

A Cartography of Energy Medicine: From Subtle Anatomy to Energy Physiology

Abstract:

The field of energy medicine (EM) is perhaps the most controversial branch of integrative medicine. Its core concept - the existence of an invisible healing energy – has not yet been validated by Western medicine, and the mechanism(s) of action of its techniques have not been fully elucidated. This paper addresses these problems by marshalling several types of evidence: basic science research into electromagnetic fields (EMF), subjective experiences of EM, and clairvoyant perceptions of EM in action. A hypothesis is then developed to explain these finding.

The main components of the human subtle energy system are presented: the “subtle anatomy” of the meridians, the energy centers and the biofield. Several representative EM techniques are then analyzed to determine which specific components of that energy structure they impact. Next, EM’s mechanisms of action are explored by describing how these altered energy dynamics can affect biologic processes. This subject is termed “energy physiology”, in further parallel to conventional medicine’s foundation in anatomy and physiology. Finally, potential research into energy physiology is outlined that focuses on several common but unusual experiences which are not fully explained by the current mechanistic biomedical model. Plausible and verifiable energy-based explanations are proposed for phantom limb pain, emotional entrainment in groups, unusually rapid symptom responses to EM, and the invisible templates that guide cell growth and differentiation.

This outline is intended to serve as a guide to future clinical and research explorations of the multidimensional nature of human beings, as Western medicine begins to more fully understand the energetic components of health and illness.

Keywords: biofield, subtle energy, energy medicine, phantom pain, energy psychology

“There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.” (Hamlet, I.v.167-8)

Introduction:

Slowly but surely, Western medicine is expanding its focus beyond a strictly mechanistic theoretical paradigm: it now recognizes that there is more to health and illness than just the physical body. Over the past 70 years, stress researchers from Hans Selye onward have compiled a growing body of clinical and research data that has forced biomedical science to accept mind/body interactions as a core part of clinical practice. And more recently, many ancient techniques that purport to utilize invisible healing energies have also begun to be accepted into medicine's therapeutic toolkit, under the rubric of "energy medicine" (EM) and biofield science. These healing energies are "the missing link" in understanding health and illness; this paper will focus on what they are and how they might work.

Clinical descriptions and research studies on EM ranging in methodological rigor from case reports to randomized controlled trials (RCTs) are documenting beneficial effects of EM on a wide array of diseases (Ross; Jain). But isolating the active ingredients responsible for these beneficial effects is complicated by the fact that more than 200 separate EM approaches are in use, as recognized by the NIH's National Center of Complementary and Integrative Medicine. How can researchers, clinicians, and patients differentiate Therapeutic Touch from Healing Touch, Reiki from Johrei, acupuncture from acupressure, and so on?

This quandary has been approached by conducting laboratory studies with equipment that can identify the various scientifically established components of these invisible energies (electromagnetic fields (EMFs), biophotons, etc.), in order to differentiate the various EM modalities. These studies are valuable and ongoing, but they generally operate within the bounds of the current mechanistic biomedical model. This paper will offer an alternative – a model of health and illness based on the existence of a subtle energy that is, at its core, not physical in nature, though it may have physical aspects like EMFs and photons.

This paper will be presented as four sections in a conceptual sequence that is intended to be a direct, if multi-dimensional, parallel to the training received by all medical students. Medical school begins with the study of "A&P", anatomy (a detailed description of the component parts of the human body) and physiology (the study of how these component parts interact). Based on this foundation, clinical practice then explores how to treat the dysfunctions that arise among and within the components of the body.

The first section will present the anatomy of the body's subtle energy system, based on pertinent concepts from several healing traditions that explicitly utilize subtle energies in their treatments. Contemporary EM techniques will then be assessed to show which specific structures in the subtle anatomy they each impact. The third section will propose several mechanisms of action by which this subtle energy might interact with the physical body to create physiologic change. And the final section will explore several well-known but poorly understood clinical phenomena, to show how this model of healing energy provides more satisfying explanations than the current biologically based model does. Directions for future research will also be outlined.

Origin of this Paper

The present author's growth as a physician and holistic psychiatrist was catalyzed by exposure to a multidimensional paradigm of health and illness that utilized a novel source of information for scientific investigation: intuitive perception. Several of my teachers seemed able to detect subtle physical and emotional changes that were not perceptible by the five senses. They called themselves "medical intuitives" or psychics, and I was surprised to learn that the use of an

anomalous subjective experience like intuition to enhance medical understanding is found in numerous healing systems, though not in Western medicine.

For example, the widely used energy balancing technique of Therapeutic Touch originated in 1979 out of the partnership between a nurse, Delores Krieger RN, and a psychic, Dora Kunz (Mulloney). In 1988, *The Creation of Health* was written by neurosurgeon Norm Shealy MD PhD in collaboration with Carolyn Myss, a medical intuitive, each offering their perspective on a range of medical conditions; in the process, they demonstrated how the subtle energy model of health and illness could peacefully co-exist with the medical model (Shealy). More recently, clinical psychologist David Feinstein PhD has partnered with Donna Eden, a healer who claims to “see” energy, in developing a range of energy-based self-care and treatment approaches (Eden).

Over the years, I have trained with and consulted with these authors, as well as several other medical intuitives, people who developed their clinically useful skills despite the lack of any formal medical training. I found their insights to be invaluable during 30+ years of clinical work in which I used non-medication approaches, including EM, for the self-management of chronic pain. In that same spirit of cross-boundary collaboration, our common interest in the role of energy in health and illness led several of us to come together as colleagues in writing this paper, to assess the energetic underpinnings of a wide range of energy practices, many of which originated in the world’s great non-Western healing traditions.

SECTION I – SUBTLE ANATOMY

Historical background:

The concept of energy can be found in virtually every medical and healing system around the world. Western allopathic medicine focuses on the biochemical energy that fuels cellular function, as mediated by the chemical ATP (adenosine triphosphate). Almost every other healing tradition has acknowledged the existence of an invisible healing force or life energy. Called *prana* in the Ayurvedic tradition of yoga, *qi* in Traditional Chinese Medicine (TCM), *pneuma* in classical Greece, *ruach* in Jewish mysticism, and *élan vital*, Animal Magnetism and orgone in Western vitalism, the ubiquity of this notion across geographic and temporal boundaries is striking. The free flow of this energy is thought to confer health and resilience on the person, much like the heuristic metaphor of a rapidly spinning - healthy - gyroscope. Even if an outside force like stress knocks it off balance, it will bounce back. But if it spins too slowly (i.e., illness), it won’t be able to recover; it will fall over and die. EM is thus in essence a set of techniques designed to keep our energetic gyroscopes spinning.

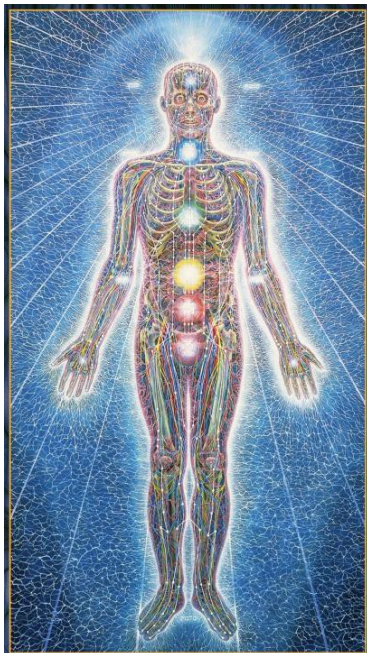
In a related vein, Western medicine has recently proposed a so-called biofield model to encompass these invisible energies. In 1995, the National Institute of Health (NIH) issued a consensus statement, calling the biofield “a massless field, not necessarily electromagnetic, that surrounds and permeates living bodies and affects the body” (Rubik, 2015). These interacting fields of energy and information are currently felt to be endogenously generated (Jain) and are the key to most current attempts to understand EM.

