. However, the various forms of PM seem to emphasize the knowledge and practice of different angles of awareness, as well as aspects of the subtle energy centers, and their practice appears "custom tailored" to the particular needs and cultural environment of any tradition. For example, Hindu Kundalini Yoga focuses on individuation, while Christian Hesychasm focuses on interrelatedness, both requiring balancing the type of self-community relationships congruent with their cultures of origin (e.g.,

the Hindu practice balances the interdependent Indian type of self while the Christian practice helps to neutralize the isolation of the independent Western type of self).

Indian Kundalini Tantra is presented as an example of one system of PM to give a deeper appreciation of such approaches. It proposes an elaborate "anatomy" of the subtle energy system of the human body. It describes, and offers methods of recognition of, 7 chakras that correspond to 7 segments of the body. Chakras supposedly operate as spatially represented domains of stable clusters of psychological experiences (Antonov & Vaver, 1989; Goswami, 1995). For example, the root chakra, identified as an interior space of consciousness appearing when the practitioner focuses attention inside the area between the pubic bone and sacrum, is associated with survival and psychological-social stability. The throat chakra is associated with the development of capacity for discernment, moral sense, congruence of expression, sense of beauty and exaltation (Antonov & Vaver, 1989; Tirtha, 1993). Chakras also serve as entrances into the subtle states of consciousness, and as transformers of the energy/emotions in the alchemical forms of Kundalini tantra. By moving, for example, concentration between the solar plexus and heart chakra, practitioners can cause the transformation of the emotion of anger into the emotion of compassion (Luchakova, 1998; Chia, 1991). In our study, we observed how, by focusing in the various regions of the head chakra, the practitioner can possibly initiate the experiences of clairvoyance, absorption in pure consciousness, light, void, or interior silence.

In the school of Antonov in Russia, attended by the first author (Louchakova), the training included methods for opening various forms of clairvoyance and healing. These faculties were regarded as necessary skills in guidance of the process of spiritual awakening, the major focus of the school (Johnson, 1998). These faculties in Kundalini Yoga schools are regarded not as esoteric, but rather quite naturally appearing in the process of training of concentration, similar to how this fact was noted by Patanjali Maharshi in his classic Yoga Sutra (Bangali, 1990). However, the focus of training in PM is not on the particular faculties but, instead, on the developing of an integral and cohesive self as the foundation to the higher forms of mystical knowledge. Hence in Kundalini yoga, clairvoyance is considered as a distraction unless opened only in a non-egoic context.

Besides chakras, Kundalini Tantra works with subtle centers of consciousness, such as the Center of Individuation on the right side of the chest, and the Center of Cosmic Consciousness on the left side of the chest. The center in the middle of the chest, the Spiritual Heart, is seen as the seat of non-dual consciousness. Dependent on which centers get actualized during the process of spiritual development, one can have a variety of psychological and spiritual experiences accompanying different forms of spiritual awakening. These may progress from gradual deep intrapersonal work, to wider openings of empathic connection to community, and then to ascetic forms of spiritual life characterized by extreme detachment.

Kundalini Tantra also works with so-called spiritual meridians, the vertical dimensions of awareness in the human body. Three of the spinal ones (called Sushumna, Brahma Nadi, and Chitrini) are most important in the definition of the foundations of character and the type of individuation of the practitioner. Kundalini Tantra also assumes that there is a special evolutionary form of awareness, Kundalini energy (see sections on subtle energies for more information on Kundalini), which unfolds in the human body through actualizing at least one of these meridians (Antonov & Vaver, 1989; Harrigan, 2000; Silburn, 1988). According to this tradition, practitioners will have either a predominance of witnessing consciousness, a tendency towards self-actualization, or an action oriented manifestation of spiritual development, dependent on the meridian actualized.

Kundalini Tantra also distinguishes the various stages in the spiritual development of the practitioner, dependent on which group of body centers of consciousness get actualized in the process (see Table 2). It also differentiates the engineered spiritual development via Kundalini yoga practice, and the spontaneous process of spiritual maturation--the so-called Kundalini process. The study of the psychology of the Kundalini process can be very helpful in development of the non-pathologizing, positive methods of psychospiritual guidance.

Table 2. The Meaning-Structures of Embodied Consciousness in Psychosomatic Mysticism.

Psychological Aspects	Zones of the body	Spiritual Aspects
Archetypes, unconscious, embodied awareness of deep characterological transformation	Head	Divine names, finding one's own spiritual family, uncreated light, void, opening of the space of pure consciousness, ego-transcendence
Changes of verbal expression and perception	Neck and collar zone	Rise of discrimination, impossibility to live inauthentic life
Deconstruction of the false (narcissistic) self, rise of true psychological self	Trunk above the diaphragm, chest predominantly	Experience of oneself as pure consciousness, essential Self, later possibilities to experience cosmic Self
Beginning of work with subconscious	Lower body below the diaphragm, trunk predominantly	Paranormal, psychic, non-normative experiences

Note. Developmental process involves changes in perception, self-awareness, identification, values, and personality structure, while spiritual experiences are but landmarks in the overall changes of the self.In the developmental (Kundalini) process, centers get actualized from the bottom up.

