

Information-energy equivalence in qigong: reviewing Dossey and Schwartz's "Therapeutic Intent/Healing Bibliography of Research" in light of Pang Ming's Three Levels Theory of Matter

by

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ABSTRACT

The paper "Therapeutic Intent/Healing Bibliography of Research"[1], together with relevant studies involving the effects of external qi healing found on the PubMed database from January 2000 to July 2012, were reviewed from the point of view of therapeutic intent mechanism and healing intent specificity. From an oriental medicine perspective, therapeutic intent is a form of external qi healing. Research into therapeutic intent has met significant resistance, primarily because there is no obvious theoretical model to account for these phenomena. By applying the Three Levels Theory of Matter as proposed by Zhineng Qigong founder, Pang Ming, this article points the way to such a possible mechanism.

KEYWORDS

Three Levels Theory of Matter, therapeutic intent, nonlocal therapy, external qi therapy, external qi treatment

BACKGROUND

There is both anecdotal and controlled experimental evidence that external qi healing/ prayer healing/ therapeutic intent can be beneficial to patients diagnosed with a wide spectrum of diseases. A more recent, but highly promising area of research, has involved the effects of mental intent on physically isolated, in vitro biological tissues, as well as non-living targets, where statistically significant correlations with the pre-stated intend have been reported by labs throughout the world. While these phenomena have been widely replicated, discussed and statistically analyzed over the past century, little is understood about the mechanism responsible for them. A common question is "where does the energy come from?" This article discusses the mechanism of nonlocal therapy in light of the Three Levels Theory of Matter as proposed by Zhineng Qigong founder, Pang Ming, with support from recent scientific findings.

DISCUSSION

Introduction to the Three Levels Theory of Matter

In *Foundation of Zhineng Qigong Science – Hunyuan Holistic Theory (Hunyuan Zhengti Lilun)* published in 1994 [2], Pang Ming points out: "among physical mass, energy and information; information is the root of everything, it decides the transformation process of everything in the universe. Information is divided into simple information and complex information, natural information and consciousness information." It further points out: "consciousness information of human mental activity can cohere and accumulate into energy and mass (physical mass)." Between 1991 and 1998, thousands of studies were conducted under the direction of the Zhineng Qigong Center in China to validate this hypothesis. Many experiments were conducted by various

universities and research centres, with the best theses compiled into *Zhineng Qigong Scientific Research Theses* - a series of 5 books published in October 1998. They are:

- a. Section I: Medical [3]- clinical papers describing the effects of external qi on more than 200 types of diseases; including randomised controlled trials (RCT) done at Foundation Medicine Research Center, China Medical Science College, Jiangxi Medical College, Xingcheng Medical Center etc.
- b. Section II: Agriculture [4] – collection of reports on studies done between 1991 and 1997. Including comparative studies done by Guangxi Agriculture University, Anhui Agriculture Research Centre, Henan Agriculture Research Centre etc. The reports indicated successes in improving harvest and yield of crops from rice to cotton, all with the help of external qi.
- c. Section III: Industrial [5] – a collection of studies on the application of external qi in industrial areas, including a study done by Haerbin Engineering University in improving the hardness of low carbon steel.
- d. Section IV: Education [6] – a collection of reports on how schools that introduced Zhineng Qigong as a form of exercise for teachers and students witnessed marked improvement in academic performance and bodily health.
- e. Section V: Helping The Poor [7]. An adult patient in a family means the productivity of the family could be affected. The centre sent out teams of therapists to the villages to help the poor. This book is a collection of accounts describing how by practicing Zhineng Qigong and with the help of external qi therapy, patients (mainly farmers in remote areas) regain health and the family income rises.