Each of these energy-based traditions developed its own forms of EM: acupuncture, *pranayama*, *qi gong*, etc. Many of these traditions have also developed maps of the energy systems that their methods impact; the term “subtle anatomy” was developed as a contrast to Western medicine’s

gross, or physical, anatomy. Defining this array of energetic structures will help to clarify the similarities and differences among the various energy-based practices.

Best known is the yogic model, which includes three key elements: a vertical axis of energy centers of increasing emotional and energetic frequency (*chakras*), a network of distribution pathways (*nadis*), and an overarching containment vessel made of sheaths (*koshas*) that surround the physical body. These layers range in density from the physical body itself to the vital (etheric) body, to the emotional (astral) body, the mental body of thoughts, and finally the soul (Ballentine).

In parallel, TCM describes energy centers (*dan tien*) and conducting vessels (acupuncture meridians) that are found in the same bodily locations as in the yogic map. Similarly, the contemporary American visionary artist Alex Grey has created images that capture man's multi-dimensional nature (Figure 1), in what might be called a revised edition of *Gray's Anatomy* (Grey). These cross-cultural correspondences suggest that a common underlying mechanism is at work.



atomy

considered the layer of *prana* to be so dense that it was for all intents and purposes a substance that should be considered part of the physical body. This was one of the seven bodies. In contrast, Western scientists felt this “pranic” energy, and its very existence is still doubted. The scientific mainstream has long neglected evidence of its existence, as seen in these three examples of institutional boundary-setting:

- the rejection of Franz Mesmer’s Animal Magnetism by the French Royal Academy in 1786 (Alvarado)
- the discounting by modern physics of findings from the classic Michelson-Morley experiments that actually support the existence of an ether (Rubik)
- the unwarranted imprisonment of Wilhelm Reich, the psychiatrist who worked with so-called “orgone” energy, and whose writings were confiscated and destroyed by the Food and Drug Administration in 1956 (Schatzberg).

But just as the compound H₂O can exist as a solid or liquid or gas, depending on its thermal energy (temperature), so can primordial energy exist in a variety of forms or levels, depending on its vibrational state. By analogy, ice is the dense physical body, water is the circulating vital body of *qi*, and steam is non-local consciousness. The *koshas* (like the aura and the biofield) can

be seen, then, not as the glow emitted by a light bulb, but as a complex structure created as the mist of consciousness condenses into successively more concrete layers of water and then ice.

Another key difference between paradigms is that modern neuroscience sees the brain as the creator of consciousness, while the ancient metaphysical models saw consciousness as a primary force that is independent of matter. In a sign that paradigms are now shifting, this ancient view has been revisited by a panel of leading medical researchers and clinicians with their *Manifesto for a Post-Materialist Science* (see Resources). The authors have reconceptualized the brain as a filter, a receiver of thoughts and awareness – as much a TV antenna as a computer. Research on the quantum nature of consciousness (“steam”) supports this view (Curtis; Hossa).

The study of these non-Newtonian aspects of consciousness dates back to Huygens’ “lumeniferous aether” in the 17th century, with recent attention given to their role in the primacy of consciousness (Kastrup) and the non-locality of consciousness, especially with respect to distant intentionality (Radin), intercessory prayer, and parapsychology (Dossey, 2013). These phenomena may originate at the quantum level (Kafatos), only to cascade into the space/time realm of the physical body as described above. Further discussion of the energetic aspects of the nature of consciousness itself is beyond the scope of this paper.

The map

A more precise model of subtle anatomy was developed about 150 years ago by the Western mystery school known as Theosophy (Bailey). In Victorian England, occultists Alice Bailey and C. W. Leadbeater expanded on the yogic model of *koshas*. They posit that each of the seven primary planes of consciousness has seven discrete sub-divisions of “vibration” or “frequency” (another evocative metaphor), ranging from the highest (1st, 2nd) to the lowest (6th, 7th). Human beings thus contain 49 possible strata in which, and through which, energy medicine can operate. The seven primary planes or bodies, in order of increasing subtlety, are physical, etheric, emotional (astral), mental (thoughtforms), causal (soul), buddhic (group soul), monadic (transcendental), and adic (Source) (Fig. 2). Although Theosophical precepts have been elaborated and expanded by more recent metaphysical studies, their basic schema can still serve as a useful template for the model of subtle anatomy being outlined in this paper. Here is a brief description of each plane (Friedlander):

- *Physical* – the human body, the organism whose functioning is the subject of medical science’s study of gross anatomy and physiology. It’s the level at which mainstream medicine intervenes via medications and surgery.
- *Etheric* – The four most subtle sub-planes of the physical plane are called the etheric plane. In Ayurveda this layer is called the “energy sheath” (*pranamaya kosha*). Victorian mystics called it the “etheric double”; in German, the *doppelgänger*. It is the template for the construction of the physical body, and both *prana* and *qi* reside here (on the 4th and 3rd subplanes, respectively). Humans can access etheric energy most directly from sunlight, fresh air, and the Earth itself, via food and via the Earth’s own subtle energy pathways (ley lines) (Kinnock).
- *Emotional* – the astral plane or desire body is the level at which emotional charge accumulates. Most people are focused in their everyday life on the 3rd sub-plane of the astral, while lower-grade phenomena like bad dreams and nightmares arise on the lower 4th and 5th sub-planes, during the “astral travel” that is said to occur when asleep. The 7th sub-plane is the transfer point where dense emotions transition into the etheric.

- *Mental/Causal* – Ideas are considered to be distinct objects (“thoughtforms”) located in the mental realm. The highest three sub-planes (1st, 2nd and 3rd) are part of the causal or soul realm, from which each reincarnating ego emerges and from which much channeled information originates.
- *Buddhic* – group consciousness, the oversoul that supervises actions of several souls and many egoic personalities.
- *Atmic* – the laws of physics originate here, as do miracle healings; it is called Nirvana in Hinduism and Buddhism.
- *Monad* – transcendental or global healing originates at this level.
- *Adic* – pure emptiness, the Source of existence.