In contrast to the example of Kundalini Tantra, Hesychasm (a PM system of the Christian tradition) is presented as another example, though in less detail. Hesychasm does not involve all the cen-

ters of the whole body but, rather, specializes in the knowledge of the centers of the chest in which its whole map of the psyche is contained. It begins its exploration of consciousness with the focusing of the attention of practitioners on the inner space of the chest in the region where "all the powers of the soul reside" (St. Simeon the New Theologian, 1995, p. 73). Theophanis the Monk (1994), who practiced Prayer of the Heart in the 8th century, described the deepening of the awareness of the centers of the heart in the Process of Jesus Prayer:

> "The first step is that of purest prayer,
> From this there comes warmth of heart,
> And then a strange, a holy energy,
> Then tears wrung from the heart, God-given.
> Then peace from thoughts of every kind.
> From this arises purging of the intellect,
> And next the vision of heavenly mysteries.
> Unheard of light is born from this ineffably,
> And thence, beyond all telling, the hearts illumination.
> Last comes – a step that has no limit
> Though compassed in a single line –
> Perfection that is endless.... " (p. 67)

Phenomenological descriptions of the practitioners of PM, similar to this one, widen the horizons of human experience. We believe that once the phenomenological richness of PM becomes more available to science, the adherence to the idea of brain being the only seat of consciousness will be very difficult to sustain. In all of its forms, PM emphasizes living as acts of doing or making something. This process of actualizing (putting into action) possibilities of consciousness is a spiritual practice. Consequently, spirituality is treated not as a separate dimension of life, but as the very praxis of embodied living (Bhattacharyya, 1999; SenSharma, 1990). In its egalitarian stance toward experience, early approaches congruent with PM made no distinction between activities of the spirit and day-to-day activities (e.g., agriculture, cattle breeding, distillation, iron-smelting, etc.), as well as scientific activities like medicine. In that sense, PM presents an expanded form of empiricism or, better, original phenomenology. PM does not discriminate between phenomenal and epiphenomenal, but studies any presentable phenomena to identify the ontological order in the Universe. It assumes that spiritual experiences (such as witnessing, perception of Unity, perception of

non-reality of forms and names, etc.) are inherent to living. The motions of the mind, similar to phenomenological epoche (Sokolowski, 2000), emerge naturally at an appropriate level of development of the self, providing new angles to learning. In the spirit of phenomenological enquiry, PM does not deny as epiphenomenal any experience available to embodied human beings, including experiences of egolessness, light, altered awareness, and divinized collective or cosmic forms of God. The formation of religion/culture/history specific myth or ritual is secondary to this rootedness in the bare experience of living and perceiving. This orientation towards phenomenological, pre-ideational discoveries is invariably found in all PM traditions. Without going into the details of various methodologies of PM, we mention here briefly that its epistemology assumes direct apperception of the structures of consciousness in the body bypassing the input of the senses (Antonov & Vaver, 1989; Yazdi, 1992) and leading to ontological insights based on specific intentional (both willful and spontaneous) works of concentration similar to, but not the same as, Western focusing techniques. Besides concentration, PM uses imagination as a cognitive organ, but differentiates between ego-generated and "revealed" images rising from the matrix of pure awareness (Corbin, 1995).

The phenomenological epistemology of PM supports a theory of embodied consciousness based on the assumption that consciousness (including its expressions as mind, emotions, spiritual experiences) is widely distributed throughout the whole body--and not just associated with the brain. In the following, we examine the possibilities for such a theory to be supported by the current findings of neurophysiology, particularly neuroimmunology, in the analyses of the information transmitting molecular systems within the brain and periphery of the body.

The Scientific Basis of PM

In the late 1960s, neurochemistry listed several types of molecules active in the transmission of nerve impulses (Donovan, 1988). Since then, the rapidly growing discoveries of new neurotransmitters and the introduction of molecular biology to the study of the nervous system advanced the field primarily through the identification of neurospecific molecular components. Molecular biology suggests that there is a correspondence between the atomic content and space structure of a specific molecule and its function. In that

sense, the structural and functional analyses of the systems of neurotransmitter molecules can present new, complementary rather than alternative, approach to consciousness.

There are so far no neurophysiological theories that offer a satisfactory scientific explanation for the phenomenon of consciousness (Newberg, D'Aquili, & Rause, 2001). The phenomenological and functional complexity of consciousness cannot be adequately associated with the brain alone and requires interpretations that take into account both the rest of the body and the social environment (Peters, 1999). On the other side, the phenomenology of PM can consider at least 15 complex major structures of intellect, spiritual experiences, psychological properties, emotions, and levels of perception throughout the body (Avalon, 1922/1974; Goswami, 1995), while about the same amount of centers are possible in the brain. This resonates with a model of the human person as a horizontally-organized psychosomatic unity (Peters, 1999), rather than as a hierarchically-organized spirit-mind-brain-body.

According to traditional neurophysiological theory, body gets reduced to the representation image in the brain and all the perceptions experienced in the body are seen only as the product of functioning of the central nervous system networks. Lately, representation theory has faced serious critique (Gallagher, 1998; O'Shaughnessy, 1998). For example, mental representation is built on proprioception—but to experience the spatially organized proprioception, one already needs a preexistent representation in the brain.

