

acupuncture needle about to be placed, the therapy session about to start, the healer and the healee would mutually pray/affirm/request/imagine the desired outcome, and then proceed. I would compare the results of this intervention to a mutual "Thy Will Be Done" prayer (secular and nonsecular versions, in whatever language is appropriate for the patient) done by both doctor and patient, and also to a control group that performs neither of these intention-focusing maneuvers.

I leave the discussion of nonlocal effects of intentionality to those who have begun to explore this most fascinating matter, and look forward to reading their comments.

## Intentionality: A Program of Study

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As I have argued elsewhere (Schlitz 1995a, 1995b, 1996), I believe that intentionality is a fruitful concept for developing a systematic program of study on the interplay of body, mind, and spirit in the healing process. Intentionality sits at an interface between the subjective and the objective points of view. From this perspective, a focus on intentionality allows us to chart the ways in which consciousness may both directly and indirectly influence individual and collective well-being.

Broadly defined, intentionality involves the projection of awareness, with purpose and efficacy, toward some object or outcome. Philosophically, it is consciousness about something or some content of consciousness such as belief, volition, expectation, attention, action, and even the unconscious. Key questions for research in mind-body medicine include ways in which our intentions interact with our own bodies, such as in self-healing; ways in which our intentions influence others through direct or indirect communication, such as in placebo and "nocebo" effects; and—more challenging to our current scientific framework—ways in which our intentions might influence others through nonlocal means, for example, as reported in claims of distant healing (Schlitz 1995a, 1996).

Each of these perspectives is currently being explored in the course of the research program that I direct at the Institute of Noetic Sciences (see Schlitz 1995b). The institute program involves a variety of methodologies, is interdisciplinary, and benefits from multinational collab-

oration. We are working with researchers from many universities and research centers, and are also exploring field research possibilities on intentionality and healing in a range of settings such as Russia and Brazil (see Schlitz 1995b). Within this program, we are also exploring a range of more specific questions about the various dimensions of intentionality, including: What are the types of target conditions/systems that can be affected by intentionality? Is there some "best fit" between intentionality strategies and personality styles? Is it possible that a redundancy of intentions may be health promoting (or debilitating)? What are the impacts of culture and beliefs on health outcome measures? How can we address the political factors that have marginalized nonspecific effects, such as placebos, as something to be eliminated, rather than enhanced as a healing tool? What are the various mechanisms that are used by healers and experimenters in order to bring about a healing effect—and are these potential mechanisms limited to direct sensory communication?

Because our dominant scientific worldview has focused on the physical, measurable part of the world, we have yet to embrace fully the subjective aspects of human experience. It is fair to ask whether a normative science can come to grips with human intention or whether we need a new scientific paradigm.

It seems to me that the scientific challenges associated with intentionality are twofold. First, how far can we push our existing scientific methods such that they can more adequately accommodate the entire range of human experience? Is it possible to find some balance between the reductionism of our current scientific methods and a holistic approach that may allow us to find the patterns within the patterns? Thus far, I believe that important progress has been achieved within our current scientific epistemology. Studies to measure the ostensible effects of intentionality on self (such as in guided imagery), toward others (such as in some of the placebo work), and nonlocally (such as in studies of prayer and healing), have all produced results that justify further research (Schlitz 1996).

But we have many more questions than answers, and we must begin to think about a second scientific challenge. Can we develop new methods that would allow us to probe the realms of subjectivity more deeply while allowing us to maintain our scientific rigor? Can we develop a map of inner states of consciousness that can be held to standards of intersubjective reliability and that will allow us to better specify the parameters of intentionality in healing? Is it possible that our assumptions related to objectivity may be faulty and that we will be required

to reflect and reevaluate carefully the role of the experimenter/clinician in the outcome of our studies (Schlitz & Lewis 1996)? There are many tools available today, such as phenomenological methods, advanced imaging that is used in brain mapping, and hermeneutic or meaning-shaped methods, but none have allowed us to fully move beyond the first person/third person perspectives in a completely rigorous and progressive fashion. This challenge of developing new and more appropriate methods is an area that holds great promise and that may shed important light on the role of intentionality in mind/body/spirit health and healing

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## The Continuum of Intention

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1. Our will and our conscious choices are central to our health. There is a continuum of ways that intention can play a role in physical health, and the interaction between different points on this continuum are complex.

I believe it is not trite, for example, to point out, at one end of the continuum, that one way the mind can intentionally influence physical health is by choosing better medical care and a healthier lifestyle. Even the simple decision to improve one's health or to beat a life-threatening illness will in itself improve emotional state (Moorey et al. 1994) which may in turn also benefit the immune system (Kemeny et al. 1993). Again, an individual may use autogenic instructions or simple muscle relaxation techniques, which generate health benefits due to decreased cardiovascular activation or decreased muscular

pain (Lipowski 1986). Both hypnosis and bio-feedback control of peripheral blood flow have been well demonstrated (Peper et al. 1979; Deabler et al. 1973) and are successfully used for many conditions, including pain and the treatment of migraine headaches (Lisspers & Ost 1990; Spiegel & Spiegel 1978). It should be noted that specific control of blood flow has been proposed as a mechanism for mental influence in the healing of many conditions, including infections, tumors, and wound closure; and such control could be developed through specific training.

The continuum includes the possibility of the mental direction of the immune system. This phenomenon derives support from a small number of controlled trials suggesting that people, using specific imagery, can learn to selectively affect the distribution of specific immune cell subtypes (Rider & Achterberg 1989). Interestingly, imagery techniques are already in wide clinical use, despite little laboratory research completed to assess their clinical efficacy. This intervention requires further experimental trials.

In a more complex example, spiritually or psychically based healing has been proposed as a mechanism whereby the individual can alter physical health (Solfvin 1984; Dossey 1993). Two large clinical trials (Byrd 1988; Bentwich & Kreitler 1994) have suggested that prayer or healing intent may result in improved medical outcomes. Now, we do not know whether such an effect derives directly from the intention of the healer, or whether the healer is somehow (perhaps telepathically) directing the patient to use his or her own consciousness to activate autonomic relaxation, for example, or immune cell redirection. Such a possibility highlights the complexity of a possible interaction of relaxation or visualization effects with any putative psychic or subtle energetic effects, a convergence that might be expected if a person uses intentionality to influence his or her own health.

These varied examples show that intention can be applied to health in many different ways. Recognizing mind-body influence as existing along such a continuum of phenomena will help disengage the concept of intentionality from the esoteric and recollect the self as the primary locus of control in health.

The study of mind-body influence on the self requires two foci: first, attention to the association of passively occurring states of mind (depression, for example, or excitement) with physiologic, endocrine, or immune status; and second, investigation of ways in which states of mind might be actively used to modify physical health. The concept of "state of mind" includes mood, cognitions, imagery, and a held intention. Medically, it is the second focus—the application