

Consciousness and Healing

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Integral Approaches to Mind-Body Medicine

THE DARK SIDE OF CONSCIOUSNESS AND THE THERAPEUTIC RELATIONSHIP

Excerpted from an address to the Sixth Annual Alternative Therapies Symposium and Exhibition, March 2002

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Following the publication of my 1993 book *Healing Words: The Power of Prayer and the Practice of Medicine*, I received several letters from religious individuals who were profoundly upset. The views of prayer and healing set forth in my book differed from theirs, and they wanted to set me straight. Some of the letters dripped with venom. The writers denounced me as a heretic and blasphemer. They often inserted religious tracts that described the fires of hell-my fate-in lurid detail. The angriest letters were unsigned with no return address-a postal drive-by in which the perpetrator could not be traced. Most of the letters concluded in the same way. Although my views on prayer were completely erroneous, the writers granted that this was not my fault. Standing outside their religion, I simply could not avoid being deluded. Therefore, because of their love and concern for me, they would pray that I would see the light and understand prayer and healing correctly.

I am grateful to readers who take the time to write to me, and I usually answer their letters personally. So I initially responded to the critical letters by thanking the individuals for their concerns. Then one day I realized that these people weren't praying for me. They were using prayer as a method of manipulation and control. They wanted to force me, through their prayers, to abandon my personal beliefs and come over to their side. From my perspective, their efforts were essentially a curse or hex.

In the past decade, the spirituality-and-health connection has become part of our national dialogue and has begun to command increasing attention in modern medicine. 2,3

Approximately 80 of the nation's 125 medical schools now have courses that explore the correlations between religious and spiritual practices and health. 4

Most people involved in this dialogue assume that spiritual pursuits are either effective or simply neutral. Others, on discovering empirical evidence for the effectiveness of intentions and prayers, have lapsed into a "gee-whiz-isn't-this-wonderful!" mindset. Almost never is it acknowledged that conscious intentions and prayer might actually cause harm-despite considerable evidence that they may do so, as we shall see.

When I initially began to investigate the role of consciousness in healing, I associated this phenomenon with love and compassion. It simply did not occur to me that intentions and prayer might have a malevolent side. But as I probed more deeply, it became obvious that I was dealing with a complementary phenomenon. Just as a magnet cannot exist without both a positive and a negative pole, the light and the shadow side of healing intentions began to come together in my mind. Eventually, the good and evil that are implicit in human intentions began to take their place alongside other great complementaries in life-male-female, life-death, night-day, and so on.

A recent Gallup poll in *Life* magazine explored the prayer habits of Americans. The survey found that 5 percent of us actually pray for harm for other people-and that's just the 1 in 20 who will admit it. When this figure is extrapolated to the population at large, it means that there are about 12 million people in the United States who are trying to harm others through prayer.

Like most people, I initially did not want to acknowledge a dark side of healing or prayer. Eventually, however, ignoring this negative side began to seem unethical. All conventional therapies, such as drugs and surgical procedures, have negative effects. Why should the therapy of human intentions be free of hazards? If they were completely harmless, they would be the only therapy known to humankind that is perfectly safe, and this seemed highly unlikely. And if we are ethically compelled to disclose the negative effects of drugs and surgical procedures, why shouldn't we openly discuss the dangers of consciousness-based therapies? Why do we turn away from these possibilities? This desire constitutes what depth psychologists call repressing the shadow-consigning our undesirable traits and qualities to the unconscious. But if we are to mature psychologically, we must drag these unlovely traits into the light of awareness, where their influence can be openly faced. As C.G. Jung said, a whole person is one who has both walked with God and wrestled with the devil. Just so, if our consciousness is to mature as a force in healing, we are going to have to own not only its positive side but its power to harm as well.

THE THERAPEUTIC RELATIONSHIP

Can the thoughts and intentions of health-care professionals affect their patients physically, nonlocally, at a distance?