As an alternative to representation theory, Brothers (1997) suggested that mind is "irreducibly transactional" (p.117) and integrates physical, mental, spiritual, and even communal dimensions. Shapiro (1985) in his phenomenological study noted that science has to be attentive to the spatial structures of experience, arising in the context of the body-schema. As we show later, the theory of molecular evolution provides an argument for the association of consciousness with the whole body. For the purpose of this article we have only focused on the data of neuroimmunology and molecular biology that can contribute to the peripheral (non-brain) material foundations of the body-schema. We suggest that actual physical peripheral systems can participate in functioning of consciousness as complimentary to, not instead of, the brain networks. The following argument is based on the assumption that besides the neuronal networks and hierarchies in the nervous system there may be other (e.g.,

humoral and peripheral) systems mediating phenomena of consciousness.

Molecules of Consciousness

The question of the chemical origins of conscious life has been engraved in the European scientific patrimony as far back as the pioneering ideas of Charles Darwin, Louis Pasteur, and more recently, Alexander Oparin (Miller, 2001). According to Oparin's theory of molecular evolution, three-dimensional complex proteins with specialized functions are the material carriers of conscious life in the universe (Lazcano, 1997). Later, neuroscience discovered the neuromolecules which seemed to provide specifically mediating functions associated with consciousness (Fernandez, Ubach, Dulubova, Zhang, Sudhof & Rizo, 1998; el-Far et al., 1998; Linial & Parnas, 1996). These transmitter ligand molecules evolved at least 1000 million years ago. They display the ability to activate ion channels, resulting in the basic neuron activities of excitation, inhibition, as well as biphasic and multiphasic responses.

Classic neurotransmitters such as acetylcholine, dopamine, serotonin, adrenaline and melatonin, participate in the transmission of nervous impulses and mediate learning and memory (Donovan, 1988). However, adrenalin was discovered to also function as a hormone (metabolism modulator) outside of the nervous system. Likewise, melatonin displayed a direct connection with the environment by reaction to the light-dark cycle and 96 % of serotonin was found to be outside of the nervous system. These molecules, specific to transmission of the nervous impulses associated by researchers with the forming of neuronal networks and functioning of consciousness, were from the very beginning, in fact, discovered to be also non-specific to the nervous system. Yet these phenomena received little or no philosophical interpretation. Currently, researchers note that the argument favoring association of behavior and emotions exclusively with the brain is unsustainable because the synthesis and functioning of neurotransmitters in non-neuronal tissues makes it difficult to discretely establish minimum and complex functional levels of organization in the nervous system (Changeux et al., 1998). Even though the function of neurotransmitters may be modified by the context of a particular organ, their presence in non-neuronal organs and cells is suggestive of new aspects in our understanding of consciousness.

The location and production of neurotransmitters and their receptors have been progressively found as ever more decentralized. Classic neurotransmitters (such as acetylcholine and neuropeptides) are produced by non-neuronal cells that are chemically, developmentally, and functionally related to the periphery of the body (Joos, 2001; Hasko, 2001). Their participation in the functioning of the systems of the body other than the nervous system is supported by more and more evidence. For example, acetylcholine, one of the most exemplary neurotransmitters, was also discovered in human non-neuronal cells, the lining of the internal organs, immune cells, and even in bacteria and primitive plants (Wessler, Kirkpatrick & Racke, 1999).

Serotonin, the classic central nervous system neurotransmitter associated with the functioning of the emotional sphere, perception, eating, sleep, and sexual behavior (Donovan, 1988), is also found to participate in peripheral vascular smooth muscle contraction and platelet aggregation (Suzuki, 2001). Serotonin receptors are located in the nerves and plexi of the gastrointestinal tract, the heart, the bladder, the adrenal glands (Gillespie, 1997), and in the pyloric cells of the stomach. There is an abundance of this type of evidence regarding other neurotransmitters. If the specific molecules that transmit impulses in the brain networks are in fact present and locally active throughout the body, can this point to the possibility of *in situ* expressions of consciousness?

Though systemic structures of the brain may be responsible for constancy of self-nonself boundaries (Damasio, 1999), the selfhood of consciousness so far has not been discovered in the brain (Newberg, D'Aquili, & Rause, 2001). There is no evidence of the brain structures providing for the experience of indivisibility, transcendentality, beingness and substantiality of the Self (referring, with a capital "S," to a sense of universal self). This commonly assumed position of consciousness (or self) as confined to the brain is contraindicated in classical texts (Advaita Makaranda, 1990) as well as through the scientific evidence cited here.

Likewise, the immune system in the human body can be considered as an interesting alternative to the nervous system in relationship to the self. The immune system is responsible for sustaining homeostasis, the chemical self that is specific to our individuality. Having no connection with the neurocentric sensory organs, but recognizing bio-invaders through molecular sensors on the surface of its component cells, the immune system serves as an extra-perceptual

organ distributed throughout the body. Phenomenologically as well according to Shakta-Vedanta models (Siddharameshwar, 1998), subtle experiences of selfhood unfold via a spectrum. The ontologically primary Self manifests in the chest, particularly in the area of the thymus, possibly the most important part of the immune system. Then this essential Self through a series of identifications gets associated with the whole body. On the whole, the immune system is distributed through the body. Similar to the sense of self, immune system acts as a principle of differentiation, establishing our chemical boundaries. The spatial structure of the whole body self corresponds with the spatial distribution of the immune system.

