

William Bengston

Questioning the Importance of Conscious Awareness in Alternative Healing

In the culture of the Alternative and Complementary Medicine community is a widespread belief that some sort of conscious connection between the healer and the healee is important to a successful healing outcome. Indeed, many healers associate healing with a conscious spiritual practice or spiritual mindset. The frequent endpoint of this belief is the suggestion that getting into some sort of a spiritual state, or “higher vibration” on the part of both the healer and healee, may be an important component in healing efficacy.

My research in alternative healing, now going on for more than 35 years, is suggestive of the possibility that the link between healing and conscious spiritual connection may be oversimplified. Indeed, my research suggests that we may have the causal order reversed. That is, an awareness of “connection” may not be the proximate cause of healing. Instead, healing may be closer to an autonomic response to need, and the subjective awareness of spiritual connection may be unnecessary and optional at best.

I realize that this perspective may seem heretical to some. Bear with me please and take a look at some interesting and relevant data that supports this view. These data have been gathered using both *in vitro* cell cultures and *in vivo* live mouse models, while I have looked into some parameters of healing such as distance and dose; the physiological correlates of healing; and more recently, the attempt to reverse engineer the healing effect to make it scalable and reliable, a more conventional treatment. The mice research encompasses sixteen experiments using standard models of mammary cancer, sarcomas, naturally occurring oncogenic tumors, immune deficient nude mice, and extremely aggressive cancers. These experiments have been performed at eight independent institutions, including four medical schools. In addition, innumerable *in vitro* cell culture experiments on the consequences of “healing with intent” have been performed on human leukemia cells and human breast cancer cells, to name but a few.

The experimental protocol used in all of these experiments has been to take a “standard” mouse or cell model with a long history of conventional empirical research that has a known and predictable outcome,^{1,2,3} and to introduce the variable of “healing with intent” using the rapid imaging healing technique

which I helped to develop.⁴ Additionally, human physiological correlates to healing have been examined using EEGs at a private lab, and fMRIs independently carried out at two medical schools. Volunteer healers, who have included both students and faculty, have all been pre-screened to be without any experience in alternative healing, nor were they in any way “believers” in the validity of alternative healing. Their healing attempts with me were the first of any kind for them.

The abridged summary of the results of these experiments include:

- The demonstration of a reliable full lifespan cure of cancer in experimental mice, including an apparent immunity to reinjection of the same cancer;
- A dose response to healing, with some minimum amount of healing time being necessary to effect a cure. Interestingly, the only predictor of the aggregate speed of cure is the number of mice in an experiment, the quicker cures being associated with *more* mice being treated;
- Healing proceeds in non-linear fashion, with sudden bursts of healing that resemble “phase transitions”;
- There is a measurable “resonant bond” between the brains of healer and healee that is fluid;
- Healing appears to be fundamentally about “information” rather than “energy,” despite the popular use of the latter term.

Perhaps most important for the following discussion on the place of conscious awareness in all this, *healing appears to be unrelated to a particular conscious state on the part of either the healer or the healee*, and instead appears to be more akin to an *autonomic* response to need.

And, to top it all off, healing can apparently be stored in both biological and physical systems. That is,

- Cells transplanted from a mouse infected with cancer that has been treated by the healing technique can independently cure otherwise infected mice, without further healing with intent, suggesting some sort of biological “memory” of the healing information;

- Water treated with healing with intent can reproduce the cancer cures in mice without further intervention on the part of a healer, suggesting some sort of physical “memory” of the healing information. Additionally,
- *In vitro* cancer cells treated with a cell medium that has been “charged” with the healing with intent will result in a robust acceleration of growth;
- *In vitro* cancer cells treated with cotton “charged” with healing with intent will undergo significant genomic changes related to immunology and inflammation;
- And finally, these apparent effects of healing, whether through healing with intent or through charged cotton, produce significant responses *only when there is a biological healing need present in the healee*.

An Illustration of the *In Vivo* Experimental Model

In the basic experimental *in vivo* protocol, mice are injected with a known dose of cancer sufficient to guarantee death within a specified interval. Mice obtained from either the Jackson Laboratories or the National Cancer Institute are injected with at least 200,000 mammary adenocarcinoma cells, double the lethal dosage. Published life expectancy has been found to be between 14 and 27 days subsequent to injection. Mice develop a non-metastatic externally palpable tumor that results in death either by the crushing of the internal organs or by malnutrition, or both.