On June 24th, 1998, at a symposium titled “The New Phase in Zhineng Qigong Scientific Research - Validating the Foundation Theory” [8] Pang Ming renamed his hypothesis “Three Levels Theory of Matter” and urged the participants to put in more effort to validate this model. This is a new theory, proposing that there are three levels of matter in the universe - a new perspective on the fundamental makeup and organization of reality. This hierarchy consists of: 1. physical matter, including both the atomic and the macroscopic level. This level of matter exists in physical form, where the energy and information are embedded in the physical mass. 2. The second level of matter includes the electromagnetic, gravitational and other fundamental forces. Here matter exists in the form of energy, where mass and information are embedded within the energy. These two levels of matter are well established by modern science. The third form is the level of matter manifesting as information. That implies that information can be converted to energy and mass. Although information does not exhibit the characteristics of energy, it can be transformed into various forms of energy and co-exists with the two forms of matter above.

Qigong views Qi as a form of information capable of effecting physical changes in specified targets during qi therapy and external qi treatment; and human consciousness (intention, thoughts) as capable of generating such effective information.

Pang Ming subdivided qi into three groups:

- a. *Primeval hunyuan qi*, which is the most fundamental substrate of the universe; everything in the universe evolved from this.
- b. *Hunyuan qi* – the information content of all objects in the universe. Everything in the universe has its own form of nonlocal, holistic information substructure.
- c. *Yiyuanti - qi* of the central nervous system of humans. This is the fundamental nature of human consciousness. In comparison to the two other levels of qi, it has initiative and selectivity. A person who learns to stay mindful and focused (as taught in qigong training) has the ability to impose qi (or information) on the chosen targets, to bring about the desired outcome.

EMPIRICAL SUPPORT

I. Effects of Qi Information in Biological Experiments

a. Effects of external qi with opposing intentions on proliferation of Escherichia coli [9]

In this study two experiments with the same design were carried out. In the initial experiment of both studies, the outcome value of the promoted group was significantly higher than that of the control ($p < 0.05$), while the value of the inhibited group was significantly lower than that of the control group ($p < 0.01$), suggesting that the healer's intent played a critical role in the effects of external qi on E.coli proliferation.

b. Yan Xing Qigong external qi experiments on cancer cells

In a study done in 2006, external qi of Yan Xin Qigong was found to differentially regulate the Akt and extracellular signal-regulated kinase pathways and was cytotoxic to cancer cells but not to normal cells [10]. Another experiment conducted in 2008, revealed that external qi of Yan Xin Qigong induced G2/M arrest and apoptosis of androgen-independent prostate cancer cells by inhibiting Akt and NF-kappa B pathways. In contrast, exposure to Yan Xin Qigong external qi increased phosphorylation of Akt and Erk1/2 in human umbilical vein endothelial cells (HUVEC), and had no cytotoxic effect on either HUVEC or peripheral blood mononuclear cells (PBMC) [11]. The third experiment done in 2010 induced apoptosis and inhibited migration and invasion of estrogen-independent breast cancer cells through suppression of Akt/NF-kB signaling [12]. The fourth experiment done in 2012 demonstrated that external qi of Yan Xin Qigong exerted potent cytotoxic effect towards SCLC cell line NCI-H82 via induction of apoptosis [13]. These findings suggest that external qi, the intent of a healer, may have specific anticancer effect. However no explanation on how external qi works is given in all 4 studies.

c. Two studies on the effect of external qi therapy on cardiac autonomic tone [14-15]

In the first study, heart-rate variability (HRV) was compared in 40 subjects receiving external Qi-therapy (QT) or placebo control therapy, in a randomized placebo controlled design experiment. The findings suggest that external qi therapy stabilizes the sympathovagal function more than placebo therapy. In the second study HRV was compared in 30 subjects receiving external qi therapy or placebo control therapy, in a crossover design experiment. It was found that external qi therapy may act by stabilizing both the autonomic nervous system and the emotional state.

d. Effect of external qi on lymphoma growth in mice [16]

This study examines the effectiveness of external qigong on the in vivo growth of transplantable murine lymphoma cells in mice. The preliminary results suggest that qigong treatment might negatively influence the growth of lymphoma cells.

f. Effect of external qi on advanced cancer (single case study) [17]