The immune system, however, is hardly represented in the brain (Besedovski & Del Rey, 2001), and, more so, is spatially separated from the brain by the hemato-encephalic barrier. The immune system does not recognize the brain as a part of the chemical self and will even attack it in cases of failures of this barrier (Louchakova, 1989; 1990) causing autoimmune diseases of the nervous system. Though the possibility of autoimmune attacks exists regarding some other tissues and organs, it is especially prominent in regards to the brain because, as shown by Louchakova (1989), its very chemical content is perceived by the immune system as alien and provokes the autoimmune conflict simply on contact with the sensors of the immune system. It is interesting to speculate that this relationship is a physical metaphor of the "heart" and "head" opposition described in PM (Yasuo, 1987) and that opposition is not only phenomenological/metaphorical but also has a material correspondent expressed in the immunological relationship between the central nervous and immune systems.

The complexity of the picture has increased further as it has become clear that an extensive cross talk exists between the nervous and the immune systems (Joos, 2001; Hasko, 2001). The immunohormone cytokines were discovered to provide bidirectional communication between the nervous and immune system (Dunn, 2001). Cytokines, the main information messengers within the complex immune networks, have also been recently found to affect the functioning of the major metabolic, behavioral and reproductive mechanism in the human body, the hypothalamus-pituitary axis (Ader, 2001; Hori, Katafuchi & Oka, 2001).

Furthering the evidence of decentralization, immune system generated cytokines affect the neuronal and glial plasticity of the nervous system (Molina-Holgado, 2001; Vitkovic, Bockaert, &

Jacque, 2000). This may mean that the formation of neuronal networks, traditionally associated with the mind, is regulated from the periphery of the body. If this is the case, inferring consciousness associated with the brain alone gets rather problematic.

Component cells of the immune system are equipped to respond to a plethora of soluble chemical messengers including serotonin, catecholamines, neurotrophins, opioids and several neuropeptides that, conventionally, have been considered to be restricted to the neuroendocrine axis (Warner, 1998; Madden, 2001; Serafeim & Gordon, 2001). Immune, nervous, endocrine, and reproductive systems appear to be synchronized, and their common effects are more than a simple sum. The body then has the ability to sense and store the data that can influence the whole being through the system of cytokines, which contradicts the current view of the exclusive neurocentricity of consciousness.

Distribution of serotonin, primarily associated with the functioning of the emotional sphere, through the body provides interesting parallels with the accounts of practitioners of PM. The latter report experiencing at least two sets of emotions–in the body and in the brain. Emotions such as fear have meaningful nuances in the different body zones. For example, the lower portion of the trunk is associated with survival terror; fear in the stomach is described as fear of being consumed; in the heart area as fear of annihilation; and in the brain as fear of losing sanity. The differentiation of these domains of experience, mapped in Kundalini yoga as chakras (Tirtha, 1993), finds correlations with the multiple functions of serotonin and other neuromediators operating in various locations of the peripheral nervous system and non-neuronal tissues of the body.

Melatonin, the hormone of the pineal gland, provides another suggestion of consciousness residing in the whole body, not just the brain. The spectrum of its activities is associated with the sleep cycle, fatigue and circadian metabolic rhythms (Maestroni, 2001; Siegel, Agranoff, Alberts & Molinoff, 1993). Initially discovered in the pineal gland, it is also found in gastrointestinal tract and thymus cells (Bubenik, 2001; Maestroni, 2001). Deep awareness of the pineal gland in PM has been reported as leading to the opening of noetic vision. Melatonin's location in the thymus corresponds exactly to the center in the chest associated with the entrance into the "dreamless sleep body," the space of the unconscious leading to the experience of pure consciousness (Goswami, 1999; St. Simeon, 1995).

New data on neuropeptides, the small neuroactive molecules found in the brain and throughout the body, has skyrocketed over the last 5 years. The neuropeptides demonstrate a variety of functions directly associated with the regions of the body, sometimes strikingly resonating with the maps of embodied consciousness. For example, opioids and endorphins associated with the suppression of emotional and physical pain are both discovered in the areas of the brain where Yoga locates the origins of ego and suffering.

The other example is the lungs, rich with neurotransmitters and immunomodulators substance P and neurokinin A (Kraneveld & Nijkamp, 2001). The lungs also contain specific neurotrophins (Carr, Hunter & Undem, 2001) that promote survival, growth, and differentiation of neurons and immune cells. In the phenomenology of PM, the chest supposedly contains 3 centers of consciousness associated with the different configurations of the self. The fluctuating "I am" sense center on the right side has no anatomical correlate. Its structure, therefore, may be humoral rather than anatomical and may consist of the fluctuating dispersed system of neuropeptide molecules.