Should they be considered as factors in the therapeutic relationship that develops between a health-care professional and her client? When I was in medical school a generation ago, this question was unthinkable. A good therapeutic relationship was considered to be mainly an intellectual affair. The physician acquired information about a patient by taking a history, doing a physical examination, and performing lab tests. Then he or she made (we hope) rational decisions about what to do for the patient, and that was that. I suggest that there is another side to the therapeutic relationship that is profoundly important—the distant, unbounded, nonlocal effects of our thoughts and intentions on those we serve. I propose, moreover, that these effects may function not only for good but for harm as well. Managed health care hasn't helped the therapeutic relationship. The increasing demands made on health-care professionals in managed-care settings has escalated the frustration many physicians feel. If they are unable to deal with their hostile feelings toward "the system," they may project them onto their patients. The result may not be merely a cranky physician with no bedside manner; it may be one who harms his patients nonlocally through his negative thoughts and intentions.

I am aware of the prohibitions against these lines of thought. The tendency has been to psychologize the therapeutic relationship and to consider it limited to the doctor's office or exam room. But we must go further in conceptualizing how we relate to one another for three reasons. First, the thrust of human wisdom is in this direction. Virtually every traditional culture has affirmed a boundless view of human consciousness in which both positive and negative intentions operate nonlocally, remotely, beyond the reach of the senses. Second, the evidence flowing from controlled laboratory studies affirms this view, as we will see. Third, sophisticated hypotheses are emerging from within science that are consistent with nonlocal expressions of consciousness. 5-9

BASIC QUESTIONS

Let's approach this issue by asking some basic questions:

1. Is it possible, in principle, for individuals to mentally influence, at a distance, inanimate objects?

In the prestigious journal *Foundations of Physics*, Radin and Nelson reported a meta-analysis of more than 800 studies conducted between 1959 and 1987 by 68 investigators involving attempts to mentally influence the performance of random-event generators. The researchers found the results to be "robust and repeatable." They further showed that the effect persisted with increasing refinement of the experiments, contradicting the claims of critics. Radin and Nelson stated, "Unless critics want to allege wholesale collusion among more than 60 experimenters or suggest a methodological artifact common to ... hundred[s] of experiments conducted over nearly three decades, there is no escaping the conclusion that [these] effects are indeed possible." 10 Although these hundreds of studies do not involve actual prayer, they nevertheless deal with whether human intention can, in principle, affect the physical world at a distance.

2. Is it possible, in principle, for individuals to mentally influence, at a distance, the physiological function of a living organism?

Ten subjects tried to inhibit the growth of fungus cultures in the laboratory through conscious intent by concentrating on them for 15 minutes from a distance of approximately 1.5 yards. The cultures were then incubated for several more hours. Of a total of 194 culture dishes, 151 showed retarded growth. 11
In a replication of this study, 1 group of subjects demonstrated the same effect (inhibiting the growth of fungal cultures) in 16 of 16 trials, while stationed from 1 to 15 miles away. 12

Sixty subjects not known to have such abilities were able both to impede and stimulate significantly the growth of bacterial cultures. 13

Sixty university volunteers were asked to alter the ability of a strain of the bacterium *E. coli* to use lactose. This strain normally mutates from the inability to metabolize lactose ("lactose negative") to the ability to use it ("lactose positive") at a known rate. The subjects tried to influence nine test tubes of bacterial cultures—three for increased mutation from lactose negative to lactose positive, three for decreased mutation, and three uninfluenced control tubes. The bacteria mutated in the directions desired by the subjects. 14

Seven subjects—two spiritual healers, one physician who was interested in and believed in spiritual healing, and four students with neither experience nor interest in healing—were asked to increase the growth of yeast in 120 test tubes "by the mental method of his choice." Another 120 test tubes were used as controls. The spiritual healers and the believing physician produced significant results ($P < .001$), and the indifferent students produced chance results. 15

3. Can such an effect influence healthy animals?

In 21 experiments conducted over several years, healers tried to awaken mice more quickly from general anesthesia. These experiments were increasingly refined. In one variation, only the image of the experimental mouse was projected on a television monitor to the healer in a distant room, who tried to mentally intervene via the image. Nineteen of the 21 studies showed highly significant results: earlier recovery from anesthesia in the mice to which positive mental intent was extended.

