

What Does *Energy* Have to Do With Energy Psychology?

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Abstract

An obstacle to professional acceptance of the growing body of research supporting the efficacy of energy psychology is the vague use of the term *energy* in the field's name and explanatory frameworks. This article explores whether the concept of "energy" is necessary to fully account for the observed clinical outcomes that follow "energy psychology" treatments. Evidence is presented that shifting 3 types of energy—electromagnetic signals, brain waves, and energy fields—gives energy psychology protocols their advantage in quickly changing longstanding patterns in the brain. *Electromagnetic signals* that reduce threat arousal in the amygdala follow the stimulation of selected acupuncture points (acupoints). Acupoint stimulation also produces *delta waves* that are believed to depotentiate neural pathways that maintain maladaptive fear. Meanwhile, *energy fields* that organize neural activity provide a possible solution to a quandary in neuroscience. Conventional neurological models cannot explain how the diverse brain activities

that are involved in information processing are coordinated. Just as electromagnetic fields have been shown to organize cellular activity in wound healing, energy fields are believed to organize neurological processes. The rapid resolution of intrusive, unprocessed memories seen in energy psychology treatments is attributed, in part, to the way acupoint stimulation is able to directly impact these "organizing fields." A working model that attempts to explain energy psychology treatment outcomes contains 3 premises about electromagnetic and more "subtle" energies in psychotherapy: (a) energy is an omnipresent dimension of body and mind that can be influenced to impact each in desired ways, (b) energy carries information, and (c) clinical interventions can draw upon the ways energy fields, through resonance, influence other energy fields as well as neural activity.

Keywords: acupoints, reconsolidation, energy, fields, resonance.

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Introduction

Energy psychology is a psychotherapeutic and self-help approach that combines established clinical methods (such as imaginal exposure and mindfulness) with somatic interventions (such as the stimulation of acupuncture points by tapping on them) for effecting therapeutic change. By using the term *energy* in its name and explanatory

models, energy psychology has opened itself to criticisms, conceptual confusion, and skepticism about mobilizing vague forms of energy for healing—skepticism that reaches back at least to the fierce controversies surrounding vitalism (Williams, 2003), ether as a physical medium (Duffy & Levy, 2009), orgone therapy (Reich, 1973), and Franz Anton Mesmer's (1734–1815) "animal magnetism." There is little question that the efficacy claims of energy psychology practitioners—which have been roundly criticized and sometimes ridiculed (e.g., Devilly, 2005; Herbert & Gaudiano, 2001; Lohr, 2001; McCaslin, 2009; McNally, 2001; Pignotti & Thyer, 2009)—would receive a more receptive hearing if the explanatory models were couched exclusively in conventional clinical language. More accepted terminology might include cognitive restructuring, exposure

treatment, desensitization, counter-conditioning, information processing, sensorimotor interventions, neural reorganization, or even the modulation of gene expression (Feinstein & Church, 2010), all of which are probably involved.

A survey of 51 peer-reviewed journal articles describing outcomes of energy psychology treatments found that all 51 reported positive changes in symptoms or behavior (Feinstein, 2012). The articles investigated outcomes following Thought Field Therapy (TFT) or Emotional Freedom Techniques (EFT) treatments, the two most extensively practiced and researched energy psychology formats. Each utilizes the stimulation of selected acupuncture points (acupoints) by tapping on them. A critical analysis of the 18 randomized controlled trials (RCTs) in this sample showed that their findings “consistently demonstrated strong effect sizes and other positive statistical results that far exceed chance after relatively few treatment sessions” (p. 14). In three of the investigations—with survivors of genocide or abuse—posttraumatic stress disorder (PTSD) scores dropped from well above to well below clinical PTSD cutoffs on self-inventories or caregiver inventories for a majority of participants after a *single* treatment session (Church, Piña, Reategui, & Brooks, 2011; Connolly & Sakai, 2011; Sakai, Connolly, & Oas, 2010). Sustained improvement was found at 1 year (Sakai et al., 2010) and 2 years (Connolly & Sakai, 2011). These single-session PTSD studies corroborated earlier field reports of successful single-session PTSD treatments with more than 300 disaster survivors (described in Feinstein, 2012). The 51 articles reviewed presented statistically significant evidence regarding nine conditions that responded favorably to energy psychology treatments. In addition to PTSD, these included phobias, specific anxieties, generalized anxiety, depression, weight control, physical pain, physical illness, and athletic performance.

With accumulating evidence supporting the efficacy of energy psychology, the question “if it works, how does it work?” becomes more prominent. Numerous explanations that attempt to account for the neurological mechanisms involved have been proposed (e.g., Alberse, 2012; Feinstein, 2010, 2012; Feinstein & Church, 2010; Lane, 2009; Ruden, 2005, 2010). This article examines whether the concept of “energy” increases the explanatory power of existing models.

Existing Explanatory Models and Their Limitations

Explanations by early proponents of the approach (e.g., Callahan & Callahan, 1996) focused on hypothesized “thought fields” and principles of acupuncture that traced to traditional Chinese medicine. Laboratory findings in areas germane to energy psychology have since made it possible for explanatory models to be better informed by empirical evidence. For instance, a number of studies have identified physiological changes that correlate with the observed clinical improvements. Acupoint stimulation has been shown in published or pilot studies to reduce levels of the stress hormone cortisol, activate stress-reducing genes, normalize aberrant brain wave patterns, and increase production of serotonin, opioids, and other neurotransmitters associated with pleasure (summarized in Church & Feinstein, in press).

Physiological correlates of subjective and behavioral improvements are not, however, mechanisms of action. Studies using electroencephalogram (EEG), functional magnetic resonance imaging (fMRI), and positron emission tomography (PET) scans have revealed two *mechanisms* that are presumably involved in the established psychological effects of acupoint stimulation.

An ongoing research program at Harvard Medical School using fMRI and PET scans has conclusively shown that stimulating selected acupoints produces extensive deactivation in the amygdala and other areas of the limbic system (Dhond, Kettner, & Napadow, 2007; Fang et al., 2009; Hui et al., 2000, 2005). Energy psychology protocols combine acupoint tapping with the activation of unwanted emotions through imaginal exposure, usually by bringing to mind a problematic memory or trigger. This simultaneously *increases* arousal (through the imaginal exposure) while at the same time *decreasing* arousal (through electromagnetic signals sent to the limbic system via acupoint tapping). In reconciling these opposing signals, the brain is ultimately able to engage the memory or trigger without limbic arousal. While the Harvard researchers used traditional acupuncture needling as their primary means of stimulating the acupoints they examined, various other investigators have found a normalization of brain wave patterns following acupoint tapping for anxiety-related or neurological disorders (Diepold

& Goldstein, 2009; Lambrou, Pratt, & Chevalier, 2003; Swingle, 2010; Swingle, Pulos, & Swingle, 2004). A double-blind study comparing penetration by acupuncture needling with nonpenetrating pressure also found equivalent clinical improvements for the two interventions (Takakura & Yajima, 2009). Whether using needles, tapping, or other means, the process starts with acupoint stimulation generating piezoelectricity (electricity produced by mechanical pressure), the same principle that causes the spark that lights a cigarette lighter or a propane barbecue. Electrical currents are then sent to cells, organs, and other biological systems via the body's connective tissue (Oschman, 2003).

So a relatively well-established mechanism of action in energy psychology protocols is that electrical signals produced by tapping on selected acupoints during imaginal exposure reduce limbic arousal. A second process, this one involving brain waves, has also been identified. Repetitive sensory stimulation, in this case tapping on acupoints, generates large increases in the amplitude of delta waves in areas of the brain involved in fear memories, as detected by EEG readings. After several minutes of stimulation, these amplified delta waves have been shown to disrupt activated memory networks, reminiscent of the "natural memory editing system" found in delta wave of sleep (Harper, 2012, p. 61). Specifically, glutamate receptors on synapses that mediate a fear memory are believed to be "depotentiated by these powerful waves of neuronal firing" (p. 61). When the neural circuits in the amygdala that maintain the threat response are deactivated in this manner (during virtually *any* exposure therapy protocol that employs repetitive psychosensory stimulation on upper parts of the body, according to Harper's findings), "the material basis of the fear memory has been removed" (p. 64). Ruden (2010) has incorporated this and related neurological findings into a sophisticated protocol for trauma treatment.