Figure 1 – An example of a mouse injected with cancer in the end stages of life



Figure 2 – A typical healing session, with the author serving as the healer. Treatment length, number of treatments, and number of mice per treatment have all been part of various experimental protocols, including other variables such as distance of hands from the cages, extending to thousands of miles.

Healing treatment of the mice generally involves the volunteer healer placing his or her hands on the outside of the cages and practicing the healing technique for a specified duration.

Those mice that have been treated by the healing with intent techniques typically develop an encrusted blackened area on the surface of the tumor, followed by tumor ulceration and then implosion to full lifespan cure.

Histology indicates that at all stages of remission there are viable cancer cells in the mouse. When full cure is achieved, the mouse is completely free of cancer and is further apparently immune to subsequent injections of the same cancer for its entire life.

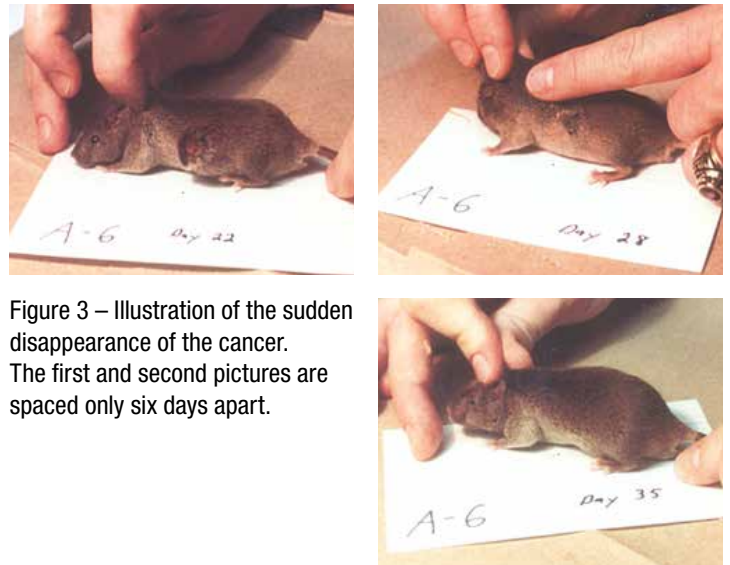


Figure 3 – Illustration of the sudden disappearance of the cancer. The first and second pictures are spaced only six days apart.

Sudden shifts, analogous to “phase transitions,” have been the pattern in all experiments, whether *in vivo* or *in vitro*. That is, in the early stages of healing treatment, mice (and cell cultures) show no apparent effect of the healing intention, until suddenly there are non-linear dramatic shifts in tumors (in *in vivo* models) or cell growth (in *in vitro* models). After the first week, there is no significant difference between cells treated and untreated. After the second week, the cells grown in the treated medium are significantly stimulated.

Healing and the Sense of “Connection”: Part 1

In addition to the anomalous healing in and of itself, there is apparently an anomalous connection that can occur between subjects.

Synchronizing EEGs between the healer and subject indicate that the healer’s EEG data shows harmonic frequency coupling across the spectra, followed by frequency entrainment effects with the healee, followed by EEG phase locking. These results suggest the presence of a connection between the healer and healee.⁵ Of central importance, in addition to the apparent connection established at a distance, is that neither the healer nor healee are consciously aware of the connection. The healee has a need, and the healer practices the rapid imaging healing technique with only a passing intention to help. The connection simply occurs.