4. Can such an effect influence biochemical processes in humans?

Blood platelets isolated from healthy human volunteers were treated by a healer, who tried to influence the activity of the enzyme monoamine oxidase (MAO). MAO activity was measured before and after the mental intent in both healthy and disrupted cells. The overall effect was to increase the variability of MAO activity relative to untreated control samples ($P < .001$). 20

5. Can such an effect influence human tissue?

Thirty-two subjects mentally attempted to prevent the hemolysis of human red blood cells (RBCs) in test tubes containing a hypotonic saline solution, as measured by standard spectrophotometric techniques. Significant differences were found between the experimental and control tubes ($P < .001$). 21

6. Can such an effect influence healthy humans?

Scores of controlled studies have demonstrated the correlation of positive mental intent with improved physiological effects in human beings at a distance. This material has been the subject of several reviews. 1,22,23

Among the studies' findings are the following:

In a double-blind experiment involving 393 persons admitted to a coronary care unit (CCU), intercessory prayer from a distance was offered to roughly half the subjects. Significantly fewer patients in the prayer group required intubation and mechanical ventilation ($P < .002$) or antibiotics ($P < .005$), had cardiopulmonary arrests ($P < .02$), developed pneumonia ($P < .03$), or required diuretics ($P < .005$). Subjects in the prayer group had a significantly lower "severity score" based on their hospital course following admission ($P < .01$). 24

In a double-blind experiment involving 990 consecutive patients who were admitted to the CCU, patients were randomized to receive either remote, intercessory prayer or no prayer. The first names of patients in the prayer group were given to a team of outside intercessors who prayed for them daily for 4 weeks. Patients were unaware that others were praying on their behalf, and the intercessors did not know and never met the patients. The medical course from hospital admission to discharge was summarized in a CCU course score derived from blinded, retrospective chart review. The prayed-for group had about a 10 percent advantage compared to the usual-care group ($P = .04$). 25

In a double-blind experiment involving 40 patients with advanced AIDS, subjects were randomly assigned to a distant healing (DH) group or to a control group. Both groups were treated with conventional medications, but the DH group received distant healing for 10 weeks from healers located throughout the United States. Subjects and healers never met. At 6 months, blind chart review found that DH subjects acquired significantly fewer new AIDS-defining illnesses ($P = .04$), were less ill ($P = .03$), and required significantly fewer doctor visits ($P = .01$), fewer hospitalizations ($P = .04$), and fewer days of hospitalization ($P = .04$). DH subjects also showed significantly improved mood compared with controls ($P = .02$). 26

In 13 experiments, the ability of 62 people to influence the physiology of 271 distant subjects was studied. 27-29

These studies suggested that

- (1) the distant effects of mental imagery compare favorably to the magnitude of effects of one's individual thoughts, feelings, and emotions on one's own physiology;
- (2) the ability to use positive imagery to achieve distant effects is apparently widespread in the human population;
- (3) these effects can occur at distances up to 20 meters (greater distances were not tested);
- (4) subjects with a greater need to be influenced by positive mental intent—that is, those for whom the influence would be beneficial—seem more susceptible;
- (5) the distant effects of intentionality can occur without the recipient's knowledge;
- (6) those participating in the studies seemed unconcerned that the effect could be used for harm, and no such harmful effects were seen; and
- (7) the distant effects of mental intentionality are not invariable; subjects appear capable of preventing the effect if it is unwanted. In a double-blind study of 53 postoperative men who had undergone hernia surgery, a treatment group who received distant healing by an experienced healer showed a significant improvement in 9 of 24 variables, including objective measures such as wound appearance, lower incidence of fever during hospitalization, and a number of

subjective attitudinal factors, including less pain and more confidence in their treatment when compared with control groups and with a group whose members listened to a suggestion tape. 30

In a randomized, controlled, double-blind study, intercessory prayer was defined as "any form of requesting God to bring about a desired end.…" 31

Intercessors belonged to churches in the San Francisco Bay area. The results noted that 406 subjects improved significantly on all 11 measures; the intercessors, interestingly, improved significantly on 10 measures, suggesting that intercessory prayer has benefits for both the recipient of prayer and the individual who is praying. Using "healing with love," a physician-healer was able to significantly decrease the number of human breast cancer cells in tissue culture dishes compared with controls ($P < .001$). 32