Sending *deactivating signals* to the amygdala and generating *delta waves* that disrupt activated memory networks are two ways acupoint tapping appears to evoke *energies* that impact brain activity in therapeutic ways. These mechanisms suggest a logical neurological sequence in the treatment of serious disorders such as PTSD. The sequence progresses from (a) PTSD involving, at its psychophysiological core, a proclivity for amygdala hyperarousal, to (b) the stimulation

of acupoints generating (c) deactivating signals and depotentiating brain waves while the threat response has been triggered by imaginal exposure, (d) turning off the threat response and possibly eradicating neural pathways, in a manner that (e) permanently changes the conditioned response to the trigger or memory. This formulation offers a plausible rationale for the distinctive ways acupoint stimulation serves as an active ingredient in energy psychology protocols beyond the other elements that are found in most therapies (therapeutic alliance, empathic communication, etc.).

While this account is consistent with established neurological principles, it has some gaps and limitations. First, controversy exists about whether "sham points" may be as clinically effective as the points used in traditional acupuncture, with some evidence suggesting that the traditional points are more effective (Lang et al., 2007) and other studies suggesting that sham points may be equally effective (Haake et al., 2007).

Second, although the model is consistent with existing physiological and clinical data, it has not been scientifically tested. Imaging equipment is available that could confirm or disconfirm each stage of the hypothesized sequence described earlier, but these studies are yet to be conducted. And even if imaging studies were to confirm that the neurological processes involved in treating PTSD have been accurately anticipated, the range of disorders that appear to respond to essentially the same acupoint tapping protocols (Feinstein, 2012) requires explanation.

Third, the surprising speed and power observed during energy psychology treatments themselves pose a challenge to existing paradigms (Feinstein, 2009). Anyone who knows someone struggling with longstanding PTSD or who is familiar with the professional literature on treating the disorder will do a double-take on hearing of the studies referred to earlier in which a vast majority of subjects who had scored above PTSD cut-offs on standardized measures were substantially below those cut-offs after a single session. In fact, in an informal survey of 265 energy psychology practitioners, less than 1% said they believed that the primary active ingredient in energy psychology treatments can be explained exclusively in conventional terms (reported in Feinstein, 2004). Might the "energy" dimension of energy psychology play a more systemic role in these surprising outcomes than the relatively confined effects of

generating electromagnetic deactivating signals and memory-disrupting delta waves?

Does “Energy” Have a Legitimate Role in Explanatory Models?

While scientific frameworks in conventional Western thought are still dominated by a rigid materialism and mechanistic worldview, leading-edge scientists, studying topics from neurology to quantum mechanics, are finding them inadequate for addressing some of the most pressing questions in their respective fields (Laszlo & Dennis, 2012). Nowhere is this more evident than in medicine. Bruce Lipton, a cell biologist who did some of the pioneering work on stem cells and on gene expression while on the medical school faculties at Stanford and at the University of Wisconsin, has suggested that medicine is a century behind modern physics in utilizing the realization that the universe is most fundamentally made—not of seemingly separate billiard ball-like atoms and molecules suspended in empty space—but of energy:

Quantum physicists discovered that physical atoms are made up of vortices of energy that are constantly spinning and vibrating ... The fact that energy and matter are one and the same is precisely what Einstein recognized when he concluded: $E = mc^2$ The Universe is *one indivisible, dynamic whole* in which energy and matter are so deeply entangled it is impossible to consider them as independent elements. (Lipton, 2005, pp. 100–102)

Conventional medicine focuses first on the chemical side of illness and healing, largely from a Newtonian “poolball” perspective; energy medicine and energy psychology focus first on the energy side.

Strengths of an Energy-Attuned Model

Lipton (2005) pointed out that a linear, mechanistic understanding of the complex information exchanges involved in the body’s normal functioning cannot “even come close to giving us an accurate understanding of disease” (p. 103) while “hundreds upon hundreds of ... scientific studies over the last fifty years have consistently revealed that ‘invisible forces’ of the electromagnetic

spectrum profoundly impact every facet of biological regulation” (p. 111).

Two clinically vital qualities that distinguish energy from chemistry are speed and responsiveness. With 50 to 100 trillion cells comprising the human body, survival depends upon the speed and efficiency of signal transfer. The act of walking requires communication among millions of cells. While chemical signals proceed at less than 0.5 in./s and much of the signal’s energy is lost in the heat generated by thermochemical coupling (Lipton, 2005), electromagnetic signals travel through nerve fibers at up to 500 feet/s, and energy fields can “broadcast” information to other energy fields at the speed of light’s 186,000 miles/s. Lipton (2005) described research suggesting that “energetic signaling mechanisms such as electromagnetic frequencies are a hundred times more efficient in relaying environmental information than physical signals such as hormones, neurotransmitters, etc.” (p. 112). Biologists have also repeatedly demonstrated the extraordinary sensitivity and responsiveness organisms have to tiny signals in the environment (Oschman, 2000, 2005), including an ability to detect extremely weak electromagnetic fields and discriminate them from background “noise” involving much stronger signals (Adey & Bawin, 1977). Recognizing this sensitivity to gradients of electromagnetic information fills a gap in our understanding of the complex information processing accomplished by the human brain.

Six strengths of utilizing an energy medicine framework have been identified as involving its abilities to (a) address biological activities at their energetic foundations; (b) regulate physiological processes with precision, speed, and flexibility; (c) foster healing and prevent illness with interventions that can be readily, economically, and noninvasively applied; (d) include methods that can be utilized on an at-home, self-help basis, fostering a stronger patient and practitioner partnership in the healing process; (e) adopt nonlinear concepts consistent with distant healing, the healing impact of prayer, and the role of intention in healing; and (f) strengthen the integration of body, mind, and spirit, leading not only to a focus on healing but to achieving greater well-being, peace, and passion for life (Feinstein & Eden, 2008). These strengths have led nationally prominent physicians such as Christiane Northrup (2008), Norm Shealy (1998), and Mehmet Oz

(2007) to publicly predict that energy medicine will play a central role in the future of medicine. According to Dr. Oz (2007), “Energy medicine is the last great frontier in medicine!”

Energy Psychology’s Three Primary Energy Systems

Energy psychology is a branch of energy medicine in a manner somewhat analogous to the way psychiatry is a branch of conventional medicine. Psychiatry applies medical principles and procedures for enhancing mental health; energy psychology applies energy medicine principles and procedures toward the same objective. Complementing the familiar energies that fall within the electromagnetic spectrum, energy healing practitioners believe they are also working with energies that involve a “subtle” dimension that is not easily detected or measured (Collinge, 1998). The Association for Comprehensive Energy Psychology (www.energypsych.org) identifies three subtle energy systems that may be addressed by energy psychology interventions: (a) energy pathways, such as “meridians”; (b) energy centers, such as “chakras”; and (c) the energy field surrounding the body, known scientifically as the “biofield,” or in healing and spiritual traditions as the “aura.”

All three forms of subtle energy—meridians, chakras, and biofields—have been independently discovered and worked with by healers throughout the world over the millennia. At least 97 cultures refer to the human aura, each calling it by their own name (White & Krippner, 1977). The chakras, according to Collinge (1998), are

major centers of both electromagnetic and vital energy [which] are recognized in indigenous cultures the world over. In the Huna tradition of Hawaii, they are called auw centers; and in the Cabala, they are the “tree of life” centers. In the Taoist Chinese traditions the term is dantien, and in yogic theory they are called “chakras.” (p. 35).

“Vital energy” is also believed to flow throughout the body along an unseen network of pathways, which are called “meridians” in traditional Chinese medicine and “nadis” in the yogic tradition of ancient India. Each of these energy systems—the aura, chakras, and meridians—is thought of as involving electromagnetic as well as subtle energies.