Detailed analyses of the correlations between the phenomenology of PM, and functions and locations of the "molecules of consciousness" throughout the body allow us to hypothesize that there may be a certain type of perception associated with the whole body. This system of "sensing" molecules, for example, can account for the experiences of expanded consciousness repeatedly reported in parapsychological and transpersonal studies.

The most striking and convincing evidence of the decentralization of consciousness is the discovery of the "homunculus" in the stomach, the enteric nervous system. According to Gershon (1999), a researcher from Columbia University, the enteric nervous system, once dismissed as a simple collection of relay ganglia, is now recognized as a complex, integrative brain in its own right. PM associates the stomach zone with the location of the chakra *manipura*. The functions of this center of bodily consciousness include establishing the sense of connection with the body, reactions of fear and aggression, and collaboration with the head chakra. Similar functions are found to be associated with the enteric nervous system. This and similar parallels show that the phenomenological findings of PM can point out to the factual elements of human anatomy yet unknown to science.

Repetitive, detailed, and progressively supported by the findings of neuroscience, living accounts of practitioners of PM can

be regarded as an alternative source of potentially valid scientific data. The phenomenological epistemology of PM brings out the theory of consciousness, postulates of which are explicated in the following section of the article.

Decentralization of Consciousness

The central concept to PM is the subtle body (i.e., the temporal structures of the psyche recognized within the space of introspection "inside" the physical body). Within this spatial psyche, there are different domains. Instead of considering just one physical body, PM introduces the notion of the several bodies of different density. For example in Kundalini Tantra, these different bodies include the vital body as the sum of emotional experiences, the body of knowledge as the sum of cognitive possibilities, the body of the mind as the sum of interpretive possibilities, and the causal body as the sum of the possibilities of the unconscious (Sadananda, 1974). The various maps of the bodies may have different degrees of detailing, from simple to very complex. For example, the map from the Hinchgiri lineage of Kundalini Tantra (Rananda, 1933/1983) includes also the body of energies and the body of the "I am" principle, the root of the whole psyche (Siddharameshwar, 1998) that resolves into the subjectivity of pure awareness (Ramana, 1996). Other possible maps of the embodied psyche, such as the imaginal worlds of Suhrawardi (1885/1999) or the map of exteriority/interiority of consciousness of Ibn al-Arabi (1975), require more exploration.

These maps of the embodied psyche are very pragmatic because the psychospiritual practices are usually specialized towards the particular domain of the map. Sometimes practices may be mutually exclusive, like the Sufi practice of self-remembrance (al-Iskandari, 1996) and the tantrik practice of self-forgetfulness (Siddharameshwar, 1998). When adequately applied, self-remembrance builds the stable sense of self while self-forgetfulness removes compulsion and integrates subconscious material. Applied inadequately, these practices can cause serious psychophysical disturbance. The guide in PM should be able to advise the correct method, one adequate to the developmental situation in the subtle body.

Differentiating the experiences of various bodies requires relocation of the center of perception into particular zones of the physical body. Likewise, the emergence of certain strictly defined

psychological and spiritual experiences also depends on relocation of the center of perception. For the psychological experience to emerge, centering has to be not "on" but "in" the location in the body (Antonov & Vaver, 1989; Govindan, 1991). Centering includes not only the three regular coordinates of length, depth and width--but also a fourth dimension of subtlety (see section on subtle energies). This fourth dimension, emerging in the exploration of the inner space of the body, corresponds to the particular type of perception identified by Cameron (2001) as interoception that is considered to be crucial for comprehending psychosomatic processes. The following is an example of a Hesychasm exercise used by the first author (Louchakova) based on Antonov and Vaver's (1989) system that allows accessing the dimensions of consciousness in the chest:

> Close your eyes; imagine and feel that you eyes are moving from the eye sockets back down, to the base of the skull. Move them down through the spine to the space in between the shoulder blades. Your sense of focus will be moving together with your eyes. After you reached the region in between the shoulder blades (you'll experience as if you are smaller in size, and your gaze, in case you open your physical eyes, will be experiences as if having a double location–in the head and in the heart), move your eyes forward into the inner space of your chest. Open your imaginary eyes inside the chest, and experience the interior consciousness close to your Spiritual Heart....

The emergence of various forms of bodily awareness is associated with specific types of emotional experience and developmental dynamics of meaning. For example, the actualization of the religious function of the psyche (Corbett, 1996) has its bodily correlates in the tantrik body of knowledge and the causal body. Besides the structural division of the different domains of the psyche into "bodies," PM differentiates the centers and channels of consciousness. Through the mapping of these centers and channels of consciousness in the body, all the higher functions of the psyche are viewed as connected with the modalities of embodied awareness.

Centers of Embodied Consciousness

As an indication of its psychosomatic sophistication, PM discriminates between various classes of structures of consciousness in the body, such as chakras, centers, or spiritual and psychological meridians (Harrigan, 2000; Antonov & Vaver, 1989). Chakras have been associated with various psychological qualities (Tirtha, 1993), with transformations of emotions (Luchakova, 1998), and also as the loci where consciousness can access its interior aspects.