In an ongoing controlled study at the Duke University School of Medicine, patients receiving urgent cardiac catheterization and angioplasty were offered intercessory prayer by prayer groups around the world. Compared with patients treated conventionally, the prayed-for patients experienced a 50 to 100 percent reduction in side effects from these invasive cardiac procedures. The study is being expanded to several major hospitals throughout the United States. 33,34

In a triple-blind study involving 219 women undergoing in vitro fertilization and embryo transfer,(transferred for roughly half the women by prayer groups in North America and Australia. The IP group had a higher pregnancy rate compared with the no-IP rate (50% versus 26%, $P = .001$). The IP group also showed a higher implantation rate (16.3% versus 8%, $P < .001$). 34

7. Can human intentions harm living organisms(It is unethical to conduct experiments in humans in which the goal of the study is cause harm, but several experiments of this sort have been done in nonhumans. Jean Barry, a French physician-researcher, asked 10 people to mentally try to inhibit the growth of a destructive fungus, *Rhizoctonia solani*, from a distance of 1.5 meters, in a controlled experiment. Growth of the "influenced" fungus in 195 petri dishes was significantly retarded in 151 dishes compared with controls. The possibility that these results could have occurred by chance was less than 1 in 1,000.

University of Tennessee researchers William H. Tedder and Melissa L. Monty replicated Barry's experiment in a controlled study using the same type of fungus. College students served as influencers from a distance of up to 15 miles. 12

Researcher Carroll B. Nash, of Philadelphia's St. Joseph's University, asked 60 student volunteers both to promote and inhibit the growth of *E. coli* bacteria. In this controlled study, they were able to mentally influence the bacteria in both directions. 13

HOW GOOD IS THE EVIDENCE?

In the late 1980s, the United States Congress asked Professor Jessica Utts, an internationally recognized mathematician and statistician from the University of California-Davis, to assess government-funded research in the field of parapsychology (psi). She assessed hundreds of studies in which individuals attempted to acquire or convey information nonlocally, at a distance, as in the above experiments. Utts first published her findings in the prestigious journal *Statistical Science* in 1991. 35

Her final report was sent to Congress in 1995 and was republished elsewhere. 36,37

Among her conclusions:

Many anomalous phenomena, such as ... the possible effect of prayer on healing, are amenable to rigorous study. 38 Using the standards applied to any other area of science, it is concluded that psychic functioning has been well established. The statistical results of the studies examined are far beyond what is expected by chance. Arguments that these results could be due to methodological flaws in the experiments are soundly refuted. Effects of similar magnitude … have been replicated at a number of laboratories across the world. Such consistency cannot be readily explained by claims of flaws or fraud. 36

The magnitude ... exhibited appears to be in the range between what social scientists call a small and medium effect. That means that it is reliable enough to be replicated in properly conducted experiments, with sufficient trials to achieve the long-run statistical results needed for replicability.… It is recommended that future experiments focus on understanding how this phenomenon works and on how to make it as useful as possible. 37

The phenomenon has been replicated in a number of forms across laboratories and cultures… it would be wasteful of valuable resources to continue to look for proof. No one who has examined all of the data across laboratories, taken

as a collective whole, has been able to suggest methodological or statistical problems to explain the ever-increasing and consistent results to date. 37

There is little benefit to continuing experiments designed to offer proof, since there is little more to be offered to anyone who does not accept the current collection of data. 37

In the field of distant healing alone, five systematic or meta-analytic reviews involving scores of studies and hundreds of patients have yielded positive findings. 39-43

The evidence is compelling, in my judgment, that we can affect living organisms with our thoughts at a distance and that these effects can be either good or bad. Critics often suggest that these data are misleading because researchers publish only their positive studies and squirrel away experiments that don't pan out-the so-called file-drawer argument. If all these unpublished negative studies were taken into account, skeptics claim, they would statistically undermine all the positive ones. This argument is frivolous. In both the fields of parapsychology and distant healing, there are not enough researchers in the entire world to produce a database this large. For example, psychologist Julie Milton, 44 from the University of Edinburgh, analyzed all the so-called "free-response" psi studies conducted between 1964 and 1993 in which subjects were in an ordinary state of consciousness (as opposed to, say, a state of deep relaxation or hypnosis). The survey encompassed 78 experiments reported in 55 publications by 35 investigators; 1,158 subjects, most of whom were unselected volunteers, were studied. Milton discovered that the overall effects resulted in odds against chance of 10 million to 1. The effects did not differ significantly among the 35 experimenters. Milton's analysis of the file-drawer issue found that 866 unsuccessful, unpublished studies would be required to abolish the overall effect.