Empirical Support for the Existence of Subtle Energies

Not only are the existence of the aura, chakras, and meridians corroborated across cultures, but each has been distinguished by electromagnetic measures and other physical verifications. Hundreds of experiments using dozens of unconventional instruments, in fact, have pointed to the existence of energies that are not described within conventional frameworks (Church, 2009; Collinge, 1998; Dale, 2009; Gerber, 2001; Oldfield & Coghill, 2011; Swanson, 2003, 2010; Tiller, 1997). For instance, a vivid demonstration of subtle energy in a lab setting, originally conducted in Russia, has been followed by collaborative experiments between the Institute of Heartmath in California and the Institute of Biochemical Physics of the Russian Academy of Sciences (Poponin, 2002). A laser beam sent through a vacuum showed distinct patterns in the vacuum’s energy field after a sealed container holding DNA was placed in the vacuum. After the DNA was removed, with strict vacuum conditions maintained, the laser beam was again passed through the vacuum. This time, patterns of light oscillation that were not in the vacuum prior to the insertion of the DNA were found after the DNA was removed. These remaining oscillations have been interpreted as being the subtle energy imprint of the DNA. Had they been electromagnetic imprints, which propagate at the speed of light, any such traces would have quickly left the chamber or been absorbed. But, as Swanson (2010) commented, these traces had “an independent, stable existence” (p. 128).

Holding that such energies are more than mere artifacts of nature, Swanson (2010) proposed that “subtle energy modifies the familiar forces of electromagnetism, gravity, and the nuclear forces [and] appears to be the source of auras and chakras and the qi [life force] which flows through the acupuncture system of the body” (pp. 48–49). Perhaps the most provocative quality of subtle energy for psychotherapists, however, is that “it responds to and interacts with thought” (Swanson, 2010, p. 50). The influence of intention on plant growth (McTaggart, 2007; Tompkins & Bird, 1973) and healing (Schmidt, 2012), as well as on mechanical instruments (Nelson, Bradish, Dobyns, Dunne, & Jahn, 1996; Tiller, 1997), has substantial empirical support, and some form of subtle energy appears to be mediating (Dale, 2009).

A Working Model for Energy Psychology

That memories, beliefs, feelings, thoughts, and habits of behavior are coded in the brain is well established. Also unquestioned is the fact that energy can carry information, as in the light waves that are bringing these words to your eyes, sound waves, radio waves, and other electromagnetic frequencies such as x-rays. Not so familiar is the way these electromagnetic energies may interact in coordinating psychological processes, with energy fields organizing the brain's neurons in coding information.

The original explanatory model within energy psychology was Roger Callahan's formulation of the "thought field." Callahan viewed a thought field as a "force field" in the body that "carries thoughts and information" (Callahan & Callahan, 2011, p. xxi). Callahan's Thought Field Therapy instructs the client in ways of tuning into the thought field associated with a psychological problem. Tapping on specific acupuncture points after this thought field has been mentally activated is believed to resolve energy disturbances that were involved with that problem. The desired result of this sequence is that the thought field that was sustaining the problematic emotional responses, behaviors, and ways of thinking will be altered.

How the Brain Processes Disturbing Experiences

Before addressing how energy fields might be able to therapeutically impact emotions, thought, and behavior, we will first review current understanding of the ways the brain manages distressful experiences. Ecker, Ticic, and Hulley (2012) summarized recent findings about how the brain stores and revises emotional learning. Core beliefs and mental models formed in the presence of intense emotion during childhood or later "are locked into the brain by extraordinarily durable synapses" (p. 3) that normally persist for the remainder of the person's life. Neuroscience research since 2004 has, however, demonstrated that—by facilitating a specific sequence of experiences—it is possible to activate targeted emotional learnings and chemically unlock their synapses "for prompt dissolution of those retrieved learnings at their emotional and neural roots" (p. 8). Through this process of

"depotentiating" (deactivating at the synaptic level) the neural pathways maintaining emotional learnings that are at the basis of psychological problems, "major, longstanding symptoms can cease [because] their very basis no longer exists" (p. 4). When synapses are temporarily unlocked during the precise set of conditions described below, neural pathways that sustain old emotional learnings may be altered or totally eradicated.

The key involves the way the brain first *consolidates* emotionally charged experiences (translating them into memory) and may then, after such experiences have been recalled, *reconsolidate* them (reintegrate retrieved memories into the memory system in a way that maintains or modifies the memory). Experiences become consolidated into working memory within seconds, and then into short-term memory within minutes to hours, through the synthesis of proteins that form synaptic pathways between neurons ("synaptic consolidation"), a hippocampus-mediated process. Over time they are further consolidated with other memories ("systems consolidation"), a process that involves the neocortex (Roediger, Dudai, & Fitzpatrick, 2007). Memories are formed by separate memory systems into two basic layers, implicit and explicit memories. Implicit memories do not involve conscious recall of an event. They are, rather, encoded as behavioral learnings, emotional reactions, perceptions of the outer world, and bodily sensations, as well as "generalizations across experiences, summarizing elements of lived moments into schema or mental models of events" (Siegel, 2010, p. 63). While implicit memories do not bring the earlier experience into conscious memory, they can impact current experiences without the person's recognition of their influence. This can be useful. The implicit memory system, in fact, plays a central role in daily functioning, from navigating one's way through repetitive choice points without having to seek a new solution each time, to routine procedures such as tying one's shoes or driving a car. We don't think about the steps or where we learned them. We simply do them, with our minds free to focus on other concerns.

Explicit memory involves the more familiar conscious recall of facts and events. First encoded by the hippocampus, memories of one's experiences subsequently become integrated as autobiographical memory at the neocortical level. Compared with the emotional or procedural

learnings in the implicit memory network, which are stored in the subcortical limbic system and right cortical hemisphere, explicit memory

is more flexible and gives us the factual scaffold of our understanding of the world as well as weaving a set of autobiographical puzzle piece assemblies. In other words, implicit memory provides the pieces; explicit memory assembles them into fuller pictures of the whole. (Siegel, 2010, p. 64).

But when a memory is based on trauma or other difficult experiences, this integration of the implicit and explicit memory systems may not occur. Ecker et al. (2012) have explained that implicit memories of highly charged emotional events may, in fact, “underlie and generate” a large proportion of the symptoms people present in psychotherapy (p. 14), including symptoms that are often attributed to genetic and other factors, such as many forms of depression. They propose that the implicit memory system generates coherent mental models that “make deep sense in light of actual life experiences and are fully adaptive in how they embody the individual’s efforts to avoid harm and ensure well-being” (p. 7). Symptoms, they feel, are best understood as emerging from mental models that reflect “adaptive, coherent strivings” (p. 7) from an earlier time rather than in the pathologizing terms found in much of the clinical literature. However, when these models are imposed on new circumstances, they are often limiting or harmful and may become the source of a range of psychological difficulties.

The Cost of Unprocessed Memories

Implicit body-level memories and learnings can influence perceptions, thoughts, and behavior in ways that produce psychological symptoms or are otherwise costly to the person’s ability to thrive, and they tend to persist. If, however, the experience that evoked the implicit memory is paired with an experience that is in conflict with the person’s predominant mental models, the conflict may enter consciousness in ruminations, mental enactments of what might have been done or said differently, or in dream content. Sleeping and dreaming are among the ways the brain attempts to reconcile implicit memories with experiences that challenge them (Walker & van der Helm, 2009). Conscious and unconscious mental

activities converge to make sense of unsettling experiences, to put them into perspective by comparing them with related experiences from the past, and to glean learnings that can be applied when similar situations are encountered.

Some experiences, however, overwhelm a person’s ability to integrate them with existing neural networks, and they are consolidated in the implicit memory system without subsequent integration by the neocortex. Traumatic experiences may actually be stored in fragments—as sensations, perceptions, emotions, thoughts, and impulses to react, such as to flee the situation—that can re-emerge and impact current perceptions and behavior with no conscious recognition of their origin. PTSD, stemming from intense trauma, has received the greatest attention, but many typical childhood or subsequent experiences—such as severe humiliation, betrayal, embarrassment, criticism, or a major loss or threat—can also create implicit memories and learnings that reactivate in the present and dominate information processing. Rather than being stored in the fragmentary manner seen in PTSD, these experiences tend to be coded in the implicit memory system as isolated but coherent internal schema for avoiding harm or adapting to difficult situations. Because they were formed to cope with circumstances that are usually no longer current, they may be at the root of automated, self-limiting thoughts, perceptions, and behavior. Such unprocessed implicit emotional learnings become intertwined and confused with the current experience, causing responses that are invisibly linked to the past while preventing desired outcomes in the present.