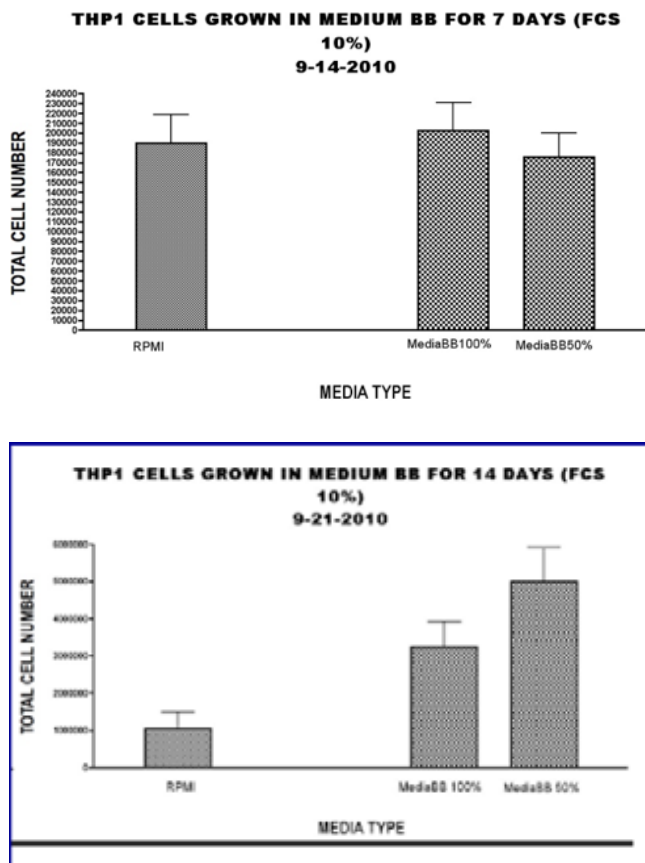


Figure 4 – A treated/not treated medium comparison of cell growth in human leukemia cells at one and two weeks. Note the sudden “explosion” of growth only in the second week. The non-linear sudden growth in cells in response to being grown in medium that has been charged with the healing with intent method. After the first week, there is no significant difference in cell growth between treated and untreated medium. But in the second week there is a sudden burst in growth in cells grown in the treated medium.

Figure 5 shows waveforms revealing the 7.5 to 8 Hz frequency range in both healer and subject at three parietal locations. Early in the healer’s sustained amplitude burst, the phase of the subject does not match the healer’s. As the healer’s burst continues, the subject’s phase synchronizes with the healer’s as the subject’s amplitude also increases to near its maximum for the entire 11-min session. Note: Given the healer’s greater amplitude generally, the subject’s entire waveform was amplified for clarity (50 vs. 15 microvolts/cm sensitivity)

Healing and the Sense of “Connection”: Part 2

Research questions have included whether healing with intent might have a specific location in the brain. In order to gather data using functional MRIs, it would be necessary to produce a “toggling” of healing intention into “on” and “off” states. To my amazement, this was achieved through conscious intent. At the University of Connecticut and Thomas Jefferson Medical Schools, an exploratory pilot study with a simple protocol had

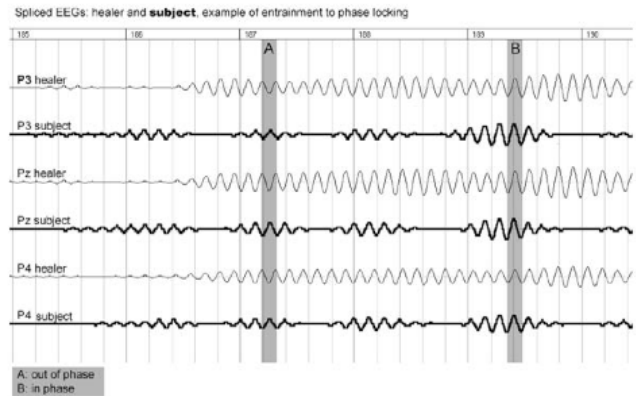


Figure 5: Spliced EEGs: healer and subject, example of entrainment to phase locking.

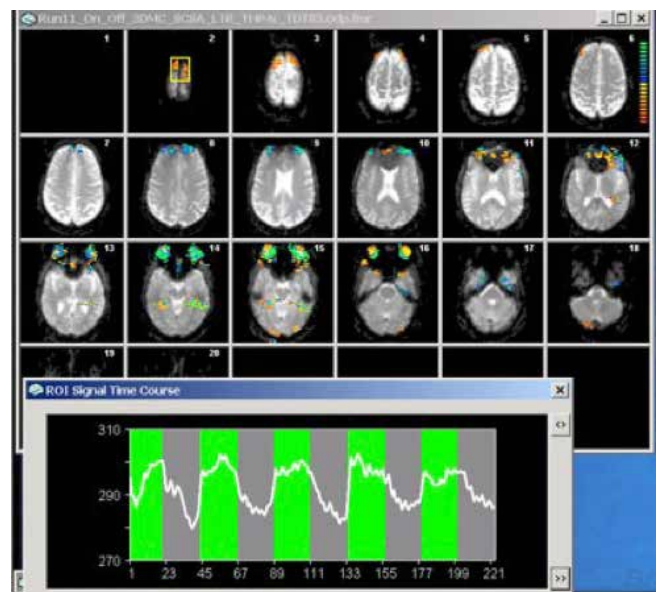


Figure 6 – fMRI data contrasting “on” and “off” healing intention, with a control run. The green and gray bars at the bottom illustrate “activation” and “deactivation” of a part of the brain when cycling is “on” and “off” at 45 second intervals. The part of the brain that was most affected by the cycling was the back of the frontal lobes of the brain (illustrated by the brain images through each successive slice). Each successive image of the brain is a “slice” of the brain at different depths. The first row of images, for example, has the highest parts of the brain.

healers inside an enclosed fMRI intend to “heal” and then to “not heal” during 45-second cycles to see if healing intention can be toggled.

