

Traditional Chinese Medicine As a Profound Science in Progress of Scientific Breakthrough.

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The umbrella term “Traditional Oriental Medicine” is used to collectively describe the group of therapies emerging from China and to a lesser extent Japan, Taiwan, and Korea (Eckman, 1996: xiii). It consists of “four technically distinct categories: herbal medicine, acupuncture and moxibustion, massage, and bonesetting” (Masakazu, 2005: ix).¹ Together these therapies form a comprehensive system that includes diagnosis and treatment as well as a prognosis of recovery and disease prevention.

Traditional Chinese Medicine (TCM) is one of the better-known categories within Traditional Oriental Medicine in the West. It provides a rich philosophy and a comprehensive system of medical knowledge. TCM is based on a premise of the duality of nature, known as yin and yang. When these dual elements become imbalanced within the body the result is chronic or acute illness. Acupuncture remedies this imbalance through the application of needles to acupuncture points located along energy channels, creating an “increase [in] the flow of energy in certain meridians or [a] calm, restoring the balance of energy in the body and facilitating health” (Zhao, 2006: 20). However, this means of treating illness and indeed TCM as a whole are often regarded with suspicion in the West. In this paper I will argue that acupuncture as used within the TCM system should not be considered pseudoscience since its effectiveness has

already been empirically observed, both through thousands of years of practice in China and by current Western scientific research.

Acupuncture is thought to have been practiced in China as early as the late stone age (Tsuei, 1996: 1), but the first recorded instance was in 400 B.C. (Lu, 1998: 71). From China, acupuncture spread into Japan, Korea and other countries at the dawn of the Common Era (Lu, 1998: 78). Tsuei notes that acupuncture "was used to treat everything" in China (1996: 1).

Traditional Chinese Medicine relies on several key concepts which are not well understood in the West. First, the duality of nature known as yin and yang "represent[s] two opposing concepts on the one hand, [but] are also used to stand for a harmony between two opposing elements on the other" (Lu, 1998: 83). TCM understands disease as disharmony between elements such as "yin and yang, heat and cold, internal and external, deficiency and excess" which are present in the physiology of the body (Lu, 1995: 311).² All of these elements relate to each other; for example, "if a disease accumulates in the outside of the body it is usually caused by external pathogenic factor like environmentally conditioned common cold; if on the other hand, a disease is internal, it might have been caused by diet" (Lu, 1995: 36-40).

To resolve illnesses or ailments caused by an imbalance, acupuncture works to unblock and regulate the flow of Qi via the meridians and organs (Tsuei, 1996: 3). Qi is the vital energy that circulates in very specific way through a healthy human body (Lu, 1995: 26; Lu, 1998: 206). Its exact nature is disputed; "Sometimes it means breath, sometimes energy, and often it seems to be synonymous with the vital force or 'vis medicatrix naturae' (natural healing force)" (Eckman, 1996: 3). No matter the definition, it is associated only with living organisms and ceases at the

¹ Bonesetting has been replaced by chiropractic practice in the West (Obaidey, 2004: ix).

² For example, yang deficiency manifests as extreme fatigue, lustrous complexion, and chilled body (Lu, 1998: 84).

moment of death (Lu, 1998: 206). According to TCM, Qi is responsible for distributing blood and body fluids to all the parts of the body (organs, bowels and glands) through a system of pathways (Lu, 1995: 207). The movement of Qi along these pathways, named "meridians" by 16th century French physicians, both warm the body and permit communication between external and internal parts of the body (Obaidey, 2004: xiii). According to current scientific research, meridians seem to be lines of heightened electric conductivity (Tsuei, 1996: 4).³ Acupuncture points are found along each meridian; "Qi can be unblocked by using acupuncture at certain places on the skin, called acupoints. Acupoints are places where the meridians come to the surface of the body. There are more than 2,000 acupoints on the human body, with specific acupoints for each condition being treated" (NCI, 2006). Acupuncture needles are used to produce a "desired change as a result of the needles' direct effects, and not from the injection of any materials through the needle" (Eckman, 1996: 1).