NURSING AND THE THERAPEUTIC RELATIONSHIP

Florence Nightingale, the founder of modern secular nursing, vigorously championed the value of love, compassion, and spirituality in the therapeutic relationship between a nurse and her patient. She saw no conflict between these factors and a scientific approach to nursing. 45

(See note 3)

Largely as a result of her prophetic vision, the profession of nursing has been years ahead of the medical profession in recognizing the value of empathy and trust in healing 46,47 as exemplified by the outstanding contributions of nurse theorists such as Martha Rogers, 48 Jean Watson, 49 Margaret Newman, 50 Peggy L. Chinn, 51 and many others. The American Holistic Nurses' Association has long championed the view that caring and compassion are crucial to the core mission of nursing. 52,53

Nurses also are reclaiming the title of "healer" and the concept of "healing" 54 -terms that, oddly enough, still make many physicians uncomfortable. Physicians do not have to reinvent the wheel; we have only to explore the work done by our nursing colleagues to see what the therapeutic relationship can be like.

MEDICAL HEXES

Unless health-care professionals acknowledge the capacity of our thoughts for harm, we will remain blind to the harm we cause others through our mental behaviors. Andrew Weil, MD, director of the Program in Integrative Medicine at the University of Arizona in Tucson, relates an encounter with a patient who came to see him for a second opinion. 55

"You wouldn't believe what those doctors did to me," she said. "The head neurologist took me into his office and told me I had multiple sclerosis. He let that sink in; then he went out of the room and returned with a wheelchair. This he told me to sit in. I said, 'Why should I sit in your wheelchair?' He said I was to buy a wheelchair and sit in it for an hour a day to 'practice' for when I would be totally disabled. Can you imagine?"

Interchanges of this sort amount to medical hexing. In his book *The Lost Art of Healing*, 56

the famous Harvard cardiologist Bernard Lown gives several examples of "words that maim" that his patients reported from interchanges with other physicians: "You are living on borrowed time"; "You are going downhill fast"; "The next heartbeat may be your last"; "You can have a heart attack or worse any minute"; "The … angel of death … is shadowing you"; "You are a walking time bomb"; "I'm frightened just thinking about your [coronary] anatomy"; "Surgery should be done immediately, preferably yesterday." To these medical hexes, Weil adds a few more: "They said there was nothing more they could do for me"; "They told me it would only get worse"; "They told me I would just have to live with it"; "They said I'd be dead in 6 months." 55 Nearly everyone, it seems, has experienced this sort of medical hexing at one time or another. Consider these examples related by an editor (anonymous written communication, August 29, 2002): "You are not as well as you think you are"; "Expect the best, prepare for the worst"; "Oh, you're the one who's worse than I thought." A classic example of how the therapeutic relationship can be manipulated for good or ill was reported by Dr. Bruno Klopfer, 57 who was treating a man for advanced lymphoma in the 1950s. The man was terminally ill, with large tumors throughout his body and fluid in his chest. All medical therapy except oxygen had been stopped, and Klopfer believed the man would die within 2 weeks. However, in a last-ditch effort he injected Krebiozen, an experimental drug

that was later said to be ineffective. Klopfer describes the amazing results:

What a surprise was in store for me! I had left him febrile, gasping for air, completely bedridden. Now, here he was, walking around the ward, chatting happily with the nurses, and spreading his message of good cheer to anyone who would listen. The tumor masses had melted like snow balls on a hot stove, and in only these few days they were half their original size! This is, of course, far more rapid regression than the most radiosensitive tumor could display under heavy x-ray given every day. And he had no other treatment outside of the single useless "shot." Within 10 days the man was practically free of disease. He began to fly his private airplane again. His improvement lasted for 2 months, until reports cropped up denouncing Krebiozen. When he read them, the man appeared cursed, and his attitude and medical condition quickly returned to a terminal state. At this point, Klopfer urged the man to ignore the negative news reports because a "new super-refined, double-strength product" was now available—a complete fabrication—and injected him with sterile water. The man's response this time was even more dramatic than initially, and he resumed his normal activities for another 2 months. But his improvement ended when the American Medical Association released a report stating that nationwide tests had proved Krebiozen worthless in the treatment of cancer. A few days after reading this statement, he was admitted to the hospital, and 2 days following admission he died.

THE POSSIBLE

When I think about what the therapeutic relationship could be like, I often think of Sir William Osler (1849-1919), who is widely regarded as the most influential physician in the history of modern medicine. After revolutionizing the way medicine was taught and practiced in the United States and Canada, Osler was lured to England in 1905, when the physician was at the peak of his fame. There he became the Regius Professor of Medicine at Oxford. One day he went to graduation ceremonies, wearing his splendid academic robes. On the way he stopped by the home of his friend and colleague, Ernest Mallam. One of Mallam's young sons was sick with whooping cough and bronchitis. The child appeared to be dying, and he would not respond to the ministrations of his parents or the nurses. Osler loved children greatly and had a special way with them. He adored playing with children, and they would invariably admit him into their world. So when Osler appeared in his ceremonial robes, the little boy was captivated. Never had he seen such a thing! After a brief examination, Osler sat down at the bedside. He selected a peach from a bowl of fruit and peeled, cut, and sugared it. Then he fed it bit by bit to the enthralled patient. Although Osler felt recovery was unlikely, he returned for the next 40 days, each time dressed in his robes, and personally fed the young child nourishment. Within just a few days the tide had turned and the little boy's recovery became obvious. 58

We are at a hellish moment in history in which raw hatred between cultures, nations, and religions is at fever pitch. The dark side of consciousness is flexing its power and can be intimidating. This is nothing new. During the darkest days of World War II, when Britain was on its knees before the onslaught of Nazism, Churchill rallied the citizens' spirits. "If you're going through Hell, keep going," he said. Just so, if we stop during our hellish trials, Hell wins. But if we maintain our vision and carry on, we will come through and our world will be transformed. The vision that will carry us through, however, is not one that sanitizes consciousness and denies its dark side but one that recognizes its eternal polarities. So here's what I wish I'd said to those pesky letter writers: Do not despair that a dark side of consciousness exists, that our thoughts and prayers can harm as well as heal. Just as shadows always yield to light, illness, on some level, always gives way to the love, compassion, and deep caring that Osler brought to a dying boy's bedside. That does not mean that illness is always vanquished but rather that it is transformed through the realization that consciousness is boundless, nonlocal, and infinite, thus indestructible and immortal. Love changes the end game; tragedy and annihilation are trumped. It's the sort of thing Osler knew in his blood and that continues to whisper in ours.

NOTES

1. Richard's story is true, but I have changed his name and key events to preserve his anonymity. This applies also to all the other clinical stories in this essay.
2. The logjam of managed care may be breaking up.
3. We are in the midst of a Nightingale renaissance. In 2001 she was honored by being included in Book of Lesser Feasts and Fasts of the Episcopal Church of the United States, with a commemorative service in September in Washington's National Cathedral.

References

1. Dossey L: Healing words: the power of prayer and the practice of medicine, San Francisco, 1993, HarperSanFrancisco.
2. Levin JS: How religion influences morbidity and health: reflections on natural history, salutogenesis and host resistance, Soc Sci Med 43(5):849-854, 1996.
3. Levin J: God, faith, and health, New York, 2001, John Wiley & Sons.