Apparently, healing can indeed be “toggled.” These results were reproduced by several people acting as healers, always contrasting “on” and “off” states of healing intention, using the same techniques as were applied to the mice and in the EEG studies.

An interesting modification of the protocol involved the healer standing outside the fMRI, approximately 25 feet from

the fMRI, and a volunteer healee located inside the fMRI. The healee had no specific intention and was instructed to simply lie inside of the fMRI. Here too, the healer was the one cued to direct healing intention in an on/off cycle of 45 seconds each, except this time the healee was the one being monitored. *The same basic pattern of on/off cueing in the brain of the healee was produced, apparently indicating a brain connection across some distance. Once again, there was no conscious awareness on the part of the healee that anything was out of the ordinary. The healee's only task was to lie still inside the fMRI.*

The third and possibly the most important variant on the fMRI protocol involved the gathering of 10 pictures and hair samples of cancerous animals (there were dogs, cats, horses, and sheep) which were each placed inside of an opaque envelope. To serve as controls, an equal number of opaque envelopes were prepared that had only index cards inside of them. The envelopes were randomized, and in double blind fashion, one was placed on the left palm of volunteer healers who were lying in an enclosed fMRI. *Results clearly indicate that the brains of the volunteer healers "turned on" only when the envelopes had "need" expressed in them (pictures and hair samples of cancerous animals). This apparent activation in response to need essentially duplicated the results when the healers consciously attempted to toggle healing and non-healing in specified intervals. The brains of the volunteer healers "knew" when a need was present in the envelopes.*

This kind of "on" and "off" contrast occurred whether the person was cycling, intending to actually heal someone, or had an envelope with healing "need" inside. And, this contrast was similar to ones where a volunteer was inside the fMRI and the healer was on the outside, some distance away. The healer, turning "on" and "off," produced similar patterns in the (non-healer) person in the fMRI.

Need and a Biological/Behavioral Response to Healing in Mice

Among the curious phenomena that have been observed is the apparent response of mice to the healing environment. In all experiments, we have seen a preference by the mice to situate their tumors as close as possible to the left palm of the healer. This occurs regardless of the orientation of the cage.

This left-handed attraction occurs regardless of the healer, or the type of cancer, only so long as the mice have cancer. Once the mice have been completely cured, they no longer have an inclination to move towards the left hand. It appears as if the mice actually take turns putting their tumor as close as possible to the left palm of the healer, and they switch off after approximately 1 minute of minimum distance from that placement.

Healing and Need in Cell Cultures

Ordinary cotton obtained from a pharmacy was "charged" by volunteer healers for approximately 20 to 30 minutes. Charged and un-charged (control) pieces of cotton were then placed next to well plates with cells that have "need" and cells without need.



Figure 7 – Apparent left-hand attraction in two different mouse models

Several growth experiments were done on bacteria cells without healing need, comparing the effects of "treated" and "untreated" cotton. There was no significant effect on cell growth. But when human breast cancer cells with a healing "need" were exposed to the treated vs. un-treated cotton, significant changes occurred in cell proliferation and migration.

Genomics performed on human breast cancer cells, comparing exposure to treated and untreated cotton, demonstrated significant changes in six genes if the cotton was charged, with strong suggestion of an additional two genes that may be of importance.

Interestingly, Raman spectra analysis failed to detect any difference between the charged cotton that had produced genomic effects, and uncharged cotton. The testing of other materials besides cotton included clear quartz, pink quartz, water, selenite, and cellulose—all with no detectable difference between "charged" and "uncharged."

To date, *only life in need* seems to respond to charged materials. And so, the interesting speculative hypothesis might be that the detector for the difference between healing and non-healing might need to be both alive and in need.