Most people, even those who are coping relatively well, carry numerous implicit memories that are echoed in their current behavior in ways that are self-limiting. If a male teacher who had bushy eyebrows was sexually provocative toward you, you may find yourself reflexively shying away from bushy-eyebrowed men. Sensory aspects of the original experience—smells, sounds, tastes, skin sensations, or images such as bushy eyebrows—can become triggers that evoke an old emotion or bodily response and result in your projecting it onto the current situation. Another person’s tone of voice, gesture, or facial expression may cause you to overlay your emotions and responses from an early experience onto what is happening now. Resolving unprocessed memories

through reconsolidation is a path out of these difficult and often self-defeating scenarios.

How the Brain Updates Emotional Learnings

Despite the stubborn tenacity of these deep emotional learnings, nature has established a mechanism for “updating existing learnings with new ones” (Ecker et al., 2012, p. 26). After an emotional memory has been brought to mind—in response to cues, triggers, context, or suggestion—the memory can, for a brief period, be reconsolidated in a new way. If, during this “reconsolidation window,” which can last for several hours, a second vivid experience is introduced that differs significantly “from what the reactivated target memory expects and predicts about how the world functions” (p. 21), the original learning can be revised or completely eliminated. The old learning is replaced by a new experience that first challenged and then “disconfirmed” the outdated beliefs, models, and interpretations. This new, incompatible experience produces a neural mismatch that chemically “unlocks” the synapses of the earlier memory and “renders [its] circuits labile,” that is, susceptible to change by “a new learning experience that contradicts (for erasing) or supplements (for revising) the labile target knowledge” (p. 27). For the synapses to “unlock,” the disconfirming experience must be evoked while the original learning is still in a reactivated condition. For the memory to be reconsolidated in a new way, the same disconfirming experience must be repeated, or another experience that contradicts the mental model that grew from the original memory must be introduced, during the reconsolidation period.

Demonstrated first in animal studies and then in humans, this process can rapidly and permanently change “learnings formed in the presence of intense emotion” that, until recently, had appeared to psychotherapists as well as brain researchers to be so indelible that it seemed, after they had been established, that “the brain threw away the key” (Ecker et al., 2012, p. 3). We now know a great deal about the brain’s keys for unlocking the synapses that maintain emotional memory. Ecker et al. (2012) summarized the clinical implications of these developments: “With clear knowledge of the brain’s own rules for deleting emotional learnings through memory reconsolidation, therapists no longer have to rely

largely on speculative theory, intuition, and luck for facilitating powerful, liberating shifts” (p. 4). Understanding the memory reconsolidation process has made it possible for clinicians to more systematically transform the core beliefs and mental models formed in response to earlier life experiences.

Therapeutically Resolving Unprocessed Memories

A century of psychotherapy has been dedicated to freeing people from old, dysfunctional patterns that are rooted in the past, allowing them to reach potentials that would otherwise remain beyond their grasp. Ways of overcoming limitations that trace to childhood were pioneered by psychodynamic therapists and have been refined by cognitive-behavioral therapists. Newer “power therapies” introduce additional therapeutic elements that are believed to enhance the speed and efficiency by which old habits and conditioned reflexes can be interrupted and new ones established (Commons, 2000). These “power therapies”—claimed by their proponents to be unusually effective in interrupting old habits of thought, feelings, and behavior and in establishing new ones—share in their use of somatic interventions. Along with energy psychology, prominent therapies utilizing somatic interventions include Eye Movement Desensitization and Reprocessing (Shapiro, 2001), Gestalt Therapy (Polster & Polster, 1973), Hakomi (Kurtz, 2007), Sensorimotor Psychotherapy (Ogden, Kekuni, & Pain, 2006), and Somatic Experiencing (Levine, 2010).

In introducing the earliest energy psychology protocols, Callahan (1985) formulated a set of procedures that were remarkably attuned to the findings about memory reconsolidation that would emerge two decades later. The sequence of experiences necessary for systematically evoking the reconsolidation process to transform a target emotional learning, regardless of the form of therapy, has been described by Ecker et al. (2012): (a) vividly accessing emotional memories or learnings that are involved in the targeted symptom, (b) concurrently activating an experience that contradicts implicit models or conclusions that were drawn from the original experiences—which Ecker et al. termed a “juxtaposition experience,” and (c) verifying that the change has occurred. During these steps, implicit memories and learnings enter the

neocortex-mediated explicit memory system and integrate with neural pathways that support established coping strategies, their earlier adaptive functions are examined and appreciated, and their automated, unrecognized influence on current perceptions, thoughts, and behaviors are eliminated. This is how unprocessed implicit emotional memories and learnings are “processed.”

In a typical energy psychology protocol, the initial rounds of acupoint tapping most often involve activating the symptom or presenting problem and the emotional learnings underlying it via imaginal exposure. The client calls up the issue using images, evocative phrases, or a felt sense of the problem. When the tapping has removed some of the emotional edge of the current problem, childhood memories that play into the current problem often spontaneously emerge, and as they become the new focus, their adaptive historical function can usually be discerned. Techniques for bridging to earlier memories, such as following a current feeling back to one of the first times that feeling was experienced, may also be used.

The second set of sequences—generating an experience that disconfirms the earlier learnings—is the most complex stage for most reconsolidation-oriented therapies, but it is where energy psychology protocols show their greatest advantage. Because stimulating selected acupoints almost instantly reduces limbic arousal (see Fang et al., 2009; Hui et al., 2005), the emotional landscape changes *during* the exposure. A traumatic memory or trigger that produced a physiological threat response is vividly imagined, but the disturbing physiological response is no longer present. The brain is experiencing a mismatch. The memory or trigger created a strong expectation that the implicit emotional learnings would be evoked, but the expected emotional reaction did not occur because acupoint stimulation had temporarily deactivated the limbic system. The juxtaposition of holding the troubling scene simultaneous with no physiological arousal is the mismatch that is the necessary ingredient for the scene that was mentally activated to be reconsolidated in a new way.

In this juxtaposition stage, energy psychology protocols closely mimic the early laboratory experiments with animals in which the role of reconsolidation was discovered. For instance, a red light in the cage of an experimental animal would glow just before a foul odor was administered. Once the

implicit learning that the red light meant the odor was coming had been established, the red light alone would cause the animal to try to avoid the odor. But if the expected odor is not released following the appearance of the light, a mismatch between expectations and perceptions is created: “The synapses of the schema’s neural circuit [are] molecularly unlocked, like an unlatching of train cars still sitting in place [so] the schema can be modified or erased permanently” (Ecker, 2010, p. 45). These conditions can be easily created in the laboratory, but they are more challenging to create in a clinical setting. The mismatch in energy psychology treatments, however, is generated by simply tapping on the skin, almost too easy to believe. The required mismatch or “disconfirming experience” is effected by bringing the trigger to mind while preventing the threat response from occurring via the deactivating signals the acupoint stimulation sends to the amygdala. Other therapies often have to work much harder to create suitable mismatch experiences.

For Ecker et al.’s (2012) third stage (verifying that the change has occurred), energy psychology practitioners use SUD (subjective units of distress) ratings to provide both the clinician and the client not only a way of readily verifying that the desired outcomes have occurred but also a gauge that can be frequently called upon to determine which elements of the treatment need adjustment or repetition. A single experience that contradicts an old learning can unlock the synapses, launching reconsolidation, but it usually must be repeated several times for unlearning to occur. The process of assigning the rating is essentially a mindfulness task that often also uncovers salient aspects of the situation that then receive attention.

The observations of Ecker et al. (2012) regarding therapeutic change, based on an understanding of the reconsolidation of emotional learnings, are consistent with the clinical and research findings emerging from within energy psychology. One of the most controversial but most significant of these is that “transformational change through the erasure sequence does not rely on extensive repetition over time to effect change” (p. 32). The rapid outcomes seen in energy psychology treatments are consistent with Ecker et al.’s observations about “the swiftness with which deep, decisive, lasting change occurs through the therapeutic reconsolidation process” (p. 32). This of course “challenges traditional notions of the time

required for major therapeutic effects to come about” (p. 32), as reports of the single-session energy psychology treatments of PTSD discussed earlier have tended to do. Another pertinent observation is that the “mismatch” component—the visceral experience that contradicts the client’s existing emotional knowledge and becomes the basis for the new learning—“must feel decisively *real* to the person based on his or her own living experience ... it must be experiential learning as distinct from conceptual, intellectual learning, though it may be accompanied by the latter” (p. 27). One of the most satisfying and frequently repeated experiences for energy psychology practitioners is watching the astonished expression on a person’s face when bringing to mind a memory or trigger or entering an *in vivo* situation that 15 min earlier was met with the physiological components of terror but is now unable to produce any emotional charge whatsoever.