While acupuncture is widely considered in China to be empirically proven, the West has been reluctant to accept it as a science. Some skeptics have gone so far as to accuse it of being a pseudoscience.⁴ This is primarily because "a demonstrable mechanism of action [for acupuncture] has yet to be found" (Tsuei, 1996: 2). For example, no conclusive studies proving the existence of Qi have yet been published due to the difficulty of measuring or describing its qualities according to modern scientific methods.⁵ However, Julia Tsuei's research on the

³ Tsuei's research into meridian pathways and functions is similar to the idea of human bodies as electromagnetic flows now being explored by some scientists: "As a result of my work, I can no longer consider bodies as organic systems or tissues. The healthy body is a flowing, interactive, electrodynamic energy field. Motion is more natural to life than non-motion – things that keep moving are inherently good" (Hunt, year: 48).

⁴ Pseudoscience is "an established body of knowledge which masquerades as science in an attempt to claim a legitimacy which it would not otherwise be able to achieve on its own terms...The most important of its defects is usually the lack of the carefully controlled and thoughtfully interpreted experiments which provide the foundation of the natural sciences and which contribute to their advancement" (Lower, 2008).

⁵ Although recently, Candace Pert theorized that Qi is made up of "the free flow of information carried by biochemicals of emotions, the neuropeptides and their receptors" (1997: 276)

resistance and polarization of acupuncture points suggests that they may be detectable using electrodermal screening devices (EDSDs) (1996: 5).

Other arguments against acupuncture are based on its status as an "unproven" treatment. The National Council Against Health Fraud argues that any effects perceived by a patient "are probably due to a combination of expectation, suggestion, counter-irritation, conditioning, and other psychologic mechanisms" (NCAHF, 1990). Quackwatch writer Stephen Barrett similarly claims that all TCM should be considered pseudoscience because it cannot be proven using Western scientific method. Barrett attributes acupuncture's effects variously to endorphins, the placebo effect, external suggestion/hypnosis, and cultural conditioning (2007).

These criticisms must be taken seriously by practitioners and patients alike. However, one of the most common arguments against acupuncture, that it is scientifically unproven, ignores thousands of years of Chinese practice. As Dr. Woodson Merrel of Columbia University notes, "I personally feel that a thousands-of-years-old practice in Chinese Medicine is an adequate empirical trial" (Lampe and Snyder, 2008: 68). Today, China is considered a pioneer in the integration of acupuncture into research universities and hospitals. For example, the Shanghai Yue Yang Integrated Medicine Hospital was established in 1952 and treats 1.1 million outpatients and 10,000 inpatients a year (Honso USA). The Chinese scientific journal Acupuncture Research recently published studies demonstrating the successful use of acupuncture in treating "hemiparalysis, facial paralysis, cervical spondylosis, humeral epicondylitis, herpes zoster, and lumbago" (Tsuei, 1996: 1).⁶

The criticism of acupuncture's effects as the result of the placebo effect is also problematic. Tsuei notes that accusations that acupuncture's effects are psychogenetic have

⁶ Additionally, many Western scientific studies have found proof of the effects of acupuncture, as will be discussed later in this essay.

“been disproven by successful studies of acupuncture in animals, many examples of which can be found in Kuo and Kuo” (1996: 2). Kaptchuk argues that dismissing so-called “placebo” effects dismisses the power of suggestion and the body’s ability to correct itself (1998: 11).

Unfortunately acupuncture remains vulnerable to these criticisms because the exact mechanism for its effects is still officially unknown according to Western science.⁷ Scientists conducting research in this area have often been faced with great obstacles to having their discoveries recognized by mainstream science, while some have even been forced to cut ties with their affiliated institutions where their thinking was not well received or understood.

“I left because, despite the support I got at Stanford, I felt that my message was falling on death ears.” (Lipton, 26)

As Lewith states, “The fact of the matter is that acupuncture does work, and has been shown to do so, but the exact answer as to how it works is unclear. The current scientific explanations give a logical and supportable basis for stating that it does have an effect on the nervous system, but it is difficult to draw any more definite conclusions” (1982: 2). A further problem with Western scientific evaluations of this nature is that since pain itself remains poorly understood, “it is a little unreasonable to expect an explanation of the effects of acupuncture on pain” (1982: 2).

According to Barrett, "you are unlikely to be properly diagnosed" by a practitioner of acupuncture (2007). Misdiagnosis is a serious problem within the entire medical establishment. However, Barrett's view of acupuncturists' diagnoses as inaccurate fails to take into account the differences between TCM and Western medicine. TCM diagnoses are based on pattern

⁷ Explanations put forward include two main schools of thought. The neuralphysiological school views acupuncture points as connected by long reflexes to other parts of the body via spinal segments, nerves, and other unknown connections. The neurohormonal school claims that needle insertion causes pain and microphysical damage, thereby triggering the release of neurohormones and producing an analgesic effect (other effects of acupuncture are not explained). However, both of these explanations remain incomplete and unconvincing (Tsuei, 1996: 2).

differentiation according to four major methods of diagnosis: observation, palpation, pulse taking and tongue diagnosis. Once a TCM practitioner arrives at a diagnosis he or she develops a corresponding treatment plan to treat the pattern of disharmony in the flow of Qi and the distribution of yin and yang in the patient's glands and organs. These considerations are obviously very different from that of the Western medical model. For example, two patients with the same disease according to a Western diagnosis may be viewed as suffering from different maladies according to a TCM diagnostic (Lu, 1998: 242, 378). Similarly, patients with different Western diagnoses might receive the same treatment from a TCM practitioner, as they might present the same pattern based on their internal flow of vital energy, pulse etc.

Stephen Barrett's arguments against acupuncture also characterize "most" acupuncturists as "nonmedical persons who only play at being doctor and use [their] certification as an umbrella for a host of unproven New Age hokum treatments" (2007). However, acupuncture practitioners seek certification in order to distance themselves from nonmedical practices. For example, qualified acupuncturists use new, sterile, disposable (single-use) needles for each patient to avoid spreading germs, and are trained to avoid problems "from placing the needle in the wrong place, movement of the patient, or a defect in the needle" (NCI, 2006). In BC, acupuncturists must follow standard hygiene routines required by the provincial government or be stripped of their license (CTCMA, 2004). Health problems resulting from acupuncture treatment include soreness and pain during treatment, as well as feelings of tiredness/sleepiness and lightheadedness, and infections (NCI, 2006). Here, in comparison, "iatrogenic illness [resulting from Western treatment] is actually the *leading* cause of death in the United States and the adverse reactions to prescription drugs are responsible for more than 300,000 deaths a year" (Lipton, 2005: 108).

While noting that Consumer Reports magazine advised readers seeking acupuncture to consult certified practitioners, Barrett recommends that patients should only use traditional Western medical doctors practicing acupuncture at research hospitals (2007). However, an issue with these practitioners is that they do not have the comprehensive knowledge of TCM methods of philosophy required of a full acupuncturist. Organizations such as the East-West Healing Arts Institute offer a brief introduction to oriental healing for Western doctors (East-West Healing Arts Institute). Compared with the five years of education required by a college of oriental medicine, the different levels of knowledge attained become evident.

It is vital for critics to avoid arguments made in ignorance about something that cannot currently be explained, rejecting acupuncture simply because it does not fit into the current scientific model. Rather than taking an a priori, simplistic view of acupuncture, scientists must first become knowledgeable about the subject in order to provide a well-founded criticism. Admittedly, acupuncture and TCM is based in part on culture-specific concepts which make research difficult when conducted outside of that culture. TCM views human beings as an intimate part of nature with the objective of “learning to live in harmony with the environment”, while Western science has often pursued research in order “to obtain knowledge that can be used to dominate and control the nature” (Lipton, 2005: 19).⁸

This is not to say that Western medicine and TCM are incompatible. Many Western scientists and doctors are beginning to incorporate the TCM philosophy into their practices because of their belief in its effectiveness. Using critical observation they have observed

⁸ Western medicine currently uses a Newtonian mechanistic model of the human body, treating diseases as problems within the human “machine” which can be solved “by providing the cell with a functional replacement part for the faulty element, by prescribing pharmaceutical drugs for example” (Lipton, 2005: 103). TCM theory, in contrast, better fits the scientific model of quantum theory. Quantum theory “reveals that the universe is an integration of interdependent energy fields that are entangled in a meshwork of interactions,” very similar to the meridian systems of TCM previously described by Tsuei (Lipton, 2005: 103).

acupuncture's effect in lessening suffering even without complete Western scientific backing. For example, Dr. Woodson Merrel has been responsible for bringing TCM into respected medical institutions such as the Columbia University Medical Center and the Beth Israel hospital in New York (Lampe and Snyder, 2008: 69). Paul Unschuld, a scientist with the Institute for the History of Medicine at the University of Munich, translated the Nan Ching, the most important compendium of acupuncture knowledge, philosophy, and applications (written around 200 CE), into English. His translation is used in almost all Traditional Chinese Medicine schools that lecture in English or German (Bauer, 2004).

Finally, TCM was accepted as a complementary medical practice by the Ministry of Health of British Columbia in 2003 (CTCMA).

Acupuncture's introduction into the Western hemisphere only began in earnest about forty years ago. While French Jesuit missionaries first brought back reports of acupuncture in Japan to Europe, in the sixteenth century (Obaidey, 2004: ix) and Louis Berlioz, father of the composer, ran clinical trials on acupuncture and wrote a text in 1816 (White and Ernst, 2008: 3), it was not until the 1970s that acupuncture began to become more widely known.⁹ The National Cancer Institute dates the beginning of American research into acupuncture to 1976 (NCI, 2006).¹⁰ This increased public awareness was spurred in part by “a member of the US press corps [who] was given acupuncture during recovery from an emergency appendectomy in China, which he was visiting in preparation for President Nixon’s visit. He described the experience in

⁹ French acupuncture has also been deeply influenced by the diplomat Souliet du Morant, who "spent many years in China and published a number of treatises about acupuncture from 1939 onwards" (White and Ernst, 2008: 3).

¹⁰ This U.S. government organization recently approved the use of acupuncture in the treatment of cancer, primarily to control pain (NCI, 2006).

the New York Times and subsequently teams of US physicians made fact-finding tours of China to assess acupuncture, particularly its use for surgical analgesia” (White and Ernst, 2008: 4).

Today, analgesia remains the most-studied application of acupuncture and is "the area where its effectiveness is best documented" (Tsuei, 1996: 1). Candice Pert notes that one study she helped direct, published in *Brain Research*, showed “that acupuncture stops pain by stimulating the release of endorphins into the cerebral spinal fluid” (1997: 276). However, increased interest in the topic has greatly increased the number of scientific evaluations of acupuncture's effects. While early studies of acupuncture were often "thinly disguised denials" (Tsuei, 1996: 2), today the topic is taken seriously. For example, the World Health Organization published a long list of diseases for which TCM has been found to have curative effect through statistical data collection (Health Information Organization, 2005). Julia Tsuei notes:

Research at the Shanghai Institute has demonstrated acupuncture's effect on various biological systems, including the digestive tract, cardiovascular system (helpful in hypotensive states), immune system (phagocytosis), and the endocrine system (the secretion of ACTH, oxytocin, vasopressin, norepinephrine, follicle stimulating hormone, prolactin, and 17-hydroxycorticosteroids)...Current research in North America and Europe includes uterine contractions, pulmonary disease, addiction, mental disorders, and as an adjunct to AIDS treatment (1996: 1).

The U.S. Food and Drug Administration also recently approved the use of acupuncture needles as medical devices (NCI, 2006).

Despite the sheer number of studies conducted on the acupuncture's effectiveness, "the number of accepted acupuncture applications has grown very slowly in the West"

(Tsuei,1996: 1).

Acupuncture remains "a discipline still looked upon with suspicion" (Pert, 2003: 276), making it a target for accusations of pseudoscience and quackery. The question is prompted: if acupuncture has been shown to work both in clinical research and as the continuation of centuries-old practices, is its lack of acceptance as Western medicine a problem with acupuncture or rather with Western science itself? I began to ask myself this question in 1999, after acupuncture proved to treat well my longstanding medical condition for which neither modern medicine nor other complementary therapies had had an answer.

Others are beginning to ask themselves this question as well: British Columbia has established programs for the registration and licensing of acupuncturists, and MSP will now cover acupuncture for low-income patients. Furthermore, the BC Ministry Health officially recognized TCM as a healthcare profession in a ceremony at UBC's Chan Centre on June 13th, 2003 (CTCMA). After years of its dismissal, TCM is beginning to be taken seriously as an effective medical treatment in the West.

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