4. Better times for spirituality and healing in medicine, *Res News Opportun Sci Theol* 1(6):12, 2001.
5. Clarke CJS. The nonlocality of mind. *J Consciousness Stud.* 1995;2(3):231-40.
6. Jahn RG, Dunne BJ: A modular model of mind/matter manifestations (M5), *J Sci Explor* 15(3):299-329, 2001.
7. Radin D: *The conscious universe*, San Francisco, 1997, HarperSanFrancisco, pp. 278-287.
8. Rauscher EA, Targ R: The speed of thought: investigation of a complex space-time metric to describe psychic phenomena, *J Sci Explor* 15(3):331-354, 2001.
9. Walach H: Theory and apory in healing research: "influence" versus "correlational" models, *Subtle Energ Med* 11(3):189-205, 2002.
10. Radin DI, Nelson RD: Evidence for consciousness-related anomalies in random physical systems, *Found Phys* 19:1499-1514, 1989.
11. Barry J: General and comparative study of the psychokinetic effect on a fungus culture, *J Parapsychol* 32:237-243, 1968.
12. Tedder WH, Monty ML: Exploration of long-distance PK: a conceptual replication of the influence on a biological system. In Roll WG, Beloff J, Editors: *Research in parapsychology 1980*, Metuchen, N.J., 1981, Scarecrow Press, pp. 90-93.
13. Nash CB: Psychokinetic control of bacterial growth, *J Am Soc Psychical Res* 51:217-221, 1982.
14. Nash CB: Test of psychokinetic control of bacterial mutation, *J Am Soc Psychical Res* 78(2):145-152, 1984.
15. Haraldsson E, Thorsteinsson T: Psychokinetic effects on yeast. An exploratory experiment. In Roll WG, Morris RL, Morris JD, Editors: *Research in parapsychology 1972*, Metuchen, N.J., 1973, Scarecrow Press, pp. 20-21.
16. Watkins GK, Watkins AM: Possible PK influence on the resuscitation of anesthetized mice, *J Parapsychol* 35(4):257-272, 1971.
17. Watkins GK, Watkins AM, Wells RA: Further studies on the resuscitation of anesthetized mice. In Roll WG, Morris RL, Morris JD, Editors: *Research in parapsychology 1972*, Metuchen, N.J., 1973, Scarecrow Press, pp. 157-159.
18. Wells R, Klein J: A replication of a "psychic healing" paradigm, *J Parapsychol* 36:144-147, 1972.
19. Wells R, Watkins G: Linger effects in several PK experiments. In Morris JD, Roll WG, Morris RL, Editors: *Research in parapsychology 1974*, Metuchen, N.J., 1975, Scarecrow Press, pp. 143-147.
20. Rein G: A psychokinetic effect on neurotransmitter metabolism: alterations in the degradative enzyme monoamine oxidase. In Weiner DH, Radin D, Editors: *Research in parapsychology 1985*, Metuchen, N.J., Scarecrow Press, pp. 77-80, 1986.
21. Braud W: Distant mental influence of rate of hemolysis of human red blood cells, *J Am Soc Psychical Res* 84(1):1-24, 1990.
22. Benor DJ: *Healing research*, vols. 1-2, Munich, 1993, Helix Verlag.
23. Solfvin J: Mental healing. In Krippner S, Editor: *Advances in parapsychological research*, Jefferson, N.C., 1984, McFarland, pp.31-63.
24. Byrd R: Positive therapeutic effects of intercessory prayer in a coronary care unit population, *South Med J* 81(7):826-829, 1988.
25. Harris W et al: A randomized, controlled trial of the effects of remote, intercessory prayer on outcomes in patients admitted to the coronary care unit, *Arch Intern Med* 159(19):2273-2278, 1999.
26. Sicher F et al: A randomized double-blind study of the effect of distant healing in a population with advanced AIDS-report of a small-scale study, *West J Med* 169(6):356-363, 1998.

