



## VITALISM

TED J. KAPTCHUK

ractitioners of most alternative healing believe that one source of their intervention is a type of "vital energy" used by their system and still not appreciated by conventional biomedical science. Subtle health-promoting influences pervade the alternative (or now integrative) healing world. Health is accessible through gentle technologies that activate, evoke, or redirect universal beneficent healing influences. The universe is thought to provide an endless influx of forces that can help to "put things right." Health is harmony in the cosmic energy; illness is cured by reordering the protective forces. A person threatened by disorder and disease is guaranteed a response from fundamentally benign, lawful, coherent, potent, and even meaningful powers. One can almost speak of a faucet that pours out healing juice.

Homeopathy connects with the "spiritual vital force" (Hahnemann, 1980); chiropractic calls it "innate" or "universal intelligence" (Palmer, 1910); psychic healing manipulates "arauric," "psi," or psionic powers (Moore, 1977; Reyner, 1982); believers in New Thought are restored by correct "mind" (Braden, 1987); acupuncture uses "qi" (Eisenberg, 1985); Ayurvedic medicine and yoga teachers are in touch with "prana" (Lad, 1984); and naturopaths invoke the "vis medicatrix naturae" (Turner, 1990). Unseen powers are said to permeate the universe and have a profound effect on humans that is undetectable by scientific instruments.

This chapter delineates this concept of alternative and integrative medicine by tracing the historical development of the idea of vital energy. Individual

Micozzi Ms (e).) Fundamentels of Complementer) (15) Integralive Medicine, St. Louis: Sambers, Elevier, 2006 alternative healing practices are described in terms of their fundamental propositions and the ontological status that they confer on the vital principle.

#### HISTORY: RISE AND FALL OF THE MAINSTREAM VITALIST PRINCIPLE

Vitalism is the proposition that more is needed to explain life than just physical or mechanical laws. It is less archaic than recent advocates or detractors of alternative medicines claim. Vitalism has its origins not within alternative health care systems, but within the elite universities of eighteenth- and nineteenth-century Europe. This doctrine arose in the West as a response to the mechanistic thesis and atomistic physicochemical reductionism of the scientific revolution (Lain Entralgo, 1948).

To understand the new science and the vitalist formulation, a review of the previously dominant Aristotelian worldview is helpful. In the Aristotelian universe, unlike the new scientific world, there was no such thing as totally inert matter changing because of external forces. Aristotelian physical matter had inherent tendencies, intentionality, and teleological properties. Things happened in the material universe because of latent tendencies that unfolded; fire's goal was to ascend, and earth's goal was to descend. The future exerted a compulsion on the present. The organic universe was the model for the inorganic universe; the acorn both embodied and obeyed its future potential as an oak tree. The material realm was a continuum of the organic realm but at a reduced level of complexity.

In terms of humans, this sense of continuation persists. Medieval biology could not conceive of an extreme dichotomy of soma (body) and psyche (mind), much less their separate existence (Gilson, 1940; Hartman, 1977). This would have conflicted with theology (Kemp, 1990). Psyche had no reality apart from soma. A human's material body overlapped and interpenetrated and was given actuality and form by a subtle substratum of souls. Each soul organized the soma into a distinct hierarchy of function and awareness. Somehow, pneuma, a mediator of the same eternal essence as the celestial bodies, allowed for both an embodied and mindful integrity of psyche and soma (Hall, 1975). Pneuma served as a common denominator of all phenomena and allowed all forms of being-from human to minerals-to maintain their

cohesiveness and growth and to transform into other forms of being.

These medieval notions were replaced by the new science. Rather than conceiving nature as an organic being that matured through self-development, seventeenth-century scientists viewed nature as a machine whose parts only moved in response to other parts. Volition, intentions, cognition, and mental states were relegated to peripheral or epiphenomenal status in biology. Some scientists even came to believe that all life could be explained in mechanical and physicochemical terms (Ledermann, 1989).

For some physicians and scientists, explaining life as an intricate system of levers, pulleys, or bubbling and fermenting microchemical flasks was inadequate. They criticized the new philosophy as excessively mechanical, material, and simple and argued that life was determined by more than the laws of the inanimate world. These physicians and biologists tried to animate the newly constituted passive matter of science with a vitalist hypothesis to explain the feeling and thought behind organic and human life (Roger, 1986).

The most important figure in this effort was the chemist-physician George Ernest Stahl (1659-1734), whose prominent university status at Halle was enhanced by his former position as physician to Frederick Wilhelm I (Rather, 1961). He proposed the anima, or "sensitive soul," to fill the perceived void in the new science. Anima was the agency that made life distinct from lifeless matter. Stahlian animism was undoubtedly influenced by the earlier "archeus" of Paracelsus (1493-1541) and van Helmont (1577-1644), two pre-Cartesian chemist-physician-mystics of the Nordic renaissance who were involved in an entirely different dialogue (Lain Entralgo, 1948). Francois Boissier de Sauvages (1706-1767) introduced the anima into the teaching of Montpellier, one of Europe's oldest and most important medical schools, but he preferred using the word "soul" for this animating life force. His student, Paul Joseph Barthez (1734-1806), whose credentials included having been Napoleon's physician, believed that both words were too occult and old-fashioned and in 1778 introduced the phrase principe vitale, or vital principle (Haight, 1975; Wheeler, 1939).

The vitalist hypothesis could not totally obliterate the newly created Cartesian chasm of an inert matter (res extensa) and a mind (res cognitans)—it conceded too much to the new physics. However, the power rela-

tionship had been reversed; in life, primary agency was no longer physicochemical or mechanical, but rather a benevolent power with a self-directive healing power.

Unbound by the precise and quantifiable laws of physics and chemistry, the vitalism argument, by its nature, quickly fractured into many interpretations. Some physicians took a phenomenal position and saw the vital principle to be a regulative principle (Lipman, 1967). Others took a realist position and postulated that a constitutive part animated matter; this approach is much more important to alternative healing (Benton, 1975). Realist theories took various forms: from various shades of incorporeal and spirit agency; to diverse mental powers; to different types of distinctive forces analogous and on the same plane of reality as conventional electromagnetism but still not scientifically measurable (Larson, 1979; Toulmin and Goodfield, 1962).

In the nineteenth century the mechanistic physicochemical view gained complete ascendancy in biology and medicine. From Wohler's synthesis of organic material in 1828 to Atwater and Rosa's demonstration in 1897 that the laws of thermodynamics apply to life, as well as inorganic matter, there was a gradual elimination of any need to believe in a vital principle or life force to explain perceived inadequacies of physicochemical explanations (Needham, 1955). Vitalism's main argument was the opponent's weakness; vitalism had to retreat before each new scientific discovery. This weakened vitalism migrated to the alternative medical worldview that was being created in the nineteenth century, where it was welcomed and eventually merged with other important forms of vitalism.

# MESMERIC VITAL ENERGY

At the time that vitalism was being developed in elite academia and just before it received an official name, the Viennese physician Anton Mesmer (1734-1815) uncovered what he believed to be the real vital energy. In 1775, Mesmer discovered that the source of a popular religious exorcist's powers was not divine intervention but rather a vital force. The cures were caused by "animal magnetism," a subtle fluid that pervades the universe and is analogous to gravitation (Ellenberger, 1970). Mesmer declared that the scientific evidence of the new vital force is the healing influx; harmony with the cosmic fluid is health. All disease was caused by an unequal distribution or

blockage of this fluid. Healing is the restoration of equilibrium, and healers can manipulate this fluid to cure patients (Mesmer/Bloch, 1980). An influx of subtle fluids from the celestial bodies is the substantive basis of all life and health, and later even mortality (Darton, 1968).

Mesmer relocated to Paris, and his popularity quickly generated controversy. In 1784, King Louis XVI, through the Royal French Academy of Science, appointed a prestigious investigatory commission that included ambassador Benjamin Franklin, chemist Antoine Lavoisier, and physician-inventor J.I. Guillotin. Mesmer demanded clinical outcome comparisons. Instead, the blue ribbon panel wanted to investigate mechanism. In a series of some of medicine's earliest controlled, blinded trials, the panel discovered that healing occurred whenever subjects believed they were being mesmerized, and no effect occurred if subjects were ignorant of magnetic passes. The commission sentenced mesmerism to the medical fringe, where it became a critical component of alternative medical thought (Fuller, 1982).

Mesmer's followers quickly split into denominations. Mesmerists divided between those who understood the force as a physical agency and those who detected a more incorporeal power. A lower mesmeric interpretation made the force analogous to a physical electromagnetic vibration that resembled morerecognized scientific energies. A higher mesmeric interpretation that quickly fused with earlier mystical and occult traditions saw the force as ethereal and reduced the physical agency to an epiphenomenon of no consequence. In addition to healing, the force had abilities for clairvoyant medical diagnosis and telepathy and became a scientific vehicle to contact spiritual forces or spiritual beings (Darton, 1968). Between the poles of lower and higher mesmerism were various intermediate versions, each spawning complex lineage; all shared the distinctive mesmeric view that life's agency and healing potential can be found in a vital energy or presence distinct from the ordinary mechanical forces. Mesmerism became the inspiration for many unconventional therapies.

# Lower Mesmerism and Psychic Healing

Tracing the history of mesmerism can be difficult because many of Mesmer's descendants often changed

their names, like other new arrivals on Ellis Island, to avoid the stigma associated with the term mesmerism since its excommunication from official science. New designations, however, could be helpful. If an earlier vital energy was discredited, new forces could be discovered to take its place. For example, Robert Hare (1781-1858), a chemist at the University of Pennsylvania and the inventor of the oxyhydrogen blowpipe, was an early convert to mesmerism. In 1856 he developed a "spirit-scope" to measure mesmeric and spiritual presences and also coined the scientific-sounding term psychic force in 1856 (McClenon, 1984; Moore, 1977). In 1935, Joseph Bank Rhine (1885-1980), who spent most of his career at Duke University trying to shift psychical research from the seance room to the laboratory, adopted the more respectable "parapsychology" from German (McVaugh and Mauskupf, 1976; Moore, 1977). In 1947, Robert Thouless (1894-1984), a British psychologist and parapsychologist at Cambridge, thought psi phenomena or psionic energy was a noncommittal label for paranormal energetics (Moore, 1977). Historically, theosophists preferred the word auric or astral force (Campbell, 1980; Coddington, 1990), whereas modern researchers have recently chosen the phrase subtle energy. These name substitutions indicate the lower mesmeric concern for keeping vital energy on a par with other more physically established forces as the primary agency for life.

Lower mesmeric forms of healing energy are easily recognized in the contemporary alternative therapies that speak of an electromagnetic dimension which can become depleted or unbalanced . . . [causing] the blockage of energy flow, requiring physical or spiritual cleaning in order for healing to occur (Glick, 1988).

Alternative therapies-therapeutic touch (Krieger et al., 1979), laying on of hands (Vlamis, 1978), polarity (Vlamis, 1978), and paranormal healing (Rose, 1954)as well as the countless individual psychic, auric, and psionic healers, although often unaware of their heritage, all bear the characteristic mesmeric style of manipulating unseen and refined forces that evade biomedical detection. The proof of the force is healing, and secondary evidence can be sensations of heat, tingling, or vibratory motions (Fuller, 1989). Curiously, despite the suspicions and even hostility of colleagues, some conventional researchers hover on the edge of this type of healing and continue to investigate the phenomenon scientifically (Benor, 1990; Beutler et al., 1988).

Higher Mesmer and the

The trance states of higher mesmeric traditions were The trance states of the transport of th used to contact itolical diagnosis, and medical advice pensations, medical diagnosis, and medical advice pensations, products of "tuning-in," as were different to the contact itolical advice pensations, medical diagnosis, and medical advice pensations. pensations, medical advice pensations, medical advice advice were common products of "tuning-in," as were clair were common products of levitations, ectople were common productions, levitations, ectoplasmic voyance, spirit sightings, spirit tapping, and voyance, spirit significance, spirit tapping, and spirit emissions, table turning, spirit tapping, and spirit emissions, table turning, spirit tapping, and spirit emissions, table the higher trance phenomenon photographs. This higher trance phenomenon photographs with earlier occult and the photographs. This photographs with earlier occult and theurgic quickly merged meo-Platonism, Renaissance quickly mergeu well-quickly mergeu neo-Platonism, Renaissance occup movements (e.g., neo-Platonism, Renaissance occup movements (e.g., hristian religions, theuroical movements (e.g., novements (e.g., and kabbala, pre-Christian religions, theurgical traditions) and kabbala, pre-Christian religions, theurgical traditions are the control of the control and kabbala, pre-stradit traditions, and Swedenborgianism [Galbreath, 1971]), cretions, and Sweden bear in the nineteenth century ating a mass phenomenon in the nineteenth century ating a mass price tentury (Braude, 1989; Oppenheim, 1988). This spiritualist (Braude, 1909, or reincarnated in various theo. sophical and occult movements in today's New Age sophical and occurrence (Beckford, 1984; Melton, 1988). Such content. porary phenomena as "experiencing the healing pow porary Priority Brotherhoods and curing their medical ailments by soul travel to different planes of reality" (Levin and Coreil, 1986) are all direct descendants of higher mesmerism. Alternative healing methods and associations, such as Spiritual Frontiers Fellowship, Edgar Cayce's Association for Research and Enlightenment (Carter, 1972), and Great White Brotherhood, and modalities such as past lives therapy (Netherton and Shiffrin, 1978) are involved with a panoply of spiritual beings that are detectable by mesmeric trances, currently referred to as altered states of consciousness, channeling, higher states of awareness, or transmissions from spiritually evolved beings. These are rarely organized as healing professions and routinely exceed the limits of healing practices, becoming instead alternative or emergent religions.

#### ELECTRICAL DEVICES AND CRYSTALS

Electrical devices and crystals that emit or harmonize energies for healing are important first cousins of mesmerism. The experiments of Luigi Galvani (1737-1798) which caused the severed legs of frogs to jump as if alive, coincided with Mesmer's own research. This discovery of animal electricity, or electrical body fluid, was considered to be analogous or identical with animal magnetic mal magnetism and all mysterious vital forces (Sutton 1991) (Sutton, 1981). Electrical machines and gadgets with



healing properties were ubiquitous in the nineteenth century (Marvin, 1988) and continued into the twentieth century. Contemporary radionic machines, magnetic beds, transcranial electrostimulators, neuromagnetic vibrators, and electromagnetic chairs all bear the imprint of their preceding mesmeric electrical cousins (Easthope, 1986; Schaller and Caroll, 1976). Important scientific research has been generated by scientists interested in low-frequency electromagnetic devices despite the stigma of an association with charlatanism (Macklin, 1993).

Crystal healing, a form of lithotherapeutics, has ancient roots distinct from mesmerism (Forbes, 1972). In the last 200 years, however, it has repositioned itself to become part of the vital energy family. In the 1840s and 1850s, Baron Charles von Reichenbach (1788-1869), the discoverer of kerosene, also managed to detect a refined and definitive mesmeric energy in crystals. He gave it the scientifically oriented name odic force. Modern crystal healers continue this merged tradition and speak of crystals as "able to tap the energies of the universe" and being an especially potent "focus of healing energy" (Fuller, 1989).

#### MIND CURE

Mind Cure, or the healing systems that consider thoughts or deep feeling to be the primary arbitrator of health, is an important offshoot of mesmerism. The discovery of the mind as the ultimate unseen force of healing is related directly to Phineas P. Quimby (1802-1866). Quimby first worked as a magnetizer or magnetic healer (reconstituted names for a mesmerist) in Portland, Maine. He decided that healing was not so much animal magnetism or an esoteric energy, but rather that it resulted from changes in the mind. The force was not a physical force, but a mental state. Mesmer's fluid was really "Mind," and everything was controlled by Mind. Disease is what follows the disturbance of the mind or spiritual matter (Dresser, 1969).

Quimby began the New Thought movement that believes disease is "wrong thinking." Change the thought, and you have health (Judah, 1967). Divine Mind, Divine Truth, and Love are primary agency, not the physical world. Physical reality is clay in the hands of the Mind. New Thought and positive thinking all derive from Mind Cure, as do such metaphysical

groups as Unity Church of Christianity, United Church of Religious Science, and International Divine Science (Braden, 1987). New and more contemporary forms of this approach to healing are constantly being offered. For example, "a course on miracles" (Perry, 1987), "prosperity consciousness" (Chopra, 1993; Cole-Whittaker, 1983), and "living love" (cornucopia) (Keyes, 1989) are all based on the same premise. Beyond any organization, this notion of "what you think is what is real" infuses important sectors of the modern alternative health community, resonating through history in uncanny ways. For example, the words Quimby wrote in 1859 could easily have been taken from Bernie Siegel's best-selling alternative healing book Love, Medicine and Miracles (1986): "Love is the true answer to our desire . . . it contains nothing but true knowledge and love, no sorrow, nor pain, nor grief, nor shame nor fear (Dresser, 1969). Love or True Mind heals all."

Mind Cure often advocated "entering the silence" to make mind impressions, self-love, or autosuggestion imprint more effectively (Fuller, 1982; Meyers, 1965). Almost 100 years ago, William James (1842-1910) described a phenomenon that still is current when he said that the "mind-cure principles are beginning to so pervade. . . . One hears of the Gospel of Relaxation of the Don't Worry Movement or people who repeat to themselves Youth, Health, Vigor" (James, 1961). Mind Cure's meditation, relaxation, and breathing techniques (which partially derive from somnambulistic or mesmeric trance states [Davis, 1885]) were some of the indigenous Western practices that prepared the way for Asian-style meditations that are so influential in the alternative health movement (see later discussion).

#### CHRISTIAN SCIENCE

Quimby's most famous legacy to unconventional healing is through his student and patient who later became known under the name Mary Baker Eddy (1821-1919). She went on to establish Christian Science, radically declaring that all disease, pain, misfortune, and evil are illusion. Knowing Divine Truth and Divine Science allows perception of the underlying perfection. Divine Mind is the only reality. Rigid, doctrinaire, exclusive, and sectarian, Mrs. Eddy denied any relationship with Mind Cure, mesmerism, or alternative healing, but her venomous denunciations

of Quimby and malicious animal magnetism revealed her origins only too clearly and assured Christian Science a place in the history of vital energy (Feldman, 1963; Fox, 1984; Schoepflin, 1988).

#### CHIROPRACTIC, OSTEOPATHY, AND MASSAGE

Mesmeric vital energy took a somatic and even mechanical twist in the creation of chiropractic, the largest contemporary alternative health care profession in North America, licensed in 50 states (Wardwell, 1992). Discovered in 1895 by D.D. Palmer (1845-1913), chiropractic's origin is a unique marriage of the indigenous healing craft of bonesetting (Cooter, 1987; Schiotz and Cyriax, 1975) and the American tradition of mesmeric healing (Beck, 1991). For 10 years before his discovery of chiropractic, Palmer worked as a magnetic healer. Like Quimby, he occasionally used hand passes and magnetic rubbings of the spine (Fuller, 1982). In an intuitive flash (or, some say, clairvoyant communication [Beck, 1982]), Palmer realized that "putting down your hands" worked better than an esoteric "laying on of hands." Mechanical adjustment was more precise than magnetic activity administered from a distance. Yet even 20 years after abandoning his magnetic clinical work, Palmer's mesmeric heritage is readily evident in his writings: "Disease is a manifestation of too much or not enough energy. Energy is liberated force; in the living being it is known as vital force. . . . It is an intelligent force, which I saw fit to name Innate, usually known as spirit" (Beck, 1991).

Disease is disruption in what Palmer calls innate intelligence. The nervous system is the conduit for this force. By aligning the spine, one frees the nerves so that this force can move without interference and produce healing. The vital energy is guided and shaped by the structure of the body. The noncorporeal agency of life is housed in the nerves and guarded by the spinal vertebrae. Chiropractic and spinal manipulation, despite its alternative associations, recently has generated considerable interest from researchers, in terms of basic science (Goldstein 1975), controlled clinical trials (Anderson et al., 1992; Shekelle et al., 1992), and comparative health care outcome trials (Meade et al., 1990). Official government reports, such as the Manga Report in Canada

(Manga et al., 1993) and a recommendation from Health Care Policy and Research (Manga et al., 1906) Care Policy and Research (Agency for Health Care Policy and Research (1904) on chiropractic for acute low. Agency for Health Agency for Acker on chiropractic for acute low back et al., 1994) on chiropractic for acute low back et al., 1994) on the demarcation between altern have blurred the demarcation and encours have blurred medicine and encouraged, and mainstream medicine and encouraged, acceptance of chiropractic.

osteopathy, chiropractic's older cousin, was ( oped by Andrew Still (1828-1917), who was a oped by Allule. Was a magnetic healer for many years. In 1874 he disco magnetic neared bones impeded the flow of fluid that misaligned bones impeded the system of that misanghed eveloped the system of osteopath blood, and he developed the system of osteopath blood, and he do belong episodes of clairvoyance and addition to having episodes of clairvoyance and addition to having in had connections to metaphy neling, Still also had connections to metaphy meling, Sun and spiritualist groups (Gevitz, )
Mind Cure, and spiritualist groups (Gevitz, ) Mind Cure, and Transfer, 1991). Obviously, osteopathy has taken; Terrett, 1991). Grand chiropractic. By breeding ferent trajectory from chiropractic. By breeding terent trajectory influence, it has become practi its mesiliere indistinguishable from mainstream medicine 1987; Gevitz, 1982).

Massage is one of the earliest and most perv. forms of healing (Sigerist, 1961). In the last 100y however, many unconventional massage there have increasingly found their rationale in vital en theory. Many styles of massage therapies exist (Kr and Antonucci, 1990) with different theories therapeutic goals, including Rolfing (Rolf, 19 reflexology (Carter 1969), Aston-Patterning ( 1988), Hellerwork, and shiatsu (Namikoshi, 19 The multiplicity of forms, the fact that anyone give a massage, and constant introduction of methods have hampered the regulation, licens and professional development that is analogou chiropractic. Nonetheless, "bodywork" provides extensive and important network of much en work (Good and Good, 1981).

#### HOMEOPATHY

Although mesmerism dominated the vital end tradition, the mainstream vitalist hypothesis also t tinued to survive and remained operational the alternative medical world. Often this sum was made possible by an explicit or implicit strate union with mesmerism. Homeopathy is the minute important important system of medicine to derive from tradition tradition.

For a considerable period during the last centul neopathy homeopathy was the most serious challenge to wentional modifications. ventional medicine (Rothstein, 1985) and currently enjoying a serious revival (Kaufman, 1988). Discovered by Samuel Hahnemann (1755-1843), homeopathy by one compating a spouses the belief that whatever symptom-complex a esposition cause in a healthy person, infinitesimally small amounts of the same substance can cure diseases with the same symptom configuration. The small dosage has the capacity to evoke the spiritual, self-acting (automatic) vital force, which is present throughout the organism (Hahnemann, 1980). Sililia similibus curentur—"like cures like." The tiny dosage enhances the spiritual essence of the bodily response to disease. The alchemical homeopathic remedy was to rescue the insufficient self-help mechanisms of the physical body and supply a corrective to nature (Neuburger, 1933). Hahnemann's idea of vital energy derived from early German romantic sources (from Paracelsus and van Helmont) and the later academic tradition of G.E. Stahl (Coulter, 1977). Even from its inception, however, an alliance with mesmerism was discernible. Hahnemann himself ascribed mesmeric healing as a marvelous, priceless gift of God to humankind (Hahnemann, 1980). At present it is virtually impossible to distinguish homeopathy's vital force from other conceptions rooted in mesmerism. Despite its alternative status, homeopathy has generated considerable conventional biomedical research and debate (Hill and Doyon, 1990; Kliejnen et al., 1991a; Linde et al., 1994).

#### HERBALISM AND THE "VIS MATECATRIX NATURAE"

Another energy in alternative medicine is the healing force of nature, which has a long history independent of mesmerism or the vitalist hypothesis (Neuburger, 1933). In 1772, William Cullen (1710-1790), a professor at the University of Edinburgh—himself no friend of this approach in medicine—proposed the term *vis matecatrix naturae* to describe this power (Neuburger, 1933). Again, as with the academic vitalist hypothesis, the natural force became more important in the alternative world and eventually was indistinguishable from the whole concept of vital energy.

The rise of the market economy and industrialization allowed for nostalgia and a romantic view of nature, which made possible the natural healing movements that date from the early nineteenth century. Alternative healing movements "irregulars" launched crusades to overthrow the orthodox medi-

cine "regulars," who used "contaminated unnatural poisonous" drugs and bleeding (Warner, 1987). The earliest American natural healing movement was Thomsonian herbalism. The history of herbal medicaments lies deep in antiquity (Wheelwright, 1974), but Samuel Thomson (1769-1843), a native of New Hampshire, initiated the first herbal social reform movement in the 1820s and 1830s. Borrowing from indigenous colonial and Indian treatments, Thomsonians substituted herbal purges and soporifics for mainstream minerals, chemicals, and bloodletting. This movement developed into the profession of eclectic medicine, which mounted a challenge to conventional medicine with a systematic herbal approach, its own medical schools (Berman, 1951), and eventually a strong following in Europe (Griggs, 1981). Somewhere in this history, herbalism formed an alliance with mesmerism. The two languages fused. Herbalists insisted that treatment must be in harmony with nature and the vital force and must assist the vital force instead of destroying it (Brown, 1985). The last eclectic medical school closed in Ohio in 1939 (Rothstein, 1988), and herbalism as a professional system of healing had practically disappeared in the United States, although it survived in Great Britain (Sharma, 1992).

In the United States, vestiges of the herbal movement remain in popular self-help manuals, and the concept of medicinal herbs remains an important symbol for alternative medicine. Some scientific research continues into popular herbal remedies (Ernst, 1995; Johnson et al., 1985; Melchart et al., 1994), but much of the conventional biomedical discussion is in terms of potential adverse effects (Huxtable, 1992).

#### HYDROPATHY AND NATUROPATHY

Water cure, or hydropathy, is another healing movement that relied on a natural force. As with herbalism, hydrotherapy has early roots but became a health reform movement only in the nineteenth century (Donegan, 1986). It has practically disappeared, except for spas and in physical therapy. Nevertheless, its legacy has important ramifications for contemporary alternative healing.

Originally, hydropathy was imported to the United States from Germany in the 1840s as the

Priessnitz method and later reimported in the 1890s as the Kneipp method. In these systems, water was the pure force of healing. Often combined with massage, exercise, and health food, water could purify the body of "morbid matter" (toxins), stimulate nervous energy, and promote natural healing (Cayleff, 1988). Quickly, the water cure movement became a catchall for other methods; by 1850 it was associated with dietary regimens, dress reform, home doctor, and finally with all-natural methods, including herbs, mesmeric energies, electropathy, and manipulation. This natural healing movement took on many forms and names, such as drugless healing, sanipractic, vita-o-pathy, sagliftopathy, panpathy, and physculopathy (Fishbein, 1932; Whorton, 1986), but the most enduring one is the name associated with Benedict Lust (1872-1945), a water cure therapist who trained under the Bavarian hydropath Father Kneipp.

In 1895, Lust purchased the term naturopathy to describe his eclectic water cure system, and the term was used publicly for the first time in 1902 in association with Lust's New York-based American School of Naturopathy (Baer, 1992; Cody, 1985). His naturopathy was a nature cure system, defined as "the art of natural healing and the science of physical and mental regeneration on the basis of self-reform, natural life, clean and normal diet, hydropathy (Priessnitz, Kneipp, Lehmann, and Just systems), osteopathy, chiropractic, naturopathy [sic], electrotherapy, sun and air cult, diet, physiotherapy, physical and mental culture to the exclusion of poisonous drugs and nonadjustable surgery" (Fishbein, 1932). Naturopathy, whose eclecticism resembles the current holistic movement, was common practice in many states during the 1920s and 1930s under the name "drugless practitioner" (Gort and Coburn, 1988; Whorton, 1986) but now functions legally only in eight states, the stronghold being the Pacific Northwest (Baer, 1992). Legal constraint prevents its widespread adoption as a unifying ideology for all natural therapies. Nevertheless, naturopathy is a potent concept in the alternative health movement and sometimes is used as a synonym for alternative health.

### ACUPUNCTURE AND ASIAN MEDICAL SYSTEMS

The vital energy of alternative medicine received a dramatic infusion of credibility and possibility with

the introduction of acupuncture and other Asian medicines into the United States in the 1960s after several unsuccessful introductions (Haller, 1973).

The Chinese notion of qi (as well as the Indian and Tibetan equivalents) obviously developed before any Western Cartesian detachment of mind from matter. Qi was not so much an entity added to lifeless matter, but the state of being—either animate or inanimate (Chiu, 1986; Kuriyama, 1986; Sivin, 1987). Qi was more akin to pneuma than any other Western idea (Needham, 1956). Asian medical systems, similar to archaic Western systems, relied on hierarchies and gradations of organizations to explain differences between organic and inorganic forms of being. Qi was characteristic of rocks, plants, and even human rationality. It was the common thread that allowed for "ladders of the soul" that extended from minerals to human life (Yoke, 1985).

The qi of acupuncture or the prana of India have been swept in the undertow of Western vitalistic ideas. Contemporary Western literature generally translates qi as "vital energy." Ancient Chinese notions, which defy severing of mind-body, have been discarded from modern Asian medical dialogue (in both Asia and the West) in favor of vital energy. Nonphysician acupuncturists have gained licensing, registration, or certification in 27 states plus the District of Columbia between 1977 and 1993 (Lytle, 1993; McRae, 1982). Although still small, acupuncture is one of the most rapidly growing health care professions, and its success provides an important ideological boost to alternative health care. The excitement of acupuncture has generated basic scientific investigations (Pomeranz and Stux, 1988) and more than 200 controlled clinical biomedical research studies (Eisenberg, 1995; Kleijnen et al., 1991b; ter Riet et al., 1990).

The Eastern opening also brought new massage (shiatsu, anmo, tui na, acupressure, jin shin jyutsu), new esoteric psychic energies (reiki johrei, qi gong), and countless new forms of meditation to supplement and supplant indigenous American forms. Again, they usually are formulated in nineteenth-century vitalist terms (Miura, 1989).

# PSYCHOLOGICAL Interventions

Of all the mesmeric forces, the most complex, prolific, and hidden ones lie concealed in psychology,

which deals with "mind." Significant aspects of which psychology's origins are connected with attempts to legitimize, mainstream, or find the real source of mesmerism and vital energy. In 1843, James Braid (1795-1860), an English physician, sought to clean up mesmerism's tainted reputation by postulating that its effects were caused by a mental force, not a mysterious fluid. He changed its name to hypnosis, after the Greek god for sleep, Hypnos (Kaplan, 1974). Hypnosis became a major concern in psychology and depending on the perspective, even a legitimate mesmerism—and retains its importance in some areas of conventional medicine (Hall and Crasilneck, 1978). Hypnosis was taken seriously by such figures as Jean Martin Charcot (1825-1893) and Hippolyte Bernheim (1840-1919) and is a crucial ingredient in the early development of the psychodynamic psychiatry of Sigmund Freud (1856-1939) (Ellenberger, 1970). Hypnosis became less critical after Freud, becoming simply a porthole to the unconscious. Vital energy transforms into various forms of dynamic tensions that are thought to have potent psychological and physiological consequences. A clinical research agenda has also become a companion for psychotherapies (Strupp and Howard, 1992).

Hypnosis and such forms of passive volitional intention as autogenic training and guided imagery also later interact with the academic behavioral psychology developed by I.P. Pavlov (1849-1936), the rigorous investigations of classic conditioning by J.B. Watson's (1878-1958), and the work of E.L. Thorndike (1874-1949) in operant conditioning (Thorndike, 1931). This crossfertilization of disciplines and ideas eventually contributed to the formation of such modern cognitive-behavioral mind-body interventions as biofeedback (Basmajian, 1981), modern autogenic training (Linden, 1990), visualization and guided imagery (Sheikh, 1983), the relaxation response (Benson, 1975), and the reexamination of older self-control practices such as

meditation (West, 1991).

These cognitive-behavioral interventions, along with the psychosomatic movement, began as academic pursuits but have become valuable intellectual and clinical resources for alternative and integrative medicine. The vital force now can be conceptualized in psychosomatic terms or in the current mind-body framework. These mind-body techniques shift between conventional and nonconventional. They are less on the fringe, almost accepted, and are often wholly accepted aspects of vitalist ideology. They are

the lowest, most scientific aspects of the mesmeric legacy, a kind of legitimate mesmerism. Because of university connections, these mind-body interventions have generated much research (Eisenberg et al., 1993; Holroyd and Penzien, 1990; Turner and Chapman, 1982).

The vital energy has gone psychological. This has lent significant credibility to alternative medicine. Psychology has been a rich source of new interventions and theory for both conventional and integrative medicine. Occasionally, however, these efforts have been used to support more outlandish alternative healing ideas, to the discomfort of more scientifically inclined researchers. In either case, the mesmeric force has become a hyphenated mind-body connection between the invisible mind and the visible body. In the last 50 years, more new psychological interventions and names probably have been developed—between 250 (Herink, 1980) and 400 (Karasu, 1986) types, depending on who counts and when—than in the entire history of mesmeric forces.

#### HOLISTIC MEDICINE

Vital energy and vitalism underwent regrouping and reorganization during the post-1960s renaissance. *Holism*, or holistic medicine, has become the new family name, coined to avoid the tarnished image of older, discredited medical ideas. The term originates within conventional medical debates of the early twentieth century over vitalism and reductionism.

Reductionism has been the corollary of the ascendancy of physicochemical mechanistic viewpoint. The trajectory of reductionism is basically described by Morgagni's situation of life-activity and pathology in organs (1761), followed by Bichat's focus on tissue (1800), leading to Broussais' attention to lesions in tissues (1830s), to Virchow's localization in cells (1848), to Koch's germ theory (1882), and all the way to modern dissection of genes. This process is complex and nonlinear (Mendelsohn, 1965). Emphasis on a mechanical physicochemical agency leads to progressively smaller analytical pieces. Again, however, academic medicine has provided important antidotes to reductionism, with organismic tendencies attempting to counterbalance or prevail over excessive reductionism. Antireductionist tendencies within conventional medicine emphasize homeostasis, predisposition, susceptibility, and psychosocial

factors, as opposed to tendencies that emphasize an idea of disease that Tauber calls ontological, autonomous, well-circumscribed states (Tauber, 1994). A few of the many names associated with nonreductionism within biomedicine include Claude Bernard, Walter Cannon, L.J. Henderson, George Draper, Charles Sherrington, Hans Selye, Helen Dunbar, George Engels, and Arthur Kleinman (Tracy, 1992).

One antireductionist position developed in the philosophy of biology was by J.C. Smuts, the Cambridgeeducated, South African statesman who in 1926 coined the word holism (Smuts, 1926). Holism was meant to be both antivitalist and antimechanistic and argued that the entirety of an organism necessarily implied a teleological purpose that could not be exhaustively explained by the laws governing component parts. The idea and word were appropriated by a few conventional scientists (Needham, 1955) and were later used positively by conventional medicine to imply humanistic, psychosocial, or systemic approaches in health care. For example, a December 1948 editorial in the Journal of the American Medical Association referred to the holistic concept as being "an integrated approach to the sick person as a being in a state of mental, moral, and physiological imbalance with his environment." In the 1970s, holistic partially changed its association. A 1979 New England Journal of Medicine editorial criticized holistic medicine, as follows:

Patients must be dealt with as whole people. But this worthwhile philosophy is ill served by those who seek quick solutions to all the ills of mankind through the abandonment of science and rationality in favor of mystic cults (Relman, 1979).

The word holism is adopted by many unconventional health practitioners, most of whom are seemingly unaware of Smuts or his philosophy (Whorton, 1989), causing confusion. Holism has become an amorphous label often glibly used or made trivial (Kopelman and Moskop, 1981) for any perspective that sees biomedicine as too reductionist or materialist. It also has become a generic name for any therapy that does not consider its clinical perspective to be reductionist. Also, holism has become the new family name for any intervention, regardless of how reductionist (e.g., chiropractic, crystals), that is informed, knowingly or unknowingly, by some nineteenth-century vitalist perspective. The term complementary, introduced first in the United Kingdom in the 1980s and then in the United St. often replaces "holistic."

# VITALISM'S ATTRACTION

Vitalism can be attractive. Life is more than chemicals Vitalism can be actively is more than chemistry and and mechanism. Agency is more than chemistry and ideas, volition, intentions and mechanism. Agent volition, intentions, spiritual physics. Mind, ideas, volition, intentions, spiritual physics. Mina, ideas, spiritual physics, beliefs, innate intelligence, feelings, and mys. entities, beliefs, filled and all become critical phenometerious vital forces can all become critical phenometerious vital entitle possibilities of vital entities of vital entitle phenometerious vital entitle phenometer terious vitai loreco possibilities of vital energy its ena. The multivatural, psychological, or supernatural lower, higher, natural, psychological, or supernatural lower, higher, flatting forms—allow practitioners and patients to customize forms—allow productions and treatment options. Its very impreciexplanations and serious flexibility and adaptibility. In conventional medicine it is sometimes too easy

for a person to become an irrelevant spectator, over. whelmed by a mechanical world of technology, tests, and surgery. The vitalist perspective, on the other hand, aligns itself with coherent, life-affirming principles. The vitalist universe is not random, detached or mindless; it is benign, coherent, and extremely hospitable for people. Instead of a medicine whose central issues can seem coldly mechanical and buried in unaccessible physiology, vitalism instinctively invites a person to experience a unifying, transcendent, and reassuring ontological presence.

Whatever the outcome of the recent scientific investigations of vitalist medical traditions, vitalism's attractiveness for practitioners and patients is likely to remain a growing presence in health care.

#### References

Anderson R, Meeker WC, Wirick BE, et al: A meta-analysis of clinical trials of spinal manipulation, J Manipulative Physiol Ther 15, 1992.

Baer HA: Divergence and convergence in two systems of manual medicine: osteopathy and chiropractic in the United States, Med Anthropol Q 1:2176-2193, 1987.

Baer HA: The potential rejuvenation of American natur opathy as a consequence of the holistic health move

ment, Med Anthropol 13:369-383, 1992. Basmajian JV, editor: Biofeedback: principles and practice for clinicians. nicians, New York, 1981, Institute for Psychosomatic

Beck BL: Magnetic healing, spiritualism and chiropractic Palmer's union of Chiro Hist Palmer's union of methodologies, 1886-1895, Chiro Hist

<sup>11</sup>(2):11-16, 1991.

Beckford JA: Holistic imagery and ethics in new religious ktoru Jan movements, Soc Compass 21(2/3):259-272, and healing movements Benor DJ: Survey of spiritual healing research, Comp Med Res

4(3):9-33, 1990.

Benson H. The relaxation response, New York, 1975, Morrow. Benson E: Vitalism in nineteenth-century scientific thought: a typology and reassessment, Stud Hist Philos Sci 5:1, 1975.

Berman A: The Thomsonian movement and its relation to American pharmacy and medicine, Bull Hist Med 25:5,

Beutler JJ, Attenvelt JT, Schooten SA, et al: Paranormal healing and hypertension, BMJ 296:1491-1494, 1988.

Bigos SJ, Bowyer OR, Braen GR, et al: Acute low back problems in adults, Clinical Practice Guideline No 14, PHS Agency for Health Care Policy and Research, Rockville, Md, 1994, US Department of Health and Human

Braden CS: Spirits in rebellion: the rise and development of new thought, Dallas, 1987, Southern Methodist University

Braude A: Radical spirits, Boston, 1989, Beacon Press.

Brown PS: The vicissitudes of herbalism in late nineteenthand early twentieth-century Britain, Med Hist 29:71-92, 1985.

Campbell BF: Ancient wisdom revived: a history of the theosophical movement, Berkeley, 1980, University of California

Carter M: Helping yourself with reflexology, West Nyack, NY, 1969, Parker.

Carter ME: My years with Edgar Cayce, New York, 1972, Harper & Row.

Cayleff SE: Gender, ideology and the water-cure movement. In Other healers: unorthodox medicine in America, Baltimore, 1988, The Johns Hopkins University Press.

Chiu ML: Mind, body and illness in Chinese medical tradition, Cambridge, Mass, 1986, Harvard University (Unpublished PhD thesis).

Chopra D: Creating affluence, New York, 1993, New World

Coddington M: Seekers of the healing energy, Rochester, Vt, 1990, Healing Arts Press.

Cody G: History of naturopathic medicine. In Pizzorno JE, Murray MJ, editors: A textbook of natural medicine, Seattle, 1985, John Bastyr College Publications.

Cole-Whittaker T: How to have more in a have-not world, New

York, 1983, Fawcett Crest.

Cooter R: Bones of contention? Orthodox medicine and the mystery of the bone-setter's craft. In Bynum WF, Porter R, editors: Medical fringe & medical orthodoxy, 1750-1859, London, 1987, Croom Helm, pp 158-173.

Coulter HL: Divided legacy: a history of the schism in medical thought. Vol II, Washington, DC, 1977, Wehawaken

Books.

Darton R: Mesmerism and the end of the Enlightenment in France, Cambridge, Mass, 1968, Harvard University Press.

Davis AJ: The harbinger of health, Boston, 1885, Colby & Rich, Banner Publishing.

Donegan JB: Hydropathic highway to health, Westport, Conn, 1986, Greenwood Press.

Dresser HW, editor: The Quimby manuscripts, Secaucus, NJ, 1969, Citadel Press.

Easthope G: Healers and alternative medicine, Aldershot, England, 1986, Gover.

Editorial: Holistic medicine, JAMA, Dec 18, 1948.

Eisenberg D: Encounters with qi: exploring Chinese medicine, New York, 1985, Norton.

Eisenberg D: Traditional Chinese medicine. In Alternative medicine: implications for clinical practice, Boston, 1995, Harvard Medical School, Department of Continuing Education.

Eisenberg D, Delbanco TL, Berkey CS, et al: Cognitive behavioral techniques for hypertension: are they effective? Ann Intern Med 118:964-972, 1993.

Ellenberger HF: The discovery of the unconscious, New York, 1970, Basic Books, pp 53-60.

Ernst E: St. John's wort, an anti-depressant? A systematic, criteria-based review, Phytomedicine 2(1):67-71, 1995.

Feldman AB: Animal magnetism and the mother of Christian Science, Psychoanal Rev 50:153-160, 1963.

Fishbein M: Fads and quackery in healing, New York, 1932, Blue Ribbon.

Forber TR: Lapis Bufonis: the growth and decline of a medical superstition, Yale J Biol Med 45:139-149, 1972.

Fox M: Conflict to coexistence: Christian Science and medicine, Med Anthropol, Fall 1984, pp 292-300.

Fuller R: Mesmerism and the American cure of souls, Philadelphia, 1982, University of Pennsylvania Press.

Fuller R: Alternative medicine and American religious life, New York, 1989, Oxford University Press, p 104.

Galbreath R: The history of modern occultism: a bibliographical survey, J Pop Cult 5:726-754, 1971.

Gevitz N: The D.O.'s: osteopathic medicine in America, Baltimore, 1982, The Johns Hopkins University Press.

Gevitz N: Andrew Taylor Still and the social origins of osteopathy. In Studies in the history of alternative medicine, New York, 1988, St Martin's Press.

Gilson E: The spirit of medieval philosophy, New York, 1940, Charles Scribner's Sons.

Glick DC: Symbolic, ritual and social dynamics of spiritual healing, Soc Sci Med 27(11):1197-1206, 1988.

Goldstein M: The research status of spinal manipulative therapy, Bethesda, Md, 1975, Public Health Service, National Institutes of Health, US Department of Health, Education and Welfare.

Good BJ, Good MJ: Alternative health care in one California community, Sacramento, 1981, Public Regulation of Health Care Occupations in California.

Gort EH, Coburn D: Naturopathy in Canada: changing relationships to medicine, chiropractic and the state, Soc Sci Med 26(10):1061-1072, 1986.

Griggs B: Green pharmacy: a history of herbal medicine, London,

Hahnemann S: Organon of medicine, ed 6, New Delhi, 1980, B Jain Publishers, p 97 (Translated by W Boericke).

Haight E: The roots of the vitalism of Xavier Bichet, Bull

Hall JA, Crasilneck HB: Hypnosis, JAMA 239(8):760-761,

Hall TS: History of general physiology. Vol 1, Chicago, 1975, University of Chicago Press.

Haller JS: Acupuncture in nineteenth century western medicine, NY State J Med, May 1973, pp 1213-1221.

Hartman E: Substance, body and soul: Aristotelian investigations, Princeton, NJ, 1977, Princeton University Press.

Herink R, editor: The psychotherapy handbook, New York, 1980, New American Library.

Hill C, Doyon F: Review of randomized trials of homeopathy, Rev Epidemiol Sante Publique 38:139-147, 1990.

Holroyd KA, Penzien DB: Pharmacological versus nonpharmacological prophylaxis of recurrent migraine headache: a meta-analytic review of clinical trials, Pain 42:1-13, 1990.

Huxtable RJ: The myth of beneficient nature: the risks of herbal preparations, Ann Intern Med 117(2):165-166,

James W: The varieties of religious experience, New York, 1961, Collier.

Johnson ES et al: Efficacy of feverfew as prophylactic treatment of migraine, BMJ 291:569-573, 1985.

Judah JS: The history and philosophy of the metaphysical movements in America, Philadelphia, 1967, Westminster Press.

Kaplan F: "The Mesmeric Mania": the early Victorians and animal magnetism, J Hist Ideas 35:4, 1974.

Karasu TB: The specificity vs. non-specificity dilemma: towards identifying therapeutic change agents, Am J Psychiatry 14:3-6, 1986.

Kaufman M: Homeopathy in America: the rise and fall and persistence of a medical heresy, Baltimore, 1988, The Johns Hopkins University Press.

Kemp S: Medieval psychology, New York, 1990, Greenwood

Keyes K: Discovering the secrets of happiness, Coos Bay, Ore,

Kleijnen J, Knipschild P, ter Riet G: Clinical trials of homeopathy, BMJ 302:316-323, 1991a.

Kleijnen J, ter Riet G, Knipschild P: Acupuncture and asthma: a review of controlled trials, Thorax 46:799-802,

Knapp JE, Antonucci EJ: A national study of the profession of massage therapy/bodywork, Princeton, NJ, 1990, Knapp &

Kopelman L, Moskop J: The holistic health movement L, Moskop J: The holistic health belman L, Moskop J. Med Philos, May 1981, pp 209.235 a survey and critique, J Med Philos, May 1981, pp 209.235 a survey E, Ancoli S: Therapeutic touch: search a survey and critique, so a survey and criti eger D, Peper E, Alleger D

1979, pp 660-662. 1979, pp 660-602.

Kuriyama S: Varieties of haptic experience: a comparative Kuriyama S: Careek and Chinese pulse diagnosis, Camb. iyama S: Varieties Strand Chinese pulse diagnosis, Cambridge study of Greek and Chinese pulse diagnosis and Chines study of Greek and University (Unpublished Ph) Mass, 1986, Harvard University (Unpublished Ph)

Lad V: Ayurveda, Sante Fe, NM, 1984, Lotus Press. Lad V: Ayurveun, D: Sensualism and vitalism in Bichar, Lain Entralgo P: Sensualism and vitalism in Bichar, Conerale." I Hist Med 3, 1948. "Anotomie Generale," J Hist Med 3, 1948.

"Anotonic Garage and Anotonic Garage and Larson JL: Vital forces: regulative principles or constitutive agents? Isis 70, 1979.

agents: 1887 of Ledermann EK: Philosophy and medicine, Aldershot, England

1989, Gower. Levin JS, Coreil J: "New Age" healing in the U.S., Soc Sci Med

23:9, 1986. Linde K, Jonas WB, Melchart D, et al: Critical review and meta-analysis of serial agitated dilutions in experimen tal toxicology, Hum Exp Toxicol 13:481-492, 1994.

Linden W: Autogenic training: a clinical guide, New York, 1990 Guilford Press.

Lipman TO: Vitalism and reductionism in Liebig's physio. logical thought, Isis 58:167-185, 1967.

Low J: The modern body therapies: Aston-Patterning Massage Magazine 16:48-55, 1988.

Lytle CD: An overview of acupuncture, Washington, DC 1993,US Department of Health and Human Services, Public Health Service, Food and Drug Administration.

Macklin RM: Magnetic healing, quackery and the debate about the health effects of electromagnetic fields, Ann Intern Med 118(5):376-383, 1993.

Manga P, Angus DE, Papadopoulos C, et al: A study to examine the effectiveness and cost-effectiveness of chiropractic management of low-back pain, Ottawa, 1993, Pran Managa.

Marvin C: When old technologies were new: thinking about electric communication in the late nineteenth century, New York, 1988, Oxford University Press.

McClenon J: Deviant science: the case of parapsychology

Philadelphia, 1984, University of Pennsylvania Press. McRae G: A critical overview of U.S. acupuncture regular tion, J Health Polit Policy Law 1:163-196, 1982.

McVaugh M, Mauskupf JD: Rhine's extra-sensory percep tion and its background in psychical research, 67:161-189, 1976.

Meade TW, Dyer S, Browne W, et al: Low back pain of mechanical security. mechanical origin: randomized comparison of chiro practic and hospital outpatient treatment, BMJ 300,

Melchart D et al: Immunodulation with Echinacea a systematic review. tematic review of controlled clinical trials, Phytomedical 1:245-254, 1994 movement:
OP 209-235.
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rchology, Press. regula-

percepch, *Isis* 

pain of chiro-

–a sys-1edicine Melton JG: A history of the New Age movement. In Basil B, editor: Not necessarily the New Age: critical essays, Buffalo, NY, 1988, Prometheus Books.

Mendelsohn E: Physical models of physiological concepts: explanation in nineteenth-century biology, Br J Hist Sci

Mesmer FA: Dissertation on the discovery of animal magnetism. In Bloch GJ, editor: Mesmerism: a translation of the original medical and scientific writings of F.A. Mesmer, M.D., Los Altos, Calif, 1980, William Kaufmann.

Meyers D: The positive thinkers: a study of the American quest for health, wealth, and personal power from Mary Baker Eddy to Norman Vincent Peale, Garden City, NJ, 1965, Doubleday.

Miura K: The revival of qi gong in contemporary China. In Taoist meditation and longevity techniques, Ann Arbor, 1989, Center for Chinese Studies, University of Michigan.

Moore RL: In search of white crows: spiritualism, parapsychology, and American cult, New York, 1977, Oxford University

Namikoshi T: Shiatsu, New York, 1969, Japan Publications. Needham J: Mechanistic biology and the religious consciousness in science, religion & reality, New York, 1955, George Brazziler.

Needham J: Science and civilization in China. Vol 2, Cambridge, Mass, 1956, Cambridge University Press.

Netherton M, Shiffrin N: Past lives therapy, New York, 1978, William Morrow.

Neuburger M: The doctrine of the healing power of nature, New York, 1933, New York Homeopathic College.

Oppenheim J: The other world: spiritualism and psychical research in England, 1850-1914, Cambridge, 1988, Cambridge University Press.

Palmer DD: *Chiropractic*, Portland, Ore, 1910, Portland Printing House, p 691.

Perry R: An introduction to a course in miracles, Fullerton, Calif, 1987, Miracle Distribution Center.

Pomeranz B, Stux G, editors: Scientific basis of acupuncture, Berlin, 1988, Springer-Verlag.

Rather LJ: G.E. Stahl's psychological physiology, *Bull Hist Med* 35:27-49, 1961.

Relman AS: Holistic medicine, N Engl J Med 300(6):312-313, 1979.

Reyner JH: Psionic medicine, London, 1982, Routledge & Kegan Paul.

Roger J: The mechanistic conception of life. In God and nature, Berkeley, 1986, University of California Press.

Rolf IP: Rolfing: the integration of human structure, New York, 1977, Harper & Row.

Rose L: Some aspects of paranormal healing, *BMJ* 4:1329-1332, December 1954.

Rothstein WG: American physicians in the 19th century, Baltimore, 1985, The Johns Hopkins University Press. Rothstein WG: The botanical movements and orthodox medicine. In Other healers: unorthodox medicine in America,
Baltimore, 1988, The Johns Hopkins University Press.

Schaller WE, Caroll CR: Health, quackery and the consumer, Philadelphia, 1976, Saunders.

Schiotz EH, Cyriax J: Manipulation: past and present, London, 1975, Heinemann.

Schoepflin RB: Christian Science healing in America. In Other healers: unorthodox medicine in America, Baltimore, 1988, The Johns Hopkins University Press.

Sharma U: Complementary medicine today: practitioners and patients, London, 1992, Tavistock/Routledge.

Sheikh AA: Imagery: current theory, research and application, New York, 1983, Wiley.

Shekelle P, Adams AH, Chassin MR, et al: Spinal manipulation for low-back pain, Ann Intern Med 117:7, 1992.

Siegel BS: Love, medicine and miracles, New York, 1986, Harper & Row.

Sigerist HE: A history of medicine, New York, 1961, Oxford University Press.

Sivin N: Traditional medicine in contemporary China, Ann Arbor, 1987, Center of Chinese Studies, University of Michigan.

Smuts JC: Holism and evolution, New York, 1926, Macmillan.
Strupp HH, Howard KI: A brief history of psychotherapy research. In Frehen DK, editor: History of psychotherapy, Washington, DC, 1992, American Psychological Association.

Sutton G: Electric medicine and mesmerism, *Isis* 72(253): 375-392, 1981.

Tauber AT: Darwinian aftershocks: repercussions in late twentieth century medicine, J R Soc Med 87:27-31, 1994.

ter Riet G, Kleijnen, Knipschild P, et al: Acupuncture and chronic pain: a criteria-based meta-analysis, *J Clin Epidemiol* 43:1191-1199, 1990.

Terrett AJ: The genius of D.D. Palmer: an exploration of the origin of chiropractic in his time, *Chir Hist* 11:1 1991.

Thorndike EL: Human learning, New York, 1931, Century. Toulmin S, Goodfield J: The architecture of matter, New York,

1962, Harper & Row, pp 322-330.

Tracy SW: George Draper and the American constitutional medicine, 1916-1946: reinventing the sick man, *Bull Hist Med* 66:53-89, 1992.

Turner JA, Chapman CR: Psychological interventions for chronic pain; a critical review. I. Relaxation training and biofeedback, *Pain* 12:1-21, 1982.

Turner RW: Naturopathic medicine, Northamptonshire, England, 1990, Wellingborought, p 21.

Vlamis G: Polarity therapy, Alternatives 2(4):23-26, 1978.

Wardwell WI: Chiropractic: history and evolution of a new profession, St Louis, 1992, Mosby-Year Book.

Warner JH: Medical sectarianism, therapeutic conflict, and the shaping of orthodox professional identity in antebellum American medicine. In Bynum WF, Porter R, Suggested Readings

editors: Medical fringe & medical orthodoxy, 1750-1850, London, 1987, Croom Helm.

West AM, editor: The psychology of meditation, Oxford, NY, 1991, Clarendon Press.

Wheeler R: Vitalism, London, 1939, HF & G Witherby. Wheelwright EG: Medicinal plants and their history, New York, 1974, Dover.

Whorton JC: Drugless healing in the 1920's: the therapeutic cult of sanipractic, Pharm Hist 28:14-24, 1986.

Whorton JC: The first holistic revolution: alternative medicine in the nineteenth century. In Stalker D, Glymour C, editors: Examining holistic medicine, Buffalo, NY, 1989, Prometheus Books.

Yoke HP: Li, qi, and shu: an introduction to science and civilization in China, Hong Kong, 1985, Hong Kong University

Carlson CJ: Holism and reductionism as perspectives of patient care, West J Med 131(6):46-8 in

Ison CJ: Hollsin description CJ: Hollsin description and patient care, West J Med 131(6):466-470

Gardner M: Isness is her business: Shirley MacLaine. Mot necessarily the new age: critical. dner M: Isness Bodes Reditor: Not necessarily the new age: critical essays Basil R, editor: Not necessarily the new age: critical essays Buffalo, NY, 1988, Prometheus Books, p 193.

Kaufman M: Homeopathy in America: the rise and fall of a med.

Raltimore. 1971. The Johns IV. ifman M: Homopung 1971, The Johns Hopkins Hopkins University Press.

Pavlov IP: Lectures on conditioned reflexes, New York, 1928 International Publishers.

Zefron LJ: The history of the laying-on of hands in nursing Nurs Forum XIV(4):350-363, 1975.