Variables that impact treatment speed and outcome include the age of the problematic emotional learning, its intensity, the context in which it was formulated, and the frequency of the experiences that led to and reinforced the emotional conclusions (Ecker et al., 2012). In discussing the durability of new learnings that are based on reconsolidation, Ecker et al. noted that new learning of any kind of course “creates brain change in the form of new neural connections,” but “it is *only* when new learning also unwires old learning that *transformational* change occurs” (p. 33). In therapies that take advantage of the natural reconsolidation process, the “new learning directly impinges upon and revises the circuits of the old learning, rewiring and updating them” (p. 33). Eliminating the old learning through reconsolidation is necessary for clinical outcomes where “symptom cessation is rapid and complete, not subject to relapse, [and] remaining symptom-free is effortless” (p. 33). Such changes are of a different order than “extinction training,” where learned responses are challenged and temporarily overridden by—but are *not* fundamentally changed or erased by—new conditioning. In reconsolidation, the original memory pathways are *themselves* changed. In extinction training, the new learnings are formed “in a physically separate memory system” that competes with “the target learning” (p. 16). As a result, extinction training has less power and the symptoms it does extinguish are subject to return.

Of particular interest with reconsolidation-informed therapies is the way that when an old emotional learning “is erased, erasure is limited to precisely the reactivated target learning, without impairing other closely linked emotional learnings that have not been directly reactivated” (p. 25). Consistent with reports from energy psychology practitioners, after the learned fear response has been eliminated, “subjects still remembered the experiences in which they had acquired the conditioned fear response, as well as the fact of having had the fear, but the fear was not re-evoked by remembering those experiences” (p. 25). In fact, energy psychology training programs teach practitioners to challenge positive outcomes (Adams & Davidson, 2011), asking the client to try to reproduce the fear, pain, anger, or other disturbing emotion associated with the target memory or trigger. If they can, the treatment is not complete. The speed with which an unwanted emotion can be decisively, experientially eliminated is one of the aspects of energy psychology treatments that clients find most convincing.

One final observation from Ecker et al. (2012)—that the treatment leads to an “increased sense of unified self and wholeness” (p. 33)—is also consistent with the outcomes reported by energy psychology practitioners. More than just overcoming symptoms, when outdated emotional learnings are transformed, eliminating their limiting beliefs and mental models, new connections with neural networks that support optimal functioning are formed. With little prompting, clients talk about themselves and their situations in more adaptive ways. Their view of their world and their place in it becomes more complex yet more coherent and empowering. In a comprehensive study of the developing mind, Siegel (2012) found increasing integration and coherence to be the hallmarks of healthy development. Such self-organization is reinforcing. Siegel explained that “a positive emotion arises with increases in integration, whereas a negative emotion occurs with decreases in integration” (p. 338). This impulse toward greater integration and health is organic. While self-limiting emotional memories that have not been processed interfere with the movement toward increased integration and coherence, they forcefully reveal themselves in symptoms, waking imagery, dreams, and problematic behavioral patterns. It is as if they push for expression in the psyche’s calculus for promoting self-healing and

personal evolution until they have been adequately processed.

Unanswered Questions

In discussing possible mechanisms of action in the “power therapies,” Commons (2000) suggested that they work at the “subcortical level of brain activity,” delaying conditioned stimuli from directly eliciting negative emotional responses “until the frontal lobes can perform their interpretive function” (p. 137). While this is consistent with current neurological understanding of what occurs when problematic implicit memories have been successfully processed, it does not address an even more basic question for the “power therapies,” or any other form of psychotherapy for that matter.

No one knows how all the parts of a single memory are coordinated in the brain. Various brain structures work simultaneously in creating a memory, and that memory seems to be distributed over many areas of the brain. A visual image may be stored here. A physical sensation there. A judgment about the experience somewhere else. How they are integrated is unknown. Moreover, after trying for more than two centuries to locate just where and how memory is stored, neuroscientists are still unable to fully explain a most curious finding by the French physiologist Jean Pierre Flourens in the early 1800s (Yildirim & Sarikcioglu, 2007), revisited by the American psychologist Karl Lashley in the 1940s (Lashley, 1950). Lashley, and Flourens before him, surgically removed various parts of the brains of laboratory animals and watched the effects on their behavior. For instance, after training a rat to perform a complex task, Lashley would remove a part of its cerebral cortex, the region of the mammalian brain involved in the higher functions of the nervous system, and observe whether it could still do the task. What was most perplexing is that not only could up to half the cortex be removed without curbing the ability to do the task, it did not matter *which parts* of the cortex were removed. Independent of the specific areas of the cortex that were left intact, as long as at least half the cortex remained, the rat could still do the task. The same finding in different animals by subsequent researchers led one of them to famously state in *Scientific American* the enigmatic observation that “memory is both

everywhere and nowhere in particular” (Boycott, 1965, p. 48).

What Is Added by an “Organizing Field” Hypothesis?

Lashley (1950) speculated that recall must involve “some sort of resonance among a very large number of neurons” (p. 479), but the enigma remained of how memory fragments stored throughout the brain are organized into a single experience at the time of recall (known to neurologists and consciousness researchers as the “binding problem”; Revonsuo & Newman, 1999). In 1981, the British biologist Rupert Sheldrake proposed that morphic (form-generating) fields organize the actions of neurons in forming thought as well as all other biological processes (Sheldrake, 1981). Fields (think of iron filings taking shape on a piece of paper with a magnet beneath it) are “lines of force” whose nature has been debated since Michael Faraday’s studies of electromagnetism in the 1830s. Sheldrake built his morphic field hypothesis on the ways that quantum fields affect subatomic particles and extended the concept to atoms, molecules, cells, and more complex structures. The brain’s morphic field, in this theory, organizes the neurons responsible for memory into a coherent system in ways that obviously occur but no one has adequately explained. The field’s “lines of force,” according to Sheldrake, operate through “resonance” (as Lashley had suggested) rather than a direct exchange of energy, much as the electrical field of a person’s brain will start to resonate with the electromagnetic field of a nearby person’s heart (McCarty, 2004).

Sheldrake emerged as a hero within the holistic healing community while being discounted or worse by mainstream scientists. In a scathing critique shortly after his book came out, the senior editor of *Nature* suggested that “This infuriating tract ... is the best candidate for burning there has been for many years” (Maddox, 1981, p. 246).

Nonetheless, energy fields have been shown to organize the activity in cells and group of cells. For example, after a wound, the immune system sets into motion a complex array of cascading chemicals to protect the body from further harm and to fix what has been damaged. At the same time, electrical currents connecting enormous numbers of cells are produced, *acting upon the body to stimulate growth and repair* (Liboff, 2004;

Oschman, 2000). Oschman (2000) explained that an electrical field is generated at the site of a wound, and it remains until the repair is complete, attracting mobile skin cells, white blood cells, and fibroblasts that close and heal the wounds. Finally, as the tissue heals, the current changes and “feeds back information on the progress of repair to surrounding tissues” (p. 94). This remarkable level of orchestration between energy fields and cells operates—according to Sheldrake (1981), McTaggart (2008), and others—not only with the cells involved in immune and repair responses but also with the neurons involved in learning.