Some Concluding Thoughts

Several interesting patterns emerge from these data. First, the theme of "need" consistently occurs. Mice that have a healing

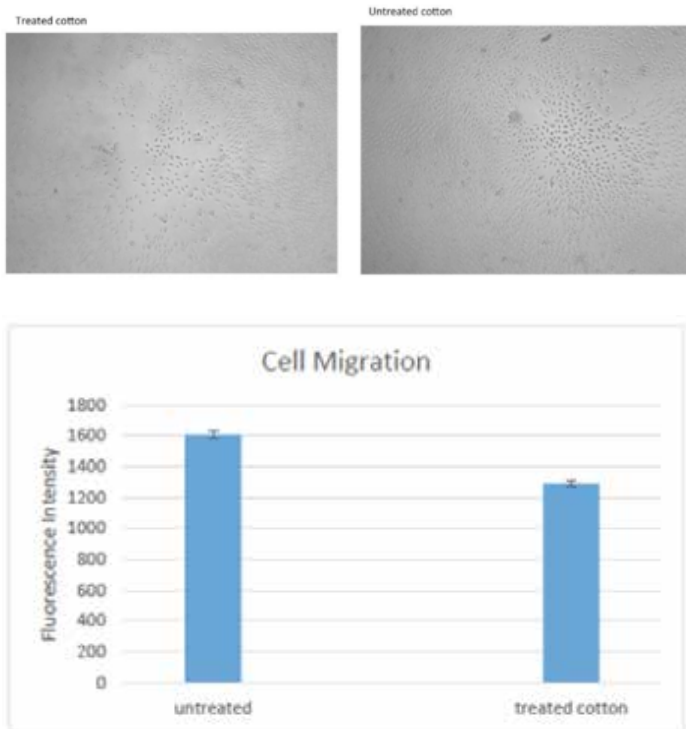


Figure 8 – Human breast cancer cell proliferation and migration comparisons between charged and uncharged cotton. Cotton treated cells demonstrated slower cell proliferation and migration.

Human Breast Cancer cells exposed to Energized Cotton (4 replicates)			
Gene Description	Gene Symbol	Energized cotton	
		Fold Change	P-Value
Caspase 9, apoptosis-related cysteine peptidase	CASP9	-1.241	0.017
E2F transcription factor 4, p107/p130-binding	E2F4	1.123	0.023
Heme oxygenase (decycling) 1	HMOX1	-1.310	0.034
Insulin-like growth factor binding protein 3	IGFBP3	1.181	0.016
Minichromosome maintenance complex component 2	MCM2	1.320	0.020
Protein phosphatase 1, regulatory (inhibitor) subunit 15A	PPP1R15A	-1.435	0.008
Serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1	SERPINF1	1.406	0.083
Vascular endothelial growth factor C	VEGFC	1.218	0.093

Figure 9 – Significant genomic changes in human breast cancer exposed to charged cotton

need will move to the left hand of the healer. Once they are completely cured, this no longer happens. Similarly, cells which have a healing need will respond to healing with intent, whether that healing source comes directly from the hands of a healer, or healing apparently stored in substances such as water, cell medium, or cotton. Cells with no healing need exhibit no anomalous changes when offered healing with intent. And so, at a minimum, it can be posited that biological need is a crucial component in healing, and it may be the healee that instigates the healing effect.

Second, conscious awareness on the part of either the healer or healee is not likely to be necessary to produce a healing effect. The extent or quality of consciousness on the part of mice or cells may be debatable, but there is little question

that they are unlike anything that parallels human consciousness. Yet mice in need “know” to move proximate to a healing source; cells in need do likewise if they possess motility. Can there be serious doubt that these responses to healing are natural biological responses?

The volunteer healer logs vary widely in the extent to which they were consciously aware of anything associated with healing. Some occasionally felt some sort of “connection” with their mice; some felt nothing at all, the latter to the point that they seemed not to understand the question when asked to comment about feelings associated with healing. In multiple experiments, there has been no association between healing efficacy and subjective states of connection. *And so, it may be posited that a conscious awareness of healing may be unnecessary for healing to take place.*

At the same time, both EEG and fMRI data clearly indicate that some sort of biological connection actually does take place. For one, at least in the case of healing humans, healer and healee go into harmonic brain phase locking, and do so without any necessary conscious awareness that the healing phenomenon might be taking place.