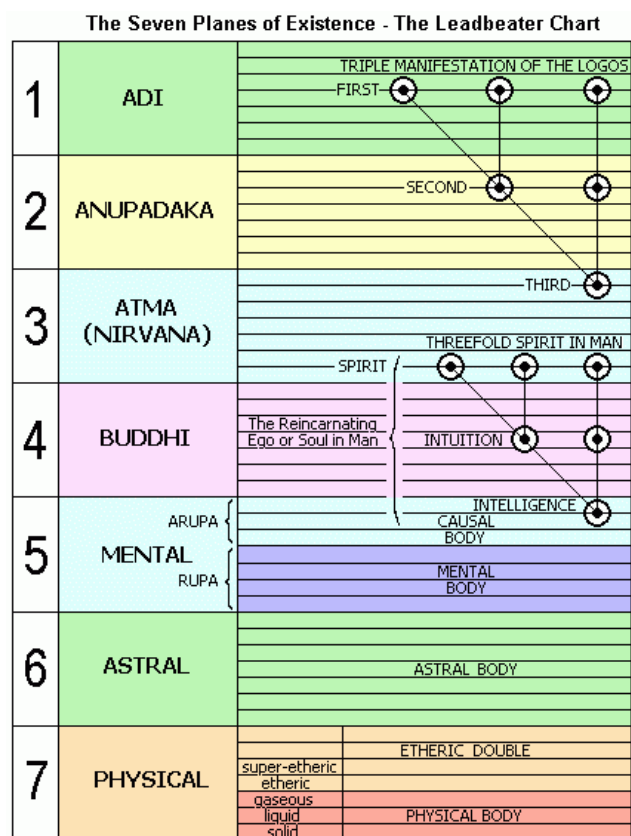


Figure 2 – Theosophical chart of the seven planes of existence

SECTION II: SELECTED EM TECHNIQUES

A sampling of EM techniques will now be assessed in accordance with this map, based on feedback from the clairvoyant authors of a book based on this model (Friedlander). Each of the following segments will begin with a brief description of the specific energy-based practice and its application, followed by a psychic assessment to determine where on the energetic spectrum the intervention has its impact. To some extent, these summaries will necessarily be an oversimplification, snapshots that highlight the primary impact of these continuously interacting multi-dimensional forces. But these processes are more complex and dynamic than their more static 3-dimensional analogues in gross anatomy. For example, the energetic impact of some techniques lies more clearly in a particular energetic sub-plane or meridian; for others, a specific energy center is activated. So wherever the EM technique's primary focus may lie, its impact resonates throughout all of these interconnected planes.

Another caveat: psychic perceptions can be differently aligned and attuned in different practitioners, so the following assessments should be viewed as one perspective, one approximation, of an extremely complex multi-dimensional system. A final qualifier: such well-known psychophysiological processes as suggestion, intentionality (Radin, 2015), expectation and the placebo effect are undoubtedly involved in all EM modalities. The role of these non-specific healing factors have been analyzed for medical treatment in general (Kaptchuk) and for EM (acupuncture) in particular (Gollub), but the focus here will be on the energy dynamics of EM.

• **Acupuncture**

Acupuncture may be the best researched form of EM (Nielsen), whether via the familiar needles, or finger pressure, low-intensity laser (Naeser) and tuning forks. Several other TCM practices also work directly with *qi*: the flowing movements of *tai ji*, the intentional breathwork of *qi gong*, and the finger pressure of acupressure all activate *qi*. From the intuitive perspective, *qi* operates on the fourth sub-plane of the etheric – the densest of the etheric forms of energy.

• **Reiki**

Reiki, a Japanese term meaning universal life energy, may now be the most widely available of the energy transfer modalities, with an estimated 60,000 certified Reiki Masters worldwide. Outcome research has largely focused on subjective quality-of-life issues like anxiety and depression (Joyce), pain (Demir Dogan), and patient satisfaction (Hahn). Practitioners are trained in a 3-step process called attunement, in which they are brought into energetic alignment with Reiki energies by working with a series of written Japanese symbols; a designated sequence of hand positions comprise the typical treatment session (Fig. 3).



Figure 3 - Reiki

The actual energy transmitted through the practitioner's hands most often comes from the 1st etheric sub-plane (ie, it is more subtle than *qi* and *prana*). It originates with the Reiki guides, transcendental beings who are seen psychically to reside in the causal and Buddhic planes, the spiritual level attained in enlightenment. Their energy is available to the practitioner via the "step-down transformers" of the Reiki symbols.

However, the actual frequency that the Reiki practitioner accesses is most dependent on their own state of energetic clarity and neutrality, and the state of their own internal resistance and barriers (Hemsher). A similar principle is at work in all EM modalities that involve access to higher frequency energies: the clinician is as much a filter as a channel, so personal work to clear inner blockages is necessary to become a clear channel.

• Eye Movement Desensitization and Reprocessing (EMDR)

Not generally considered to be a form of energy medicine, EMDR is a behavioral intervention that is widely used by psychologists to treat post-traumatic stress disorder (PTSD) (Shapiro). In an EMDR session, the patient sits facing the therapist and moves their eyes back and forth in a rhythmic horizontal motion, following the guidance of the therapist's moving hand (Fig. 4). At the same time, difficult emotions and memories are allowed to surface in order to be processed and released.

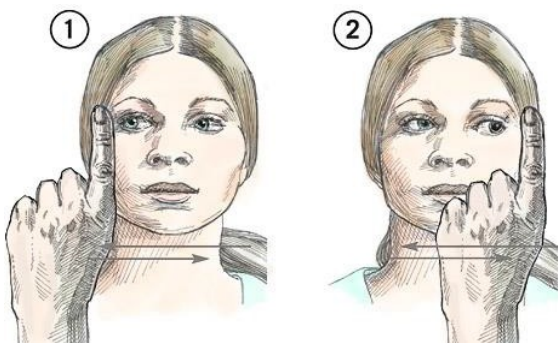


Figure 4 - EMDR

The neuropsychiatric connection between eye movements and memory reprocessing and reconsolidation is unclear (Oren), but the energy perspective can be instructive. The energy center between the eyebrows, also called the third eye, is associated with intuitive insight and inner vision. EMDR's eye movements may be activating this chakra, thereby creating psychological perspective on traumatic material, allowing for its easier emergence and release

(Leskowitz, 2001). A similar pattern of eye movements has been used to train people to activate their intuition (Schwartz); while increased hypnotic susceptibility has been linked to the ability to intentionally gaze upwards (Spiegel). When viewed clairvoyantly, EMDR appears to activate the entire third-eye complex (the pineal and pituitary glands, the front and back of the brow chakra and a central portion of the 7th chakra).

• Emotional Freedom Technique (EFT)

EFT is a meridian-based psychological protocol of exposure and desensitization, with a somatic component that takes the form of self-acupressure – percussively tapping on a series of one's own acupuncture points. The client will intentionally call to mind a troubling issue, note the location and the degree of bodily discomfort which accompanies this memory, and then tap themselves on a standardized series of acupuncture points in order to reduce their subjective units of distress (Fig. 5). More than 100 clinical trials have been published, as well as 52 randomized controlled studies (RCT) and 5 meta-analyses, with particular efficacy being shown for post-traumatic stress disorder (PTSD), chronic pain, anxiety, and depression. Detailed neuroscientific explanations of its possible mechanisms of action have been outlined, which invoke memory reconsolidation, neuroplasticity, rebalancing of the autonomic nervous system, and limbic system deactivation (Feinstein, 2019).

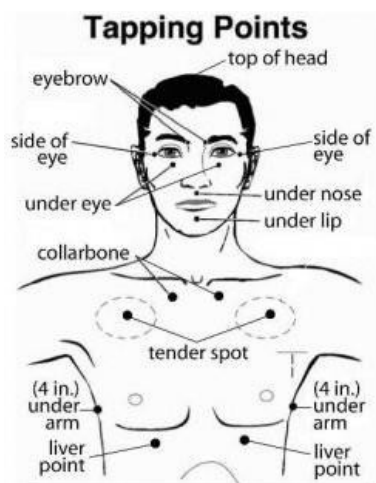


Figure 5 - EFT

Energetically, the acupressure tapping, like acupuncture itself, impacts the 4th sub-plane of the etheric. The 12 main EFT points are located at the endpoints of the major meridians, each of which regulates a specific emotional quality, so astral energies are also accessed by EFT tapping when the patient experiences the emotions related to the issue at hand.