An early description of how organizing fields influence health, dating back to the 1930s, emerged from the research of Harold Burr, a neuroanatomist at the Yale School of Medicine. Burr measured the electrical field around an unfertilized salamander egg and found that it was shaped like a mature salamander (Burr, 1972), as if the blueprint for the adult were already there in the egg’s energy field. The electrical axis that would later be aligned with the brain and spinal cord was already present in the unfertilized egg, as measured by a vacuum-tube voltmeter with extremely sensitive, nondistorting, silver/silver-chloride electrodes to detect microvolt differentials (devices that a contemporary engineer, after examining Burr’s scientific papers, described in a peer-reviewed journal as having been both reliable and “remarkable for their time”; Matthews, 2007, p. 55). Burr went on to find electrical fields surrounding numerous organisms, from molds to plants to frogs to humans, and he was able to describe electrical patterns that distinguished health from illness. In a hospital-based study conducted in the 1940s, voltage abnormalities around the cervix were found to predict malignancies with 85% accuracy in more than 1000 women presenting with gynecological symptoms (Langman & Burr, 1947). Burr demonstrated not only correspondences between specific pathologies and electrical characteristics of related organs but also that physical illness is *preceded* by changes in an organism’s electromagnetic field (Burr & Northrup, 1935), a potentially cardinal finding for preventive medicine and a core principle of energy medicine.

The unanswered question in Burr’s and Sheldrake’s theories (as well as in other notable formulations or speculation about an *underlying*

reality, such as Plato’s “Forms,” William James’s “subtler forms of matter,” Carl Jung’s “archetypes,” David Bohm’s “implicate order,” and Ervin Laszlo’s “interconnected universe”) is “what is the nature of this hypothetical medium” (Radin, 2006, p. 234) by which the underlying reality and the world as we see it are intertwined? The idea of some sort of “ether”—which was prevalent until experiments in the 1880s by Albert Michelson and Edward Morley failed to detect an “ether wind” from the Earth’s movement—keeps reemerging. Underlying influences of invisible fields in organizing physical phenomena have, in fact, been independently proposed within a variety of disciplines, including physics, medicine, neurology, and physiology (McTaggart, 2008). Consider “zero-point energy,” for instance. Formulated in a 1913 paper by Einstein and Otto Stern that built on the work of Max Planck, zero-point energy is the lowest possible energy a quantum mechanical system can have. It suggests that the vacuum, “the space between particles,” is not empty! Rather, there is “an ocean of microscopic vibrations in the space between things ... the very underpinning of our universe [is] a heaving sea of energy” (McTaggart, 2008, p. xxvii). While the standard model of quantum physics leaves unanswered questions (Kane, 2005), zero-point energy has been supported by a number of experiments and is generally accepted, even if not entirely understood (Davis et al., 2005).

It is not necessary, however, to explain mysteries of nature that still elude quantum physicists in order to recognize that if resonance is the best explanation available for the attunement that occurs between one person’s heart and another’s brain as well as a host of other observable phenomena, that: (a) some medium is required, and (b) its nature would involve some sort of energy or line of force that we do not yet know how to detect directly. Returning to the way neurons are organized during complex processes such as consolidating or retrieving a memory, a 2001 paper introducing the concept of a “brainweb” (Varela, Lachaux, Rodriguez, & Martinerie, 2001) was, a decade later, the most frequently cited article published that year in *Nature’s* prestigious specialty journal on neuroscience (Luo et al., 2010). Attempting to explain how “scattered mosaics” of information over many brain regions are coordinated into a

unified experience, the investigators suggest that “frequency bands” (think of how a radio tunes into a particular frequency) synchronize cognitive activities throughout the brain. Neurologists at Stanford had previously proposed a “neural broadcasting theory” to explain, on a smaller scale, how neurons appear to influence neighboring neurons even when there is no electrochemical connection via axon and dendrite (Schuman & Madison, 1994). In all three theories—morphic fields, the brainweb, and neural broadcasting—the neurons *resonate* to a field or a frequency that coordinates their activities. Thomas Insel, the Director of the National Institute of Mental Health (2012), has, in fact, pointed to accumulating evidence that the synchronization of “large scale electrical oscillations across distant brain regions” allows content-specific information to be transmitted (p. 1). Laboratory studies have, for instance, shown that individual neurons in the prefrontal cortex are synchronized by oscillations in the brain’s electromagnetic fields, demonstrably impacting thought and behavior (Buschman, Denovellis, Diogo, Bullock, & Miller, 2012). Neurons resonate with brainwaves.

Resonance implies vibration. The vibratory nature of biological structures has been described by Oschman (2000, 2005). Every component of the body—from units within the cell; to the cell; to the organs; to complex structures such as the cardiovascular, respiratory, or collagen systems—is “immersed in, and generates, a constant stream of vibratory information” (Oschman, 2000, p. 71). Oschman suggested that a requirement for “complete health” is “total interconnection” of all the body’s systems at this vibratory level. These connections can become impaired by physical damage or emotional trauma, making the person vulnerable to disease and dysfunction. Interventions, including “acupuncture and other energy therapies,” however, “restore and balance the vibratory circuitry” (p. 71).

Building upon the morphic resonance, brainweb, and neural broadcasting theories and combining them with the role of energy psychology in facilitating emotional learning through reconsolidation as described earlier, the following formulation for explaining the role of energy fields in energy psychology treatments is derived: *Organizing fields* that (a) *coordinate* neural activity are (b) *impacted* via energy psychology

interventions to (c) *orchestrate* information-processing in ways that (d) *enhance* integration and coherence.

Visualizing an “Organizing Field” in a Clinical Situation

Acupoint stimulation presumably enhances clinical outcomes at several levels. The brain imaging studies discussed earlier show that stimulating certain acupoints sends deactivating signals directly to the amygdala and produces brainwave patterns that reduce learned fear. As a result, cortisol and other stress chemicals are not released, the hippocampus and higher cortical regions stay online, and formative experiences can be reconsolidated in a manner that updates internal models and links them with adaptive neural networks. This formulation is useful as far as it goes. But—just as it is still a mystery how neural activity is coordinated in memory formation—the coordination of neural shifts following energy psychology treatments is yet to be decisively explained. Both point to the hypothesis of an organizing field that directs neural activity. That is, in addition to generating electromagnetic signals and brain waves that impact the amygdala, acupoint stimulation appears to also work at a more global level. While other “power therapies” may enhance the adaptive capacities of organizing fields in their own distinctive ways, acupoint stimulation works directly with the meridian system, bringing balance to the body’s energy pathways and then, by resonance, to its entire “vibratory circuitry” (Oschman, 2000, p. 67), including the energy fields that organize neural activity.

In energy psychology sessions, the client is invited to think about a memory or a trigger that brings up a troubling emotion. This, according to the hypothesis proposed here, activates the organizing field that connects the memory, the trigger, and the emotion. Rather than immediately attempting to process the memory, energy psychology protocols next stimulate acupoints to enhance the balance and coherence of the organizing field. While the concept of an organizing field may seem ephemeral and abstract—you cannot grasp it through your senses any more than you can visualize the concepts of magnetism or gravity—such fields are nonetheless believed to act upon matter, specifically in this case, neurons

and neural pathways. The potential roles of fields and frequencies in neural operations have been proposed in the morphic resonance, brainweb, and neural broadcasting theories discussed earlier. Even if we cannot see them, we can imagine them and speculate about their nature.

To turn this speculation into a more palpable experience, imagine that you have goggles that allow you to view the energy fields that organize neural activity. As sci-fi as that sounds, the claims of some healers that they “see” the energies they work with have been indirectly verified (Gerber, 2001; Hunt, 1995), perhaps representing an ability to perceive frequencies outside the normative range, analogous to the way dogs can hear sounds that humans cannot hear. So with our imaginary energy-sensitive goggles, we can speculate about the actions of energy fields in an energy psychology treatment session.

A new client, Richard, comes to you with concerns that his emotional reactions to his boss may be about to cost him his job. Virtually any evaluative comment about his performance, however respectfully delivered or constructively intended, causes Richard to feel severely criticized, become angry, and have difficulty maintaining a civil tone in his responses. His heart begins to beat more quickly, his breathing becomes shallow, and his hands start to tremble. During his first session with you, after a few rounds of tapping acupoints while recalling a recent incident with his boss, he quiets himself and scans his inward sensations to give a rating to the amount of distress the incident still evokes. This mini-mindfulness procedure often brings up earlier experiences related to the current situation, and an image arises of his father watching him play baseball on a playground and yelling at him in front of his friends when he misplays a ground ball. His humiliation around this incident is rated as an 8 on the 0–10 subjective units of distress scale. After several rounds of tapping, it is down to a 0. Two additional incidents, both of greater intensity and emblematic of his father’s charged criticism, next come to mind and are in sequence tapped down from 10 to 0. The incident with his boss is then quickly brought to 0. The next week, he proudly recounts two situations that would have triggered him

but did not. Table 1 speculates on how the organizing fields governing Richard’s relationship to criticism might have appeared through our magical goggles.