Yet, while there can be high confidence that conscious awareness on the part of either the healer or healee is optional at best, the role of *intention* on the part of the healer becomes more problematic. That is, the simple act of putting hands around a cage, or attempting to “charge” materials for a healing experiment, signifies intention of some sort. That intention may be fleeting, and certainly separate from anything approaching either belief or sustained awareness. But if action is taken in order to produce or to test healing of any sort, there must be intention. This intention is akin to the intention expended for many forms of action. I “intend” to walk down the street, but there is nothing approaching “belief” or sustained “attention.” Indeed, attentive walking will diminish efficacy. There must have been some intention to begin the walking, but the activity is driven not by sustained effort or attention, but by a letting go. The mastery of many skills, whether walking or healing, likely involves the transition from “mindful” attention to relatively “mindless” fleeting intention.

Connection can be seen as an autonomic response to need. Consider that in one fMRI protocol, blinded envelopes with pictures and hair samples of animals placed onto the palm produced significant brain response in the healer if “need” was present in those envelopes. These responses were biologically similar to the brain changes that occurred if the healer intentionally attempted to heal. If the envelopes placed into the palms of volunteer healers did not contain need, then no significant brain changes ensued. Again, there was no conscious awareness of whether any envelopes did or did not have any pictures of animals in need.

The commonly found association between certain states of consciousness and healing, often associated with being “spiritual,” likely has the causal order and temporal sequence inverted. Instead of a “spiritual” sense of connection first being necessary in order to produce healing, the data indicate that healing occurs more as an autonomic response to biological need, and the subjective sense of spiritual connection is an

optional consequence of that need. Since more subjectively sensitive individuals are more likely to be drawn to healing, the mistaken association can be made that this sensitivity is the source of healing. It turns out that people who are less subjectively sensitive can heal just as well without ever experiencing connection. Conscious awareness of spiritual connection is optional.

That healing intention can apparently be stored in materials and later be used to stimulate healing effects is extremely suggestive that consciousness may have an associative technology. Data presented here on the apparent storage of healing in water, cell medium, and cotton, which can produce a future healing effect when need is present, begs inquiry into future studies that may help to unravel some of the mysteries of healing. And, there is the additional possibility that this storage ability might be able to make healing more conventional and scalable.

Finally, the lack of necessity of awareness of spiritual connection on either the part of the healer or healee makes it likely that healing does not conform to models of psychokinesis that support conscious intention as the operative agent. That is, healing outcome is not “willed” in the way that operators can bring about intended alterations in, say, the theoretical output of random number generators. Volunteer healers may have “intended” healing in that they went through some training in a healing technique and placed their hands around cages, but there are no cases of these healers having healing follow their wishes. Indeed, initial experiments proceeded under the assumption that if healing were to work, then mice that were treated shortly after being injected with cancer would avoid tumor growth altogether. In all cases, regardless of type of cancer, and regardless of how soon after injection treatment began, tumors grew, sometimes very large, before the process of ulceration and implosion commenced. The volunteer healers were successful in the outcome; they were upset and concerned when their mice developed tumors. Certainly, the pattern and stages of healing do not conform to the wishes of the healers.

The data output from the experiments, and the experiences of the healers, do not conform to anything like a direct PK effect. Instead, there is merit to thinking of healing as a non-directed outcome similar to that proposed by Jahn and Dunne in their M5 model for explaining their consciousness-related anomalies with random event generators and remote perception studies.⁶ That model proposes the notion that the conscious mind might connect to the tangible physical world not directly, but by way of a circuitous route involving unconscious processes and intangible physical mechanisms. Further speculation involves a timeless and spaceless “Source” in which the unconscious and intangible merge.

While a full examination of the application of the M5 model to healing is beyond the scope of this discussion, let me simply say that the actual healing technique used in these experiments, as well as the subjective experiences of a selection of volunteer healers, is remarkably consistent with this model.⁷ I would add, however, that a full explication of the usefulness of the model to understanding healing would actually and controversially minimize the importance of the conscious mind.

This article has been abridged and edited from a chapter entitled “Some Reflections on Consciousness, Intention, and Healing,” in *Being and Biology: Is Consciousness the Life Force?* Edited by Brenda Dunne and Robert Jahn, ICRL Press, 2017.

ENDNOTES

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- 2 Bengston, W. and Moga, M. “Resonance, Placebo Effects, and Type II Errors: Some Implications from Healing Research for Experimental Methods.” *J. of Alternative and Complementary Medicine*, Volume 13(3), pp. 317–327, 2007.
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- 6 Jahn, R. and Dunne, B. “A Modular Model of Mind/Matter Manifestations (M5).” *J. of Scientific Exploration*, 15(3), pp. 299–329, 2001.
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