Major centers are associated with the variety of spiritual experiences. For example, besides the heart chakra, the chest contains three other centers in this view. They are crucial for human completion according to the Vedanta of Sri Ramana Maharshi (Ramana, 1996), Sufism (Elias, 1995), Hesychasm (Spidlík, 1986; Ware, 1986), Gnosticism (The Papyrus of Ani, 1998), and Kundalini Yoga (Antonov & Vaver, 1989; Harrigan, 2000). It is claimed that the core of the interior space of the chest is associated with pure consciousness and, according to Hesychasm, serves as a bridge between human being and God. The ancient Greeks associated this location with "nous," the deep contemplative mind (Spidlík, 1986). The right side of the chest is claimed to contain a center associated with the experience of the individual self. Chest space in general is connected with intelligence, attention, intention, and disposition, will and wish (The Papyrus of Ani, 1998). The left side of the chest, which houses the anatomical heart, also is said to contain the center of cosmic, supramental consciousness. A precise phenomenological description of the experience of this center is in the famous *hadith* given through the prophet Mohammed: "My earth and My heaven embrace Me not, but the heart of My believing servant does embrace Me" (Chittick, 1989, p. 107). In fact, all spiritual experiences can be mapped through the various centers of consciousness in the body. In light of this, rather than speaking of PM as such, perhaps we might as well say that mysticism itself is psychosomatic.

Besides the centers, PM describes the meridians of consciousness that differ from the meridians known in acupuncture. The latter are claimed to provide the current of pranas (see the section on subtle energies) while the former are associated with the predominant positions of the awareness. They are said to contain the flow of Kundalini and define the type of spiritual awakening in the particular person (Harrigan, 2000; Silburn, 1988). Work with these meridians

in alchemical tantra yoga may change the constitution and characterological predispositions of the aspirant (Antonov & Vaver, 1989).

According to PM, the distribution of bodily awareness changes during the life span. For example, initial developmental actualization of the centers of the throat (*Vishuddha* chakra) happens in adolescence and the awareness of the areas of the neocortex (*Sahasrara* chakra) develops only after puberty. The gradual actualization of an awareness of the subtle centers of consciousness formulates the developmental map known in Yoga as the Kundalini process (Harrigan, 2000). Spiritual experiences have a dialectical relationship to the general process of psychological maturation, both being dependent on the same substratum of the subtle energy body. PM has an elaborate map of human development, where spiritual states, rising in a predictable succession, are included as part of the process. The main emphasis, however, is on changes of character, changes of perception, and changes of self- and world-identification. Thus, psyche in PM becomes embodied, and acquires structure and visibility. It also acquires the depth hierarchies through the concept of subtle energies.

Energy as Intentionality, and the Concept of Subtle Energies

PM has developed a number of practical personality theories around the central concept of the essential, free, and changeless Self. These theories consider both Self-recognition and personality development to be mediated by the subtle energy system of the body. Subtle energies provide the link between the embodied spatial structures of the psyche and its content (meaning) and the gradient between the subjectivity of pure Self-awareness and the objectified world.

The principal Energy (Shakti-Kundalini in Hinduism) is the power of pure consciousness to unfold the world of multiplicity (i.e., to present phenomena). It is the impulse of the unmanifest consciousness to become manifest, to self-transcend, and to be "about something." In that sense, it is similar to the notion of intentionality in Western phenomenology (Merlau-Ponty, 1995), but different from the common language associating intentionality with individual will. However, since the non-duality of consciousness is established in PM and the body is viewed as the epitome of the world, PM doesn't experience the difficulties found in Western phenomenology--such as the problem of ontological validity of the theory of consciousness or the problem of inside and outside (Johnson, 1999).

Preliminary analyses show that PM discriminates among several types of intentionality. The primary intentionality is the unfolding of the phenomenal world from the subjectivity of pure consciousness into the subject-object dichotomy. A set of secondary intentionalities is responsible for self-reflection, theoretical thinking, and the actualization of various functions of the psyche. The third is the "reverse" intentionality, providing for the flow of introspection and the availability of the experiences of pure consciousness. This power in consciousness (which initiates, sustains, and *is* the presentation of time, space and all phenomena) is not inferred but perceived directly through specific forms of concentration in the root, heart and head chakras (Antonov, personal communication, February 5, 1990; Hughes, 1994).

PM invites one to position attention at the origin of things, such as the phenomenological origins of will, knowledge, activity, or enjoyment (Bhavanopanishad, 1976). Kundalini yoga, for instance, uses specific dynamic concentrations on motion, time, and emergence to capture the unfolding intentionality (Swami Brahmagyanam, a.k.a. Dina Nath Rai, personal commucation, May 14, 1996). Mastering deep concentrations on various types of intentionality becomes the means of personal transformation.

In Indian religious systems, intentionality of consciousness is personified as the Goddess Kundalini-Shakti manifesting the world (Jnanadeva, 1985; Tirtha, 1993). Energy is given different names and identities in other traditions, but all of them acknowledge its ontological presence (Bobaroglu, personal communication, September 9, 2001). However, the transformative potential of Kundalini is neither researched nor used by Western psychology because it is conventionally reduced to psychosis-like dramatic events (e.g., spiritual emergency). Kundalini itself, as the intentionality of consciousness, is neither discussed nor understood because the outer expressions of the process, such as dramatic spiritual awakening, conceal its developmental essence and lead to the epistemological mistake of giving primacy to secondary events.