The Model in a Nutshell

Explanations in the behavioral sciences are progressing toward increasingly precise and subtle frameworks, from the psychological to the biological to the neurochemical to the quantum mechanical to the realm of subtle energies. It may, however, only be at the energetic levels that we can begin to explain the speed and coordination of millions of extremely subtle and sophisticated processes occurring simultaneously. Acupoint stimulation, in addition to producing electromagnetic signals and brain waves that reduce activation in the brain’s emotional centers during the reconsolidation window, apparently impacts the “organizing fields” that govern neural activity. This brings momentary balance and harmony to the body’s energy pathways, and the brain’s organizing fields resonate with this balance. This enhances their capacity to orchestrate the resolution of intrusive, unprocessed memories. Resolving unprocessed experiences not only eliminates intrusive fragments from implicit memory, supporting the emergence of coherent explicit memories. It allows this more coherent narrative to network with other memories into neural networks that provide more adaptive guidance. In the model presented here, this ongoing process of the integration of new experiences and the reconsolidation of old learnings, vital in maintaining mental health, is directed by fields of energy, lines of force that carry information and organize neural activity.

Three Core Premises of an “Organizing Field” Model

While scientific substantiation of this model may have to wait until instruments have been developed that can detect and track changes in organizing fields, the model is (a) congruent with constructs that have been scientifically established or reasonably well-established, (b) straightforward enough to be useful in guiding the practitioner, and (c) sophisticated enough to guide research (see **Conclusion**). The model is based on three core premises about energy, discussed in the following sections.

Table 1: Speculation on the Role of “Organizing Fields” in an Energy Psychology Treatment

The Experience	The Organizing Field
<p>Richard is calmly going through his day.</p> <p>Richard’s boss makes a constructive suggestion about one of Richard’s projects. Richard has a strong, negative, kneejerk reaction.</p> <p>“Implicit” (unrecognized) memories of hurt and unfairness from childhood are imposed onto the situation, impacting Richard’s perceptions, emotions, and behavior, though he is not consciously recalling the earlier experiences.</p> <p>As Richard becomes calmer with the initial tapping, and mindful while assessing his distress level, the “playground” memory enters his conscious awareness.</p> <p>Richard begins to tap acupoints with the memory active and quickly feels more peaceful. Holding the scene simultaneously with no physiological arousal contradicts the expectations of Richard’s internal model, producing the mismatch necessary for the old learnings to be reconsolidated in a new way.</p> <p>The memories are now cohesive rather than emerging as intrusive perceptions, images, and emotions.</p> <p>The next time his boss makes a suggestion about one of his projects, Richard receives it with no emotional overlay.</p>	<p>The fields organizing Richard’s neural circuitry are, for the moment, relatively integrated and balanced.</p> <p>An organizing field has linked the neurons being fired by the current situation to memory fragments of his father’s fierce criticism. Richard’s meridians resonate with this memory and become disturbed, as they were in the original event.</p> <p>The disturbed meridians, through resonance, impact the organizing field so its state shifts to that of the earlier time. It activates additional implicit learnings from the playground and related incidents with accelerating power.</p> <p>The initial tapping and mindfulness create another state change in the meridians, causing the organizing field to become focused and able to access details of the earlier memory in a more coherent manner.</p> <p>The acupoint stimulation brings balance to the meridians that had become disturbed during the recall of the playground and related incidents. The organizing field resonates with the restored balance and flow of energy, allowing it to bring the old learnings into explicit memory, to transform them, and to connect them with more adaptive organizing fields and neural networks.</p> <p>The organizing field has orchestrated a reconsolidation of the old learnings.</p> <p>The unprocessed implicit learnings have been integrated into adaptive networks and are no longer there for Richard’s organizing field around criticism to activate.</p>

Energy Is an Omnipresent Dimension of Body and Mind That Can Be Influenced to Impact Each in Desired Ways

Like a miniature battery, each of the body’s cells stores and emits electricity. Information processing within a cell and communication among cells is achieved through electrical activity. Memories, feelings, and thoughts are encoded in patterns of tiny electrical impulses. Every breath, every muscle movement, and every morsel of food being digested, in fact, involves electrical energy. These electrical and electrochemical processes, along with more subtle energies, form the

foundation of an energy-attuned model of health and healing.

Subtle energies share a property with gravity, which is that neither can be seen or photographed or in any other way directly perceived through mechanical extensions of our senses. While the Earth’s gravity field remains invisible to our most delicate instruments, its effects are so easily demonstrated that its existence seems obvious. Like gravity, the human “life force” that is the focus of energy healing practitioners has never been directly imaged by scientific instruments. Unlike gravity, however, this “life force” is not accepted within conventional science. Yet its effects

can also be easily demonstrated. If you have it, you are alive. If you do not, you are dead. It is that simple. Energy medicine and conventional medicine would enter into an easier dialogue if the implications of this single fact were more widely recognized. If conventional medicine were more focused on the body's life force, it would first approach an illness with non-invasive energy interventions, and it would be more adept in preventing disease. Consider, for instance, modern thermography, where emanations in the infrared range of the electromagnetic spectrum detect the precursors of illness (Diakides & Bronzino, 2007) or Burr's (1972) early finding that disturbances may show up in an organism's energy field months before they manifest as tumors.

While the "life force" has not yet been detected by conventional scientific instruments, it contains an obvious essential property: the ability to sustain life. Many cultures have concepts and vocabularies for describing this "life force" or "vital energy," such as the Sanskrit *prana*, the Greek *pneuma*, the Japanese *ki*, and the Chinese *chi* or *qi* (pronounced "chee"). Though these terms have often been translated as "energy" in the West, each depicts a larger construct than electromagnetic energy. The concept of *qi*, for instance, provides the main theoretical basis for traditional Chinese medicine, philosophy, culture, and natural science (Jonas, 2003). Jonas explained (2003) that while it "has characteristics of energy such as the ability to work, to be accumulated, stored, discharged and projected from the body, *qi* also has characteristics of intelligence and information" (p. 103). *Prana*, a core concept in yoga and ayurvedic medicine, is understood as the life-sustaining energy that permeates the aura, the chakras, and the nadis, the subtle network of energy channels similar to the Chinese concept of meridians (Co & Robins, 2011).

Just as human anatomy contains many systems and structures, energy manifests in the body in many forms. Some of these energies have been measured by existing instrumentation. Others (subtle energies) have not been. Such energies are, however, said to be known for their effects: "Healers through the ages have perceived subtle energies intuitively and proven them through application" (Dale, 2009, p. 422). Dale explained, "Subtle doesn't mean delicate. In fact, science is beginning to suggest that the subtle—the as

yet immeasurable—actually directs" (p. xxi) the energies that are more familiar. So, for instance, the electromagnetic fields that appear to shape an organism's growth (e.g., Burr, 1972) may shadow more subtle information-laden energies that are actually influencing the electromagnetic field being detected. The role of energy fields in mental and physical health has been established in a number of arenas (Oschman, 2000, 2003). For instance, the human heart, which emits an electromagnetic field that is approximately 5,000 times as powerful as the electromagnetic field of the brain, surrounds the entire body, and extends 8 to 10 feet beyond it (Childre & Martin, 2000). This field governs an array of physiological processes, and its strength and coherence correspond with a person's physical and mental well-being (McCraty, Atkinson, Tomasio, & Bradley, 2009).