27. Braud W, Schlitz M: Psychokinetic influence on electrodermal activity, *J Parapsychol* 47(2):95-119, 1983.
28. Braud W, Schlitz M: Possible role of intuitive data sorting in electrodermal biological psychokinesis (bio-PK). In Weiner DH, Morris RL, Editors: *Research in parapsychology 1987*, Metuchen, N.J., 1988, Scarecrow Press, pp. 5-9.
29. Braud W, Schlitz M: A methodology for the objective study of transpersonal imagery, *J Sci Explor* 3(1):43-63, 1989.
30. Bentwich Z, Kreitler S: Psychological determinants of recovery from hernia operations. Paper presented at Dead Sea Conference, June 1994, Tiberias, Israel.
31. O'Laoire S: An experimental study of the effects of distant, intercessory prayer on self-esteem, anxiety, and depression, *Altern Ther Health Med* 3(6):38-53, 1997.
32. Smith AL, Laskow L: Intentional healing in cultured breast cancer cells. In *Proceedings of the 25th meeting of the Academy of Religion and Psychical Research*, June 2000, Rosemont, Pa.
33. Krucoff M: The MANTRA study project [interview], *Altern Ther Health Med* 5(3):74-82, 1999.
34. Krucoff MW et al: Integrative noetic therapies as adjuncts to percutaneous intervention during unstable coronary syndromes: Monitoring and Actualization of Noetic Training (MANTRA) feasibility pilot, *Am Heart J* 142(5):760-767, 2001.
35. Utts J: Replication and meta-analysis in parapsychology, *Statist Sci* 6:363-403, 1991.
36. Utts J: An assessment of the evidence for psychic functioning, *J Parapsychol* 59:289-320, 1995.
37. Utts J: An assessment of the evidence for psychic functioning, *J Sci Explor* 10(1):3-30, 1996.
38. Utts J: The significance of statistics in mind-matter resesarch, *J Sci Explor* 13(4):615-638, 1999.
39. Astin JA, Harkness E, Ernst E: The efficacy of "distant healing": a systematic review of randomized trials, *Ann Intern Med* 132:903-910, 2000.
40. Abbot NC: Healing as a therapy for human disease: a systematic review, *J Altern Complement Med* 6(2):159-169, 2000.
41. Braud W, Schlitz M: A methodology for the objective study of transpersonal imagery, *J Sci Explor* 3(1):43-63, 1989.
42. Jonas WB: The middle way: realistic randomized controlled trials for the evaluation of spiritual healing, *J Altern Complement Med* 7(1):5-7, 2001.
43. Schlitz M, Braud W: Distant intentionality and healing: assessing the evidence, *Altern Ther Health Med* 3(6):62-73, 1997.
44. Milton J: Ordinary state ESP meta-analysis. In Schlitz MJ, Editor: *Proceedings of the 36th annual meeting of the Parapsychological Association*, August 1993, Toronto, Ontario.
45. Dossey BM: *Florence Nightingale: mystic, visionary, healer*, Springhouse, Pa, 2000, Springhouse.
46. Paris MR: Letter to the editor, *JAMA* 287(4):447, 2002.
47. Marriner-Tomey A: *Nursing theorists and their work*, ed 3, St. Louis, 1994, Mosby.
48. Rogers ME: *Nursing: a science of unitary human beings*. In Riehl-Sisca J, Editor: *Conceptual models for nursing practice*, ed 3, Norwalk, Conn, 1989, Appleton & Lange.
49. Watson J: *Nursing: human science and human care*, Norwalk, Conn, 1985, Appleton-Century-Crofts.
50. Newman MA: *Newman's health theory*. In Clements IW, Roberts FB, Editors: *Family health: a theoretical approach to nursing care*, New York, 1983, John Wiley & Sons.
51. Chinn PL: *Theory and nursing*, ed 5, St. Louis, 1999, Mosby.
52. Dossey BM, Keegan L, Guzzetta CE: *Holistic nursing: a handbook for practice*, ed 3, Gaithersburg, Md, 2000, Aspen.
53. Frisch NC et al: *AHNA standards of holistic nursing practice, guidelines for caring and healing*, Gaithersburg, Md,

2000, Aspen.

54. Keegan L, Dossey BM: Profiles of nurse healers, New York, 1998, Delmar.

55. Weil A: Spontaneous healing, New York, 1995, Alfred A. Knopf, pp. 63-64.

56. Lown B: The lost art of healing, New York, 1996, Houghton-Mifflin, p. 65.

57. Klopfer B: Psychological variables in human cancer, J Proj Tech 21:331-340, 1957.

58. Golden RL: William Osler at 150. An overview of a life, JAMA 282(23):2252-2258, 1999.

59. Robinson JC: The end of managed care, JAMA 285(20):2622-2628, 2001.