An additional level of energy is accessed by the series of affirmations of self-acceptance that precedes the tapping, relating to the problematic life issue being addressed. A typical statement would be: “Even though I’m still upset about that argument, I love and accept myself fully and completely”. This so-called set-up statement has a rather complex energetic impact that depends on the two different meanings of the word “I”. The “I” who is upset is the ego, the personality, while the “I” who does the accepting is the transpersonal Self, the soul. Hence, causal energies

are accessed by this deceptively simple invocation of acceptance. EFT *in toto* thus accesses energies from the etheric, mental, astral and causal planes.

• **Tapas Acupressure Technique (TAT)**

Acupuncturist Tapas Fleming uses a configuration of hand positions devised by a Chinese tai chi master to facilitate the release of unpleasant emotions and self-defeating beliefs. Her clients mentally review upsetting experiences and insert positive reframing statements of acceptance while their hands remain in the position shown below (Fig. 6). Thousands of psychotherapists have been trained in this modality, though outcome studies are few (Elder).



Figure 6 - TAT

These finger and hand placements have specific energetic effects:

1. The left thumb and ring finger are placed on the left and right Bladder 1 acupoints. The bladder meridian, called the “Guardian of Peace” in TCM, runs along both sides of the spinal column, parallel to the autonomic nervous system. It regulates the fight-or-flight response and other fear-related emotions, and so its re-balancing in TAT further facilitates the emotional release process.
2. The front-and-back hand placements resemble the fronto-occipital hold in osteopathic craniosacral therapy (CST). TAT doesn’t use CST’s gentle pressure, but leverages the differential energetic polarities of the two hands of the practitioner. The right side of the body is thought in many traditions to be the output or male polarity, the left to be receptive or female, so the TAT alignment sends a general flow from occiput to brow, clearing out the 6th chakra and creating space for new intentions to be implanted.
3. By holding the meridians and the 6th chakra in balance, inputs from above (the crown chakra and the Self) are also facilitated.

• **Heart coherence**

The form of heart rate biofeedback known as heart coherence was conceived of as a psychophysiological self-regulation technique, but its energetic underpinnings are crucial to an understanding of its efficacy. Researchers at the Institute of HeartMath (IHM) found that by

focusing one's attention on the emotion of appreciation, while imagining the breath flowing in and out through the heart, a major change in cardiac rhythm arises that creates a balance between the sympathetic and parasympathetic branches of the autonomic nervous system (Fig. 7). The psychological and physiological benefits of this state of heart coherence have been well-documented in many controlled studies of such clinical symptoms as depression and test anxiety, and sports performance enhancement (McCraty).

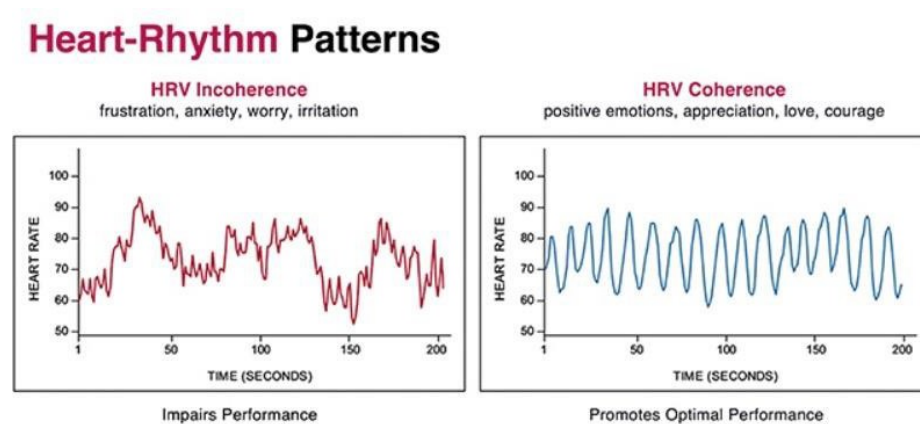


Figure 7 – Heart coherence

Energetically, the emotion of appreciation activates the heart chakra. The mental imagery of mid-sternal breathing increases this activation by adding the energy of focused attention to that center. Clairvoyantly, the heart energies of participants in a group heart coherence demonstration were observed to entwine with each other. These matching energies brought pink and green tones to the aura in an “elegant and gentle” process that created group cohesion (Hemsher).

• Spiritual masters

In contrast to the previous EM modalities, healing with a spiritual master may involve only a fingertip touched to the student's brow (*shaktipat*) or mutual eye contact in the master's presence (*darshan*). Theosophists called the former process “magnetic healing”; the latter, “radiatory healing”. Several well-known spiritual healers from India who utilize these approaches to emanating energies were assessed clairvoyantly, based on either direct experience with the master or on nonlocal clairvoyant perceptions at a distance. My colleagues saw that each of the three masters described below had access to the entire spectrum of subtle energies, but chose a particular focus that was in line with their specific life mission. The energy accessed by any of their devotees depended on the nature and depth of their relationship with the master (Hemsher).

Mother Meera – This Indian master sits on a chair while the recipient kneels in front of her. She then places her fingertips on their temples for about 10 seconds and then gazes into their eyes for another 10 seconds. No words are spoken and there is no personal interaction, in what is a passive process for the recipient. Anecdotally, participants in her group sessions describe a noticeable decrease in mental chatter in the days after a session, though full incorporation of these energies by the recipient's personality may take several months. Her energies are said to connect to the recipient at the mental plane, but at a level that goes beyond simple cognition and conceptual thinking.

Amma – The “hugging saint” physically embraces each recipient in a hug lasting about 30 seconds (Fig. 8). She also whispers a brief Sanskrit prayer to each recipient, who is not required to say anything or make any movements. Her energy emanates from the Buddhic plane of love energy, but is focused in an individualized manner:

“When you observe clairvoyantly Ammachi hugging thousands of individuals, one at a time, you can see that even though she performs essentially the same sweet hug, in fact she instantly changes and adapts her energy for each person. She gives each person his or her own specialized energy hug, providing exactly the energy blessing that is appropriate at that moment.” (Friedlander, 2011)



Figure 8 - Amma

Muktananda – This Indian guru was well-known in New Age circles in the 1970s for administering the direct energy transmission of *shaktipat* by touching the forehead of his disciples. Many recipients described a visual experience of inner radiance or luminosity of the sort that is classically considered to accompany the opening of the third eye. His focus was on activating the *kundalini* energy that leads to an awakening of each of the chakras in succession.

To summarize, Sections I and II have introduced a map of human subtle anatomy and then described where, on that map, several well-known EM modalities have their specific energetic impact. Let us now look at possible mechanisms of action by which subtle energies can affect and alter physiologic functioning.

SECTION III: ENERGY PHYSIOLOGY

• The contrast with medical physiology

As previously mentioned, anatomy and physiology are the keystones of pre-clinical medical school training because they explain the structure/function connections within the human organism. Similarly, subtle anatomy can provide a foundation for understanding how energy dynamics are activated by these EM approaches, and it can also help us to understand how these energies impact and transform the organ systems of the biological body. This interaction has been referred to as “the physiology of the vital body” (Greene); by analogy, here it will be called “energy physiology”.