Healing applications of electrical stimulation and energy fields have also been documented. TENS (transcutaneous electrical nerve stimulation; Johnson & Martinson, 2006) and PEMS (pulsed electromagnetic field stimulation; Markov, 2008) machines are entering the medical mainstream. In an early meta-analysis of 15 studies, chronic wounds exposed to electrical stimulation healed 144% faster than comparable wounds that did not receive this treatment (Gardner, Frantz, & Schmidt, 1999). A progression of studies demonstrated that the electrical frequency of a chemical could have the same effect as the chemical itself. For instance, histamine increases heart rate, atropine decreases heart rate. Researchers exposed a beating heart to the *electrical frequency* of the histamine molecule and the heart rate increased; the electrical frequency of atropine decreased heart rate. While these findings are still controversial, the study, originally conducted in France, was replicated by independent research teams in Canada, Italy, and Israel before being published in *Nature* (Davenas et al., 1988). The electrical frequencies of the compounds were having the same effects as the compounds themselves! The principle has been extended to healing. Pancreatic tissue from healthy rats was scanned with a laser, and the information was converted into a wide bandwave signal. Rats that had been given a lethal dose of a toxin that destroys the pancreas were exposed to these bandwave signals. In the original experiment in Moscow, and two replications by other teams in other countries, all the rats receiving the toxin

without subsequent treatment died within 4 days; 90% of the rats exposed to the bandwave signals survived (Gariaev, Friedman, & Leonova-Gariaeva, 2006). Their stem cells were stimulated and they regenerated pancreatic tissue.

Church (2009), in reviewing evidence from a vast array of sources, summarized, “Energy is the currency in which all transactions in nature are given or received” (p. 114). Physiological processes in the brain and the body are influenced by a complex system of energy flows and fields, some of which we can readily detect and measure with existing instrumentation and some of which we cannot. The healing traditions of most cultures that live in closer harmony with nature than ours hold that bringing these energies into balance and harmony enhances health.

Energy Carries Information

Information is carried by energy in countless devices, from wireless routers to cell phone towers. Energy has, in fact, been described as “information that vibrates” (Dale, 2009, p. 4), with changing amplitudes and frequencies being capable of coding information that can be “stored or applied” (p. 5). Electromagnetic waves extend from low frequencies, such as radio waves, whose wavelengths can extend over thousands of miles, to high frequencies, whose wavelengths are a fraction of the size of an atom.

Energy psychology interventions are believed to produce shifts in the energy systems that code psychological information, particularly the meridians, the chakras, and the biofield that surrounds the body. For instance, the chakras are an inter-related set of energy fields that—according to the energy healers who work with them—play a key role in processing memories and maintaining psychological patterns (Judith, 1987). The detail and subtlety of the information carried by such energies may be surprising, as in this account by energy healer and intuitive Donna Eden (2008):

Each chakra spirals down seven layers into the body. ... If I move into the field deeply enough, and reach the fourth, fifth, and sixth levels, I get images and stories. When I tell the stories, the person usually responds with a surprised confirmation. Working with the heart chakra of a morose 36-year-old woman, I related, “I feel I am looking out at the world

from the age of about 7, and I have just lost someone I love dearly. It is not a parent, perhaps a sibling? My grief is too much to bear. My heart is closing down.” Her startled and tearful reply: “That’s when Robert, my older brother, was accidentally shot by a neighbor boy who was playing with his father’s gun. He died 2 days later.” (pp. 155–156).

Beyond the memory carried in her chakra’s energy field were instructions that kept the woman, Gail, from risking deep intimacy. Implicit learnings are, in this rendition, coded in the energy field as well as the neurons. After her brother’s death, Gail had never again been able to allow herself to love that deeply. After the energy techniques brought balance and restoration to the disturbed energies locked in her heart chakra, there was an internal shift on this issue. The same reconsolidation sequence occurred as described earlier, but this time the energy intervention involved the heart chakra instead of acupoint stimulation. The pain of her brother’s death was activated, Gail’s heart chakra was simultaneously brought into balance, and being able to recall her brother’s death without pain in her heart was the juxtaposition experience that allowed her reflexive fear of intimacy to be eradicated and more adaptive strategies to develop. In fact, Gail reported a “breakthrough,” with her marriage entering deeper levels of intimacy, during the week following the session. While this may of course have been a coincidence, correspondences between shifts in core issues during energy healing sessions and changes in emotional and behavioral patterns are frequently reported.

The chakras, according to Eden (2008), carry psychological information, storing memory in a separate system that parallels, influences, and somewhat duplicates the memory stored in the brain’s neurons. Strange as this sounds to Western ears, “mental” processes are no longer believed to be limited to the brain. Neuroscientists have established that memory and intelligence are distributed throughout the body in a vast network of mind–body cellular communication (Pert, 1999).

If the first premise for a model of the mechanisms at play in energy psychology is the concept that energies that can be influenced impact health and mental health, the second premise is that energy carries information. To the degree that energy

psychology practitioners can influence the body's energies, they can alter stored information that underlies psychological processes.

Clinical Interventions Can Draw Upon the Fact That Energy Fields, Through Resonance, Influence Other Energy Fields as Well as Neural Activity

Individuals resonate with one another energetically. A person's EEG (brain wave) patterns are, as we have seen, influenced by the EKG (heart wave) patterns of a nearby individual, even though there was no conscious intention to send or receive a signal (McCraty, 2004). These experiments led McCraty and his colleagues to conclude that "the nervous system acts as an antenna, which is tuned to and responds to the magnetic fields produced by the hearts of other individuals" (p. 549). McCraty and Childre (2010) also presented evidence that information encoded in the heart's magnetic field "is communicated throughout the body and into the external environment" and, in fact, creates "bi-directional feed-forward and feedback loops" with the Earth (pp. 20–21).

Resonance is (as in the way that plucking a guitar string tuned to C will cause the C string of another guitar across the room to vibrate) emerging as a unifying concept for understanding a range of unexplained phenomena. Sheldrake's (1981) morphic resonance hypothesis is the most comprehensive formulation, extending from subatomic particles to the evolution of culture. The concept has been applied by others to systems ranging from neural networks (Lashley, 1950; the "synchrony" of Varela et al., 2001) to human/environment interactions (McCraty & Childre, 2010). Of greatest relevance for understanding the effects of energy psychology interventions are the resonances (a) between acupoint stimulation and the body's energy pathways or meridians, (b) between the meridians and the "organizing fields" that orchestrate psychological processes, and (c) between these organizing fields and neural activity. In brief, acupoint stimulation impacts the meridian system, which through resonance, impacts organizing fields that, again through resonance, impact neural activity. This apparent ability of acupoint tapping to readily establish harmony and alignment at these three levels may be the source of its demonstrated ability to achieve a

range of clinical objectives with unusual speed and power.

Conclusion

Three ways that energy psychology protocols impact the body's energies have been proposed: (a) electrochemical impulses reduce arousal in the limbic system during the reconsolidation window, which allows neural pathways maintaining outdated emotional learnings to be revised or eliminated; (b) delta waves are generated, which are also involved in depotentiating maladaptive emotional learnings; and (c) balancing the body's meridian energies by stimulating acupoints brings greater order and coherence to the organizing fields that regulate neural activity. By stimulating acupoints while problematic memories or triggers are mentally activated, the synapses maintaining the implicit learnings related to those memories or triggers are unlocked and reconsolidation can occur. The limbic system's reduced arousal (due to the acupoint stimulation) while the memory or trigger is still active becomes the "new normal."

This formulation has both research and clinical implications. The conceptual framework held by a researcher or clinician determines the questions that will be asked and the avenues that will be explored. If the framework excludes the role of the body's energies in psychological processes, the subsequent conclusions will be skewed toward aspects of the therapy that are not related to these underlying energy dynamics. Each of the premises of the working model, however, raises salient questions that can be investigated. If energy can be influenced to optimize mind and body (Premise 1), what are the most direct ways of engaging that energy and the most effective ways of influencing it? If energy carries information (Premise 2), can that information be accessed; can maladaptive information be altered? If energy fields, through resonance, influence one another as well as neural activity (Premise 3), what are the most effective ways to leverage this principle for therapeutic gain?

As an energy perspective is brought into research and treatment settings, new and extremely practical glimpses into nature's enigmas emerge. The tension between "expanded horizons" and critical thinking can, however, be challenging in any field, and markedly so when attributing

controversial outcomes whose causes are difficult to determine to energies that are difficult to detect. Nonetheless, empirical support for the existence and relevance of energies not usually considered in clinical practice—as surveyed in this article—is there for anyone to review. Despite its controversies, unexplained mechanisms of action, and push against the boundaries of conventional clinical frameworks, energy psychology is proving to be a potent intervention for health and well-being as well as a bridge into the mysterious world of subtle energies.

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