Meditation on intentionality as a key to personal transformation is typical to the advanced forms of PM. This focusing targets the subtle space in-between the subjectivity of pure awareness and the awareness of objects. In the psychosomatic theory of consciousness, subject and object are not completely opposite but interconnected via the gradient of subtle energies.

As a specific domain of human experience, subtle energies are very poorly researched and described. From the Aristotelian concept of "energeia" as the "the unfolding actuality that realizes itself in substance" (Steiner, 1978, p. 28), through neoplatonic thought, Islamic mystical philosophy, and Christian disputes on the nature of subtle energies (Pelikan, 1974), the term "energy" has landed in both psychological and natural domains. In transpersonal psychology, subtle energies are usually considered epiphenomenal to the altered states of consciousness emerging in the process of concentrative meditation practice (Goleman, 1977). Medicine, at best, reduces them to semi-hypothetical phenomena in the human body, similar to electricity.

In PM, the spectrum of subtle energies is considered as a special class of phenomena expressing the relationship between the ontologically primary intentional impulse and the living embodied psyche. As mentioned previously, concepts of Holy Spirit in Hesychasm or Kundalini in Shakta-Vedanta are the metaphysical metaphors for the original intentionality. The spectrum of pranas or subtle energies unfolds from "Mother" Kundalini. According to this view, all perceived phenomena are classified according to the density of the subtle energy corresponding to this perception (Mouravieff, 1992). The subtler and epistemologically closer to pure consciousness is the element of the psyche, the higher the level of causality and ontological reality attributed to it.

Is there in PM an emerging junction, an intuited point of contact between the natural and the psychological (i.e., between phenomenology and materialism)? Poortman (as cited in Thompson, 1996), in taking his concept of hylic pluralism (from the Greek *hyle*, matter) from the various mystical phenomenological maps, wrote: "I am attempting to give expression to the fact that it is not in the first place a question of matter as a philosophical point of view ('materialism') but rather a question of several forms or subdivisions of matter [i.e., different densities]" (p. 5).

In PM, the body is manifested from and onto consciousness. Consciousness transcends itself into the body through the spectrum of subtle energies and the body can be folded into consciousness, the Indweller (Mandukyopanishad, 1995). Consciousness-awareness is one with body and meaning, like the dancer and the dance (Dakshinamurti Stotra, 1978). The body is the embodied intentionality-energy, and the vehicle of knowledge (Sri Ranjit Maharaj, personal communication, March 2, 1999). The brain in this approach is con-

sidered the part of the body associated with self-reflection and interpretive thinking. The body-energy-based personality, gradients of subtle energy-intentionality, and the limitless, free, imperishable, and immutable Self are the core categories in PM.

Cosmic Awareness in the Individual Psyche

Specific attention to the very emergence of phenomena and the positioning of awareness in-between manifestation and transcendence gave PM the epistemological possibility to discover the macrocosm within the microcosm, or cosmic psyche within the individual psyche. According to PM, the primary intentionality in the psyche unfolds the two holographic possibilities, individual and cosmic. These two possibilities, nevertheless, pertain to one indivisible consciousness (Mandukyopanishad, 1995). The areas of the body associated with the experiences of cosmic consciousness are the zone of the anatomical heart and the zone of the corpus callosum in the brain. The early forms of Tantra distinguished between the experiences of Ishwara, the Lord of the solid universe, Hiranyagarbha, the Lord of the subtle, and Brahman, Self and the Lord of all. They gave detailed maps of the locations in the body where these forms emerge (Brahmagyanam, personal communication, May 14, 1996; Mandukyopanishad, 1995).

In all forms of PM, it is important for psychological health that both avenues—the individual and the cosmic—are discovered and interrelated within the maturing human psyche. This is especially elaborated in Sufism, where awareness has two eyes: the individual and God's (Chittick, 1989). The individual and cosmic perspectives initially alternate in the teaching, and then converge in the image of the cosmic man (Ibn al-Arabi, 1975).

Thus, the psychology of PM is rooted in the understanding of the intentionality forming the individual and cosmic aspects of embodied psyche. The effectiveness of transformative psychospiritual practices in PM results from working with intentionality and the knowledge of the subtle energies of the body. The Bhavana Upanishad, a very esoteric core text of the tradition, described the unfolding of foundational intentionality through the philosophical diagram of Sri Yantra (Bhavanopanishad, 1976), a detailed map of all the possible types of intentionality and their coordinate meanings.

The transformational impulse in PM acquires the character of an imperative rather than a personal choice (Harrigan, 2000). In

the developmental process, the initial disunion of the body-mind-consciousness has to be replaced by wholeness (Yasuo, 1987). Through a series of distinctly defined stages of maturing awareness and transformations of the psyche, the process unfolds qualities necessary for Self-recognition, and results in the recognition of essential Self. There is no positive transformation without the drive towards the Self, and there is no Self-recognition without characterological transformation. The Self in PM is not conceptual, but experiential, as a direct immediate gestalt of pure awareness devoid of the superimposition of veiling concepts (Kshemaraja, 1990; Vijnanabhairava, 1979). This gestalt of the essential Self has multiple positive consequences, such as better adaptation, healing, and transformation of the psyche (Bader, 1990; Karapatra, 1979).