A large and growing medical literature describes how EM techniques affect such physiologic processes as neuronal growth, gene expression, and polyvagal activity. However, this paper

proposes that these cellular biologic processes are the down-stream effects of the energy manipulations, and only subsequently do they cause the clinical observed changes in health and behavior. Energy physiology is the missing piece of the explanatory puzzle.

In other words, the directionality of EM differs from allopathic medicine: conventional medicine is bottom-up, with cellular processes like gene expression and neurotransmitter release seen as creating healthy organs and generating particular states of consciousness. In contrast, EM is a top-down model of health and function: the processes that occur in any given plane are activated and regulated by events in the higher energetic planes, in a step-down cascade from spirit to mind to emotion to energy to physical body.

Yoga tradition describes important interactions between these layers or densities of energy, a mechanism of action by which energy shifts may influence physiology. A trickle-down effect flows from the most refined to the most dense layer: thoughts shape emotions, which activate the pranic layer, which then sets the body's physiology in motion. Similarly, a widely-repeated but poorly translated TCM aphorism states that “the mind directs the *qi*, and the blood follows the *qi*”: Unfortunately, “mind”, as used here, is a common mis-translation of *yi*, a Chinese word whose more specific meaning is “purposeful intention”, “motivation” or “heart-body discernment”. So life energy is recognized as a key ingredient of health, one that links the subjective realms to the physical body. And while this dimension may be overlooked by mind/body medicine, the etheric/physical interface is the key to understanding EM modalities.

That is, the intervening variable of subtle energy is the driver of physiologic change, with neuroplastic shifts, for example, being secondary effects – correlative, but not causative. Similarly, knowing where different EM approaches target the energy map (Section I) is descriptive but not explanatory. The task is now to determine how the movement of energy effects cells and organs to bring about these attendant biologic changes. Outlining possible mechanisms of action for EM treatments in this way will help overcome a frequent objection to EM: If we can't explain how it works, it must be of dubious value. I suspect, though, that EM skeptics do not turn down their surgeon's offer of general anesthesia simply because the mechanism of action of general anesthesia is not understood.

Important foundational work along these lines has already been done, and generally focuses on the electromagnetic components of subtle energy, and how the biofield's known elements (EMFs, biophotons, low frequency UV, etc.) impact human physiology at the cellular level (Oschman; Feinstein; Rubik; Jain). Yet an implicit reductionist assumption underlies this work: the biofield arises from a biologic substrate – it is “endogenously generated” by cellular metabolism, ion fluxes, and magnetic fields.

In contrast, the non-materialist model being proposed here suggests that the biofield is an organizational template that originates from a different vibrational level, one that operates apart from the laws of Newtonian physics. This model's lineage dates back to 19th century physicist James Clerk Maxwell's proposal that magnetic field vortices are generated when etheric energy condenses into matter (Rubik). More recently, hypothetical quantum particles mediating this interdimensional process have been termed deltrons (Tiller), biophotons (Swanson), and vortrons (Grady).

• **Organelles at the interface**

Several researchers have proposed that the etheric/physiologic interaction is mediated by sub-cellular organelles. For example, microtubules (sub-units of the spindles that direct cell division

– Figure 10) resemble microscopic tuning forks and may be resonantly activated by subtle energy (Hameroff). Similarly, mitochondria (the cell’s power plants, producers of ATP) may be able to harness *qi* directly (Grady), perhaps building on their evolutionary origin as independent, energy-producing unicellular organisms that were incorporated into larger cells via endosymbiosis (Gray). Organelles may utilize etheric energy in a transductive chain: *qi* flow -> EMF changes -> sub-cellular organelle activation-> intra- cellular biochemical changes (McCurdy).

In this vein, localized intracellular magnetic fields may be involved in choreographing cell division at the cellular level, during the replication process called mitosis. The morphologic similarity between magnetic lines of force and mitotic spindles is striking (Figs. 9 and 10) – Maxwell’s “magnetic field vortex” in action. The actual “unzipping” or separating of the DNA’s double-stranded helixes during chromosomal replication may also be mediated by this micro-EMF component of the biofield (Rein).

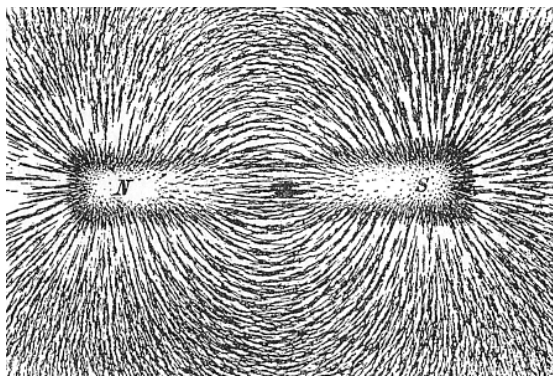


Figure 9 – Magnetic lines of force

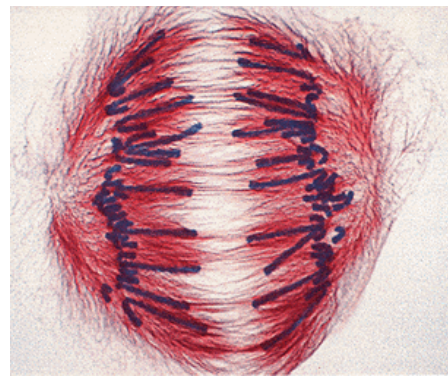


Figure 10 – Mitotic spindles

• Oxidative stress

Low-grade inflammation is now known to underlie many chronic illnesses, from coronary artery disease to dementia: it may result from impeded *qi* flow. Rein’s micro-inflammation theory offers one possible mechanism: obstruction to *qi* flow within the meridians causes oxidative stress within cells by generating pro-inflammatory free radicals (Rein), in a sort of intracellular “rust”. This model predicts that *qi*-induced inflammation could be alleviated or prevented by blocking free radical formation, using anti-oxidant supplementation or anti-oxidant-generating practices like dry saunas (Masuda) and earthing (Chevalier). These practices would then enhance the flow of *qi* and create greater health.

Oxidative stress after intense exercise causes muscle soreness, cramping and even fasciculations. These symptoms can be rapidly alleviated with acupuncture, as noted by a team of acupuncturists working at the finish of the Boston Marathon (Chin). Proof-of-concept research could further define the connection between *qi* and oxidative stress by measuring blood markers of inflammation (erythrocyte sedimentation rate, C-reactive protein) and meridian conductivity (GDV, AMI, and TCM pulse diagnosis), before and after these interventions. One preliminary study showed reduction in post-exercise blood lactate levels in elite athletes treated with acupuncture (Tandhya); similar *qi*/inflammation studies would be informative.

• Acupuncture physiology

Three intriguing findings from biomedically-oriented acupuncture research are intriguing, though constrained by the reductionist paradigm of materialism, showing physiologic and anatomic

correlates of acupuncture while avoiding the need to invoke *qi*. Anatomic studies show that the cleavage planes of myofascial connective tissue map out the meridians themselves (Langevin), with an especially strong structural correspondence noted to the primo vasculature system of acupuncture pathways.