This study examines the effectiveness of external qi therapy in the management of advanced cancer symptoms in one patient. Although limited by the single case study approach, the results support similar literature reports on this topic and provide reasons to believe that external qi therapy might be beneficial.

g. A case study of simultaneous recovery from multiple pathological conditions with medical qigong therapy [18]

The intensive qigong workshop in this study involved a patient's training and practice for self-healing plus about 10 sessions of external qi healing performed by a qigong healer for his pain and systematic adjustment. After the workshop and qigong therapy, the patient discontinued all medications (8 in total) and lost 35 pounds; his blood pressure dropped from 220/110 with medication to 120/75 without medication (in 2 weeks);

pulse rate dropped from 88 beats per minute resting to 68 beats per minute in the mornings and 55 bpm in the evening; the edema in his legs went away; symptoms of asthma and allergies disappeared; the PSA level dropped from 11 to 4 (normal), all without any medications.

h. Benefits of external qigong therapy on morphine-abstinent mice and rats [19].

To effectively exclude possible psychological effects (placebo) of qigong therapy in the treatment of addiction, morphine-dependence models needed to be established in mice and rats.

The effects of external qi on withdrawal syndrome were examined. The experiments showed that morphine-dependent mice, after external qi therapy, had decreased incidence of jumping and lower jumping frequencies, and attenuated loss of body weight. After external qi therapy, morphine-dependent rats had reduced withdrawal scores and body weight loss was inhibited. In the conditioned place preference test, the time spent in the drug-paired box was significantly shorter for the qigong group than for the morphine group. The results suggest that qigong might have an inhibitory effect on withdrawal syndrome, and reduce the dependence potential in mice. Three different designs confirm that the impact of qigong therapy on morphine-abstinent mice and rats is reliable and substantial.

Note that no explanation for how external qi works is given in any of the papers listed above.

II. Double-Blind Test of the Effects of Distant Intention on Water Crystal Formation [20]

In 2006, Radin D. and Emoto M. conducted a double-blind experiment to ascertain the hypothesis that the ice crystals formed by water can be affected by the information imposed onto that water sample. A group of approximately 2,000 people in Tokyo focused positive intention toward water samples located inside an electromagnetically shielded room in California. The participants were unaware of similar water samples set aside in a different location as controls. Ice crystals formed from both sets of water samples were blindly identified and photographed, and the resulting images were blindly assessed for aesthetic appeal by 100 independent judges. The results indicated that crystals from the qi treated water were given higher scores for aesthetic appeal than those from the control water ($P = .001$, one-tailed). The study proved that human consciousness could remotely alter specific physical targets but not the control samples.

III. ICRL Research

In the United States, scientists at the International Consciousness Research Laboratories [21] have been studying the effect of mental intent on the physical world by using a Random Event Generator (REG). The REG is essentially an electronic coin flipper: if we flipped a coin 10 times, statistically we would get 5 heads and 5 tails. We would not be concerned if we got 6 heads or tails out of 10 flips. However, if we flipped it 10 million times and got 6 million heads, then we would know that something is influencing the outcome. The REG is a quantum mechanical device which is not affected by normal external physical forces. Its output is fundamentally random and impossible to predict [22]. The REG flips 200,000 times per second and when it is left unattended will achieve statistically normal outcomes. However, when an operator “willed” the REG to perform either way, the output deviated to a statistically significant degree from the norm – which is something that cannot be explained by current physics models [23]. ICRL has also explored the output of REGs exposed to various group activities or environments. They named these FieldREG experiments, where the “field” was assumed to be a “consciousness information field”. This is similar to the description of “qi field” in Zhineng Qigong [24].