The above analyses show that the theory of consciousness in PM addresses the essential human features of intentionality ("aboutness"), consciousness, and autonomy (i.e., free will). An understanding of these features is paramount for successful work with the human psyche in therapy (Lewis, 1994). PM's comprehensiveness makes it effective in transformational practice.

So as neuroscience speculates that brain alone is the device in the human body suitable for connection with God (Newberg, D'Aquili, & Rause, 2001), PM experientially shows that both the cosmic form of God and transcendental Subject are discoverable through the specific forms of embodied awareness. Not brain, but the whole of the body, becomes the sensory organ and the field of expression and self-knowledge for consciousness. The Bhagavat Gita states, "...this body is called the field...Know Me [i.e., God-Consciousness] as the field-knower, present in all fields. I deem the real knowledge to be the knowledge of the field and of the field-knower." (*Srimad Bhagavat Gita Bhasya of Sri Samkaracarya,* 1983, p. 403-404).

Research on clinical applications of PM

The theory of embodied consciousness in PM also potentially provides a practical avenue for enabling effective transformative practice. Understanding consciousness as embodied and cultivating the various forms of bodily awareness gives access to in-depth meaning (Antonov & Vaver, 1989; Wall & Louchakova, 1998) and to the foundations of character and constitution (al-Iskandarī, 1996; Antonov & Vaver, 1998; Ware, 1986; Goswami, 1995). De-

veloped spiritual practices, causing strictly predictable transformations of personality and health and an arising of specific spiritual experiences, are common to the traditions of PM considered here. Monitoring the various functions of the psyche may lead not only to spiritual completion but also to better adaptation. Practices can decrease stress through the harmonization of the emotional sphere and support health by the resolution of psychosomatic conflicts (Antonov & Vaver, 1989). We also believe that PM offers a set of interventions actualizing the sense of a coherent self, useful in management of psychological disturbances such as psychosis.

The health-related and character-influencing aspects of practices in PM appear to be quite profound and certainly require more study. The mechanisms of healing may involve activation of biochemical correlates to embodied awareness previously described (see molecules of consciousness section).

There has been some research on the effects of PM practice. For example, a study with volunteers whose ages ranged from 25–70 years (N=500) in Eastern Europe and Russia in the mid-1980s found the following health related effects of PM practice: the percent of people having health complaints among participants went down from 81.2% to 34.3 % after 21 weeks and down further to 21.3% after 63 weeks of training (Antonov & Vaver, 1989; Wall & Louchakova, 1998). In specific groups in this study, neurological/ psychological complaints decreased from 42.8% to 1.3%, complaints related to cardiovascular system decreased from 25.6% to 4.0%, complaints related to gastrointestinal tract decreased from 16.2% to 4.0%, complaints related to respiratory system went down from 17.2% to 2.6%, and complaints related to joints and spine problems went down from 12.8 % to 5.3% of the participants. The noted tendency toward health improvement deserves more attention by future researchers, particularly investigations of both body-centered consciousness models and body-centered spiritual experiences in their relation to health and pathology.

Although little other research has been done on PM per se, in a previously unpublished pilot study conducted by the first author (Louchakova), the PM methods of self-monitoring of emotions were tested over a 3 year period with groups of volunteers interested in personal development. A content analyses of their accounts indicated that there were a number of benefits to this practice, including reports of high degrees of satisfaction, personal transformation, and changes in relationships with family, community and among them-

selves. The practices of PM, adapted to the Western cultural environment, were also noted as effective in the management of several cases of panic attacks, autoimmune disorders (initial stages of multiple sclerosis), chronic fatigue, depression and psychosomatic disorders, as well as with histrionic disorders and cardiovascular disorders (Louchakova, 2002).

Conclusions

By elucidating a theory of PM relevant to transpersonal psychology, the authors hope for the reshaping of transpersonal psychology to include the body. In this new clearing, already registered knowledge of the embodied psyche can get new interpretations, and the new knowledge of the embodied spirit has a space to emerge. If examined, developed and assimilated by transpersonal psychology, this approach could open the possibility for the further development of a number of transpersonal applications, including clinical practices of healing and transformation that can spring forth from traditionally acknowledged spiritual systems.

Eysenck (1997) emphasized that theories integrating mind and body as a continuum are the future of psychological science. As such, they have to be verified by psychological practice and research. In regards to PM, however, succession is reversed: millennia of successful psychospiritual practices warrant elucidation of the essential assumptions of the theory of decentralized consciousness as understood via Kundalini practices of embodied spiritual living. Understanding the ensouled body (Sovatski, 1998) can lead to methods which could change constitutional predisposition to disease and provide new lifespan-oriented models offering a non-pathological psychotherapeutic focus. Through the model of embodied decentralized consciousness, and embodied language and ritual, the cultural diversity inherent to transpersonal psychology can reconcile with the universality of transpersonal ontological hierarchies. Epistemologies of PM can enrich the arsenal of transpersonal research methods and the psychosomatic applications can establish long desired links with medicine. Meanwhile, the careful mapping of the field seems to be the appropriate next step.

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