When the crystalline matrix of the fascia is mechanically stimulated by acupuncture or acupressure, piezo-electric transduction can generate electrical signals along the meridians (much as with a crystal radio) (Spaulding; Oschman 2002). And finally, increased electrical conductivity is an electrophysiologic marker of certain acupoints (Ahn). Though these findings all correlate with the flow of *qi* energy, this type of research makes a category error in logic by assuming that biologic structures give rise to *qi*, even while highlighting the multiple factors that could be involved in mediating the interface between energy and the body.

• Subjective experiences of energy

Several common subjective experiences involve the direct perception of energy flows that arise independently of biologic structures. For example, strong emotions will often elicit tangible sensations in bodily locations that lack a clear anatomical relationship to the emotion but which are tied to the energy center that regulates the relevant emotion. This energy/chakra connection is recognized in idiomatic figures of speech: love is “heartwarming”; fear is experienced as “butterflies in the stomach”; insight is a “lightbulb” switching on inside the head; “getting turned on” sexually is felt in the genitals, etc. (Leskowitz, 2000; Judith). (See Figure 11)

#	CHAKRA	ENDOCRINE GLAND	EMOTION	SENSATION
7	crown	pineal	bliss	scalp tingling
6	brow	pituitary	intuition	inner “light bulb”
5	throat	thyroid	creativity	“choked up”
4	heart	thymus	love	“warm-hearted”
3	solar plexus	pancreas	power	“butterflies”
2	sacral	gonads	sexuality	sexual arousal
1	root	adrenal	fear	adrenaline “rush”

Figure 11 – Sensations associated with chakra activation

When the emotion is strong enough, we can directly perceive its energetic source.

• Energy shifts and disease pathogenesis

Some disorders, like chronic pain, show energy dynamics that accord with this proposed energy/emotion linkage:

- In myofascial pain, the characteristic trigger points are palpable, painful knots in the fascia and muscle that are often located at common acupoints (Birch). They are over-energized because of unacknowledged emotional distress (Shealy) and can be “sedated” (TCM for “relaxed”) by acupuncture and acupressure massage, or by dry needling and trigger point injections of saline solution (Western analogues of acupuncture) (Audette).
- In fibromyalgia, the pathognomonic tender points are often underactive acupoints that have been drained of *qi* by chronic stress. These points can be “tonified” (TCM for “activated”) by acupuncture (Deare), as well as by commonly prescribed and clinically effective lifestyle medicine practices that directly replenish vitality, such as restorative sleep and aerobic exercise

(Bidonde).

- In complex regional pain syndrome (CRPS), the physical symptoms can arise in regions of the body that symbolize an emotional conflict, locations where the flow of *qi* then becomes stifled. For example, CRPS developed in the hand of a highly moralistic patient who felt it would be sinful to express anger at an unfair boss by clenching that fist in rage; he was able to acknowledge this emotional and energetic conflict in therapy (Leskowitz, 2008). Physical signs of advanced CRPS – cold extremities, loss of body hair and muscle mass in the affected region – result from a decrease in circulation that would follow from restricted *qi* flow (“the blood no longer follows the *qi*”).

To more vividly illustrate this process, the following hypothetical energy cascade illustrates how energy might cycle through the dimensions - from thought to emotion to chakra to etheric energy to physical symptoms and disease:

1. After a marital argument, the husband thinks: “I’ll be all alone if my wife divorces me.”
2. A palpable wave of sadness arises in his chest and throat.
3. This emotion triggers an old belief system: “Big boys don’t cry.”
4. This cognitive directive leads him to stifle the emotion seeking release, shutting down the flow of energy through his throat chakra. This resistance (energetic friction) is intense enough that he feels himself “getting choked up.”
5. If this energy blockage continues, the localized oxidative stress could trigger inflammation and throat soreness, possibly becoming a strep throat infection.
6. Repeated elicitation of this inflammatory cycle could, over time, trigger an auto-immune response that down-regulates and repatterns the associated thyroid gland into Hashimoto’s thyroiditis.

Similar patterns of psycho-energetic interactions may be involved with other disease processes – Type A behavior and heart disease are linked by the emotion of anger (Shealy), while Type C behavior has been linked to cancer (Simonton). These mind/body connections have been explored by psychoanalysts, in psychosomatic medicine, and in psychoneuroimmunology (Moraes). But the final common pathway they share – imbalances of subtle energy flow - allows for a unified field model of energy physiology to emerge.

• Tools for research in energy physiology

Technology to measure *qi* or *prana* directly is still in its infancy, limiting our ability to understand the interface between etheric energy and biology. So although we can readily measure EM’s effect on the electromagnetic component of this etheric energy (EMFs, photons, microcurrents), other techniques must be developed in order to obtain direct measurements of this supposed etheric energy. Here are five of the most promising measuring devices and research tools currently being used in EM studies (Muehsam):

1. The Apparatus for Meridian Identification (AMI) - This so-called Motoyama Device measures the electrical conductivity at meridian-terminal acupuncture points in the finger tips, before and after treatment, and uses computer software to translate these results into an index of the activity levels of the associated acupuncture meridians (Muehsam).
2. Kirlian photography – This form of corona discharge imaging records the electrostatic field surrounding living organisms in a direct photographic image. Changes in the discharge patterns reliably follow the application of various EM techniques, and have been measured during energy healing sessions (Russo).

3. Gas Discharge Visualization (GDV) – This modification of Kirlian photography obtains images of the field around each fingertip, much like AMI, and then reconstitutes a diagram of the complete aura via proprietary computer software (Korotkov). It is used as a diagnostic tool in many EM clinics world-wide.
4. Biophoton detector – A powerful photo-multiplier, sensitive enough to detect individual photons, has measured streams of biologically-generated photons coming from living organisms. These biophotons may regulate cell growth (Ives; Swanson) and have been correlated with human intention and healing.
5. EMF blockers – The contributions of known EMF components to any healing process can be ruled out by using certain barriers between healer and patient. The Faraday Cage is a copper grid that blocks the electrical field component of the EMF, while mu-metal is an iron alloy used in electronics to shield equipment against static and low frequency magnetic fields. If healings occur despite the presence of these barriers between healer and subject, then non-EMF forces must be at work.

SECTION IV: UNEXPLAINED CLINICAL PHENOMENA

Given the limitations of the currently available technologies described above, these propositions about energy physiology are not yet definitively either falsifiable or verifiable. A fuller analysis of these interactions and correspondences awaits future technological developments, but in the interim, some speculations can suggest directions for future research. We will now consider several clinical situations that require inclusion of a non-material energetic element in order to completely understand them.

• Phantom limb pain and energy templates

Every cell in the body possesses an identical DNA repertoire that it uses to manufacture protein molecules, yet from these initially identical blueprints, cells are somehow able to differentiate into a wide range of tissue types and organs. This process of growth and differentiation cannot be directed by these protein products, since proteins are only building-block components of cells rather than organizational blueprints. In other words, DNA and genes can't regulate the shape of the body, the location of the organs, and other "meta-" outcomes. Rather, cell differentiation must be directed by a supra-cellular process with a wider scope and purview.

A metaphor: iron filings align precisely with the otherwise invisible lines of force of the nearby magnet. Similarly, cells may grow in topographic alignment with the invisible energy template of the biofield, and may differentiate in accord with localized variations of energetic frequency within the biofield. Cells do not independently "decide" where to go or what to become.

The organizational template model of cell growth was first postulated in 1922 by a Russian embryologist who called it the "morphogenetic field" (Gurvich); recent iterations have included Sheldrake's "morphic resonance" (Sheldrake), Swanson's "torsion fields" (Swanson), and Tiller's "conjugate physical reciprocal space" (Tiller). On the parallel track of the materialist paradigm, computational neuroscience has proposed that cell growth and development are regulated by endogenous bioelectric networks that are generated by the cells themselves, in a process called "cytoskeletal self-organization" (Levin). But the evidence suggests otherwise.

For example, many patients who have suffered limb amputation (whether by injury or surgery) develop an intense pain that seems to come from the missing limb, one whose presence is still

palpable. While upwards of 30% of amputees may experience phantom pain, a far higher portion will experience painless “phantom sensations”, a feeling that the missing limb is still present and intact (Flor). The neuroscientific explanation for phantom sensations is that they represent sensory memories of that limb, but phantom sensations are also felt by people with congenitally absent limbs, who have therefore never developed sensory memories of that limb (Melzack). Work with patients experiencing this phantom limb pain suggests that the phantom limb is not just a subjective illusion generated by the patient’s sensory cortex, but may actually be an energy field that exists independently of, and antecedent to, the physical body (Leskowitz, 2014).

Multiple lines of evidence support an energy-based view of the phantom as an objectively real aspect of the biofield. For example, the phantom limb can be perceived clairvoyantly (Eden, p. 36-40), and the outer boundary of the phantom limb can be manually palpated by skilled energy workers (Leskowitz, 2013). In one widely-viewed video demonstration, a blindfolded amputee correctly identified objects that were placed “in” his phantom hand (Brown). Further, phantom pain has been successfully treated by acupressure treatment of the phantom acupoints in the seemingly empty space that the phantom limb occupies (Eden, 1998a). And laser acupuncture directed at these presumptive acupuncture points along the phantom limb is effective, according to anecdotal reports (Naeser).

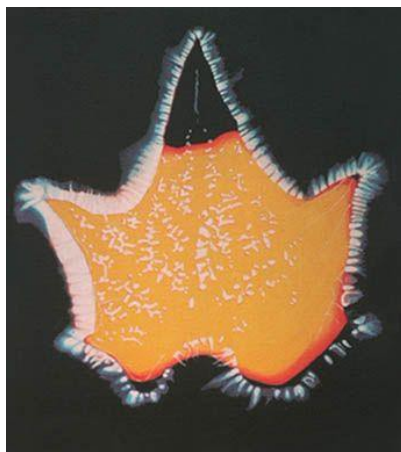


Figure 11 – Kirlian image of the phantom leaf effect

An analogous phenomenon, the phantom leaf effect, was detected 40 years ago with Kirlian photography. As seen in figure 11, the corona discharge does not follow the perimeter of the leaf where the tip has been cut off, as would be expected if the electric field was somehow generated by the leaf’s cells. Instead, the pattern shows an independent, and possibly pre-existent, template for the structure of the full leaf tip. Replication of the phantom leaf effect has been surprisingly difficult (Hubacher). The technical challenge of shielding out other potentially confounding forms of radiation (magnetic, cosmic, biophotonic) also impedes attempts to obtain Kirlian images of phantom limbs.

Shifts in external magnetic fields occur during the process of limb regeneration after amputation in salamanders. Similarly, partial limb regeneration has been achieved in mammalian species that are not normally capable of such regrowth, by applying external EMFs to the amputation stump in rats (Becker). Both processes may involve transductive chain activation of the phantom’s etheric template, when then guides DNA replication, cell growth and differentiation. In other

words, the appropriate alignment of internal and external EMFs may allow etheric energy to “jump the gap” and interact directly with the physical realm.

Two tests could confirm that an energetic template exists independently of any biologic substrate, and is not being emitted by the organic material of the leaf or the limb stump: Obtaining direct images (Kirlan or otherwise) of phantom limbs, and alleviating phantom limb pain with laser therapy of the phantom.

• Sighs and yawns

The “sigh of relief” is a universal experience – the satisfying deep diaphragmatic exhalation that often follows an emotionally charged experience. Smokers acknowledge this as one of the pleasures of smoking (McClernon), while pulmonary physiologists view the sigh as a reflex mechanism that keeps the lung’s alveolar sacs fully inflated. A related form of inadvertent diaphragmatic activation – yawning - is triggered by the parasympathetic branch of the autonomic nervous system, and reverses high levels of carbon dioxide in the blood.

Deep breathing is also an important component of many expressive psychotherapies, and it accompanies many forms of bodywork that do not even have a direct psychological focus (ie, massage). In the body-centered psychotherapy modality called Focusing, patients are encouraged to “befriend” dysphoric emotions (Klagsbrun). This attitude of non-judgmental acceptance allows the sensations to move and change, often disappearing completely following a sigh. The energetic charge of the emotion is seemingly dissipated when the patient overcomes their resistance to experiencing this sensation. And working within the pranic perspective, the founder of kundalini yoga, Yogi Bajan, often incorporated intentional yawning into his practices, in order to induce a state of relaxation (Khalsa), as though the yawns expelled stagnant *prana* that had become stagnant due to psychological resistance. Although both breathing patterns have a strong energetic component, as experienced subjectively, they are not accompanied by significant shifts in the aura (Friedlander, p.c.).

• Emotional contagion

The well-known contagious quality of these emotive breath patterns has been attributed to cortical mirror neuron activation by sensory cues transmitted during shared empathic experiences (Haker). However, according to Church’s model of sympathetic brain-wave entrainment, the mirror neurons are only triggered after interpersonal brainwave resonance occurs (Church). In this vein, one lab study done at IHM has demonstrated that a heart coherence-naïve volunteer in sensory isolation can be entrained into a state of heart coherence when in the physical presence of several trained heart coherence practitioners (see link to video in Resources).

The IHM explanation for this psychophysiologic entrainment presumes that the magnetic field of the meditators entrains the EMF, and thus the nervous system, of the subject. However, emotions may be transmitted by direct energetic resonance, with the chakras functioning as energetic tuning forks (Tatum). Whatever emotional frequency or “vibe” is being most powerfully expressed will entrain others in the vicinity – an energetic explanation of such common phenomena as personal charisma, mob psychology, the feedback between performers and their audience, the doctor-patient relationship, the empath’s awareness of another person’s emotional state, contagious laughter (Dossey, 2010), and even the home field advantage in sports stadiums (Jenkins). Large-scale non-human group interactions like bird flocking and fish schooling (Winter video) may also be synchronized by a similar resonance mechanism.

Research into the underlying nature of heart coherence interactions could eliminate any specific EMF components by shielding the non-meditating subject from the meditators with a Faraday cage and a mu-metal barrier. Any remaining interactional effects would then have to be ascribed to non-electromagnetic etheric forces, as has been shown in preliminary studies (Jabs). A similar barrier protocol could also winnow out the etheric component of non-contact manual healing practices like Therapeutic Touch and the Bengston Method (Beseme), as well as such nonlocal practices as distant Reiki.

- **Rapidity of symptom relief**

EFT patients rate the intensity of their discomfort before and after treatment. These sensations - of tightness, of pressure, tingling, warmth, etc. – can be conceptualized as arising from strong energetic movement within the physical body. These etheric flows are not usually perceptible, but if the emotion is unpleasant enough and strong enough, even energetically naïve people can feel the impact. This energetic “friction” disappears when the emotional conflict is fully cleared, a release often marked by a sigh of relief. An energy shift like that can happen instantly, and can account for the very rapid elimination of symptoms with EFT. Even longstanding symptoms like chronic pain, phobias and PTSD are often alleviated within minutes, during the session. On the other hand, limbic system downregulation, synaptic repatterning, and nerve regrowth - the biologic mechanisms used to explain psychotherapeutic changes - can take days to weeks to complete. Ironically, professional EP organizations now strive to document such concomitant physical mechanisms to enhance EP’s credibility and acceptance by conventional medicine, while the technique’s origins in subtle energy have been de-emphasized.

- **Energy cysts**

The founder of craniosacral therapy, osteopathic physician John Upledger, believed that an actual energetic structure - the “energy cyst” - stored unprocessed emotions in the body’s connective tissue matrix (Upledger, 2002). Manual therapies like his SomatoEmotional Release were designed to release these cysts with a hands-on treatment process that is often marked by sighing, presumably as each cyst dissolves and is released.

These cysts may provide a final common energetic pathway or target for a wide range of therapies. These structures may allow “the body (to) keep the score” (van der Kolk), by accumulating the energetic scars of trauma. Their existence has not yet been confirmed objectively, either electrophysiologically or microanatomically, as has been done with the analogous myofascial trigger points and acupuncture points. However, skilled practitioners of manual therapies are reportedly able to detect the presence of these cysts, so a simple blinded, multi-practitioner protocol could assess inter-rater reliability of cyst detection, helping to establish the existence of yet another subtle energy structure.

- **Micro-phenomenology**

Many EP practitioners and their patients informally report that as they gain familiarity with their own subtle internal sensations, they become able to release energetic blockages with progressively less intensive measures. For example, at some point, acupressure tapping becomes unnecessary because simply stating the affirmation aloud is sufficient. Later, merely thinking of the affirmation, or just noticing the issue’s bodily locus, can lead to an emotional and energetic clearing, without the tapping or spoken words. In other words, the skill of subtle energy perception develops with practice, just as *qi gong* and *tai chi* practitioners have long known. Extreme examples of this sensitivity are the legendary blind acupuncturists of ancient China, who located acupoints through exquisite fingertip sensitivity to *qi*.

The following examples of internal awareness of energy shifts suggest that subjective research into the nature of subtle energy could be fruitful. One practitioner of mindful self-compassion described “a warm, comforting energy spreading through my body. Then there was a distinct shift: My heart softened a bit, my shoulders relaxed, and my mind felt more clear and open.” (Brach). Similarly, a well-known paraplegic yoga instructor has described the sense of presence in his paralyzed legs as a “form of energetic awareness – a tingling, ... a hum”, “energy was moving throughout my paralyzed body” (Sanford). One of my patients, a C5-6 quadriplegic and Level 1 Reiki practitioner, described the symptom of “phantom body pain” that could be alleviated by self-administered Reiki, which created a palpable energy flow through his paralyzed and supposedly numb body. And after his famous encounter with Moby Dick, Captain Ahab noted that “a dismasted man never loses the feeling of his old spar, but it will be still pricking him at times” (Melville).

Similar subtle internal sensations are often experienced during body-oriented psychotherapy (Payne) and interoceptive practices like yoga and meditation, and they are now being systematically studied in the emerging discipline of micro-phenomenology (Petitmengin). This methodology will add further rigor to the systematic exploration and classification of subtle energy dynamics, and to our understanding of the interactions between energy and the body.

To summarize this section’s discussion of difficult-to-explain clinical phenomena, the following tests are proposed to evaluate the etheric body hypothesis:

- Conducting laser acupuncture treatment directed at the presumptive acupuncture points along the phantom limb, in empty space
- Obtaining direct Kirlian images of a phantom limb
- Demonstrating entrainment of heart coherence in a subject shielded from meditators by a Faraday cage and a mu-metal barrier
- Measuring inter-rater reliability in detecting energy cysts.
- Systematically correlating subjective reports of subtle energy sensations across cultures and times and disciplines, for reliability and validity.

SUMMARY AND CONCLUSIONS:

The subtle anatomy map – of interacting energy centers (*chakras*) and distribution pathways (meridians) held within a multi-layered containment vessel (the biofield) – has been described in many non-Western healing traditions. Western science and medicine rejected earlier versions of this vitalist philosophy, but energy manipulation techniques from acupuncture to Reiki are now emerging into the clinical and research spotlight. In the first section of this paper, the map of subtle energy anatomy is outlined from the perspective of Western mysticism and Theosophy. The activation of these subtle energy structures by various forms of EM was then described from phenomenological and clairvoyant perspectives, showing how techniques ranging from meridian-based psychotherapies to EMDR each target and impact different specific components of the human subtle anatomy.

The third section addressed “energy physiology” – the ways in which this presumptive etheric energy may interact with the denser physical matter of the human body to create measurable biologic changes. Outlining these possible mechanisms of action for EM treatments is important because it will help overcome a frequent, if logically fallacious, objection to EM: Lack of a plausible mechanism of action means that the intervention is not credible.

The most significant test cases of this energy physiology model are those anomalous “black swan” events which cannot be explained by mechanistic biomedicine because they do not correlate with, or depend upon, underlying physical anatomy. The examples considered in the final section of this paper include the syndrome of phantom limb pain, the subjective sensations that accompany chakra activation, the process of interpersonal emotional entrainment, the rapidity of EM symptom relief, and the possible existence of fascial “energy cysts”. These examples suggest that subtle energy does not originate from biological structures. Rather, energy initiates and directs physiologic processes from a higher dimensional plane, via an etheric/physiologic interface that has not yet been well-characterized.

Because currently available measurement devices are not sensitive enough to detect subtle energy directly, the etheric processes proposed in this paper can only be inferred and indirectly supported; they are also not yet falsifiable or verifiable. However, ongoing research in bioelectromagnetism and energy medicine, conducted from the perspective of a post-materialist science, can incorporate the research directions suggested here to develop a more complete picture of how energy medicine techniques actually work. Hopefully, the map outlined in this paper will help us to one day understand how subtle anatomy and energy physiology interact to cause disease, and how they can be harnessed to create vibrant health. As Sherlock Holmes once said: “Come, Watson, come! The game is afoot.” (Conan Doyle). And so it is.

Acknowledgements: The author wishes to thank three anonymous reviewers, plus Debra Greene, David Leskowitz and David Feinstein for editorial feedback, and Gloria Hemsher and John Friedlander for sharing their clairvoyant insights into the nature of these energy processes; hopefully their input has been accurately rendered. This paper is dedicated to the memory of Gerardus Mercator, the 16th century Flemish cartographer.

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Resources:

Institute of HeartMath: <https://www.heartmath.com/research>

Institute for Frontier Science: <https://frontiersciences.org>

The Consciousness and Healing Initiative (CHI): www.chi.is

Manifesto for a Post-Materialist Science: <http://opensciences.org/about/manifesto-for-a-post-materialist-science>

International Society for the Study of Subtle Energy and Energy Medicine (ISSSEEM):
<https://www.issseemscience.org/>

Association for Comprehensive Energy Psychology (ACEP): www.energypsych.org

Group heart coherence (video): <https://www.youtube.com/watch?v=72DtbK2EVcI>

The Seven Planes of Consciousness (audio): <http://psychicpsychology.org/7plnesfre>

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