In the book "Consciousness and the source of reality" [25] Jahn and Dunne stated that informal operator reports alluded to a requisite sense of "resonance" between the operator and the device, task or purpose, whenever anomalous results were being achieved. This is commonly known among qigong practitioners as “qigong state” or meditative state whereby the operator/ practitioner formed a holistic entity with the device,

task, or purpose. The unique brain wave pattern during qigong state (meditative state or highly mindful, focused state) has been reported by Richard Davidson of University of Wisconsin in the early 2000s [26] and in the study by Lagopoulos and colleagues in 2009 [27]. Combining this with the 'resonance' finding of ICRL we can see that a rightly trained qigong practitioner who is able to remain mindful and focused is likely to generate a much stronger result than untrained subjects.

The ICRL researchers did not speculate about the possible mechanisms responsible for these results. According to the Three Level Theory of Matter, the information injected into the system by the operator was converted into the energy necessary to effect these observed changes.

IV. External qi detected as infrared bioenergy [28]

A study was done at the National Yang-Ming Medical College, Taiwan where electromagnetic pulses in the 3 to 5 microns infrared spectrum were measured from the palm of a qigong master in the process of emitting external qi. The measurements were made using a III-V compound semiconductor InSb detector. It was found that the qigong master could emit two opposite kinds of qi, one with "facilitating" intent and the other one with "inhibiting" (destroying) intent. In the one with facilitating intent, large amounts of infrared radiation were detected and the air temperature in the vicinity of the subject went up. When external qi with inhibiting intent was emitted, the infrared wave was absorbed from the environment resulting in a cooling of the air.

The biochemical effects of external qi from the same qigong master on the human fibroblast FS-4 were investigated. The external qi with facilitating intent caused a 1.8% increase of the cell growth in 24 hrs, 10-15% increase of DNA synthesis and 3-5% increase in protein synthesis of the cell in a 2-hr period; while external qi with inhibiting intent caused 6% decrease of cell growth in a 24 hr period, 20-23% decrease of DNA synthesis and 35-48% of protein synthesis in a 2-hr period. In addition, it was found that the respiration rate of boar sperm increased 12.5-13.0% after receiving 5 min exposure to external qi with facilitating intent and a decrease of 45-48% by exposure to 2-min of external qi with inhibiting intent. The results indicate that the external qi was capable of effecting bi-directional changes correlating with the intent of the qigong master.

V. Micro-sculpture through the mind [29]

In a study done in 1999, gold film of 100×100 square microns was laid on a semiconductor wafer to prove that human consciousness can accumulate energy to perform micro engraving through imagery thinking. The study was carried out by a person with extraordinary ability and the images recorded under atomic force microscope confirmed that the mind could perform micro-etching, such as generating holes, rings or pressure lines on the gold film. This result suggested that somehow conscious intent could generate sufficient energy to alter a gold film target.

VI. Review of mind photography [30]

Mind photography experiments were carried out in various ways in China back in the 1990s. Negative photographic films of various forms were placed directly at Laogong (P 8), Yintang (Ex-HN 3), and Baihui (Du 20) acupuncture points on the body, or at a distance away from the experimenter. The films were shielded with black paper, black cloth bag, or kept in a metal box. Otherwise experiments were carried out in dark room.

It was found that the most important factor for success was the ability of the subject to remain mindful and focused. While in deep meditative state (qigong state) the subject was able to control and regulate the external

qi transmission and even write the designated characters assigned by the researcher. The study indicated that the intent of a qigong practitioner could create photon phenomena to expose shielded negative film.

VII. Magnetic signals generated by external qi in a zero field lab [31]

In this experiment done in 1991, 20 qigong practitioners emitted external qi toward the probe of a Gauss meter through their Laogong point (middle of the palm) for a total of 32 times, while 6 non practitioners served as controls. None of the 6 controls could produce any electromagnetic field stronger than 1nT when they simulated the work of the qigong practitioners. Three forms of electromagnetic fields were detected when qigong practitioners emitted external qi to the probe. They were DC signal with flux density of $2\sim 6 \times 10 \text{nT}$, AC signal with flux density of $2\sim 2.6 \times 10 \text{nT}$ and pulse signal with flux density of $3\sim 1.3 \times 10 \text{nT}$. At the end of a session, when the practitioners had removed the palm away from the probe, most of the time (80%) the meter still indicated a signal, suggesting that the field was still around. The field only dropped down to base level when the qigong practitioners left the room.

VIII. Physical Manifestation and Effects of External Qi [32]

The half-life of a radioactive nucleus is determined by its intrinsic properties and is not affected by any ordinary physical conditions or chemical environments such as high temperature, high pressure, strong electromagnetic fields, strong acids, or strong bases. To study whether external qi can affect the half-life of a radioactive isotope, two independent methods, namely the gamma-ray spectroscopy and the solid-state nuclear track detector, were used to measure the gamma-rays and alpha particles, respectively, emitted during the decay of radioactive isotope ^{241}Am . Experiments were performed at the Institute of High Energy Physics, the Chinese Academy of Sciences, with a total of 50 qi-emissions by Dr. Yan.

Dr. Yan emitted and directed external qi onto the radioactive source from a remote location. The ^{241}Am source was placed on a table in the qi receiving room. Dr. Yan emitted external qi to the ^{241}Am source from a wide range of distances (3 m to 2,200 km). In one experiment the half-life of the radioactive isotope was increased by 9.5% or reduced by 11.3% (Table 9); in another experiment, it was increased by 6.7% or reduced by 12.0% (Table 11), again showing the bi-directional effect of external qi from Dr. Yan.

IX. Information can be converted into energy: the landmark study of Sano et. al.

“The fundamental law of thermodynamics implies that you can't get energy for nothing. Worse still, you will always get out of a system less energy than you put in. But a nanoscale experiment inspired by a nineteenth-century paradox that seemed to break those laws now shows that you can generate energy from information [33].” *Nature Physics* 6,988–9 (2010). Masaki Sano, Shoichi Toyabe and colleagues explored connections between statistical mechanics and information processing in order to study a much debated idea which seems to violate the laws of thermodynamics. The Japanese researchers set up a very small version of a spiral staircase and made a molecule climb up this staircase by applying information. The “staircase” was made of potential energy and created using electrical fields. A high-speed camera was used to photograph the molecule. Due to thermal energy the molecule would move in random motion (Brownian movement). When the molecule happened to move up the staircase, the researchers let it move freely; but when it happened to be moving down the staircase, they blocked its motion by inserting an electrical field that acted as a virtual wall.

Since the particle was moving to a location of higher potential it required energy to move up the staircase. Yet the researchers did not input any energy to push the particle up – they simply used the information about which direction it happened to be moving in at any given time to guide the climb. The particle was made to climb up a spiral-staircase-like potential exerted by an electric field, gaining free energy larger than the amount of work done on it (the energy needed to create the electric field wall included). This enabled Sato and colleagues to

suggest a new fundamental principle of an ‘information-to-heat engine’ and the conclusion was drawn that information could be converted into energy, causing the molecule to move up the staircase.

SUMMARY

In the proposed Three Levels Theory of Matter, qi is a form of information, and information can be converted into energy. Human intention (external qi) appears capable of generating energy at the site of remote targets and bringing about bi-directional changes that correlate with the operator’s pre-stated intent. Given the far-reaching implications of the results discussed in this paper, it is recommended that additional replications of these studies be conducted by independent labs, in conjunction with a theoretical framing of possible physical mechanisms to account for target specificity, bi-directional effects and information/energy conversion.

COMPETING INTEREST

The authors are qigong practitioners. However they have never met the founder of Zhineng Qigong, Pang Ming nor visited the Zhineng Qigong Centres which operated from 1985 to 2000.

AUTHOR INFORMATION

OKH is a qigong therapist and the National Industry Expert on Qigong Therapy appointed by the Malaysia Ministry of Human Resource. SHL is a researcher at Usains Biomics and TSC is the deputy director of the Institute For The Research Of Molecular Medicine and a lecturer at the School of Pharmaceutical Sciences, Science University of Malaysia. OKH carried out the literature research and organization and drafted the manuscript. TSC and SHL participated in the review of the articles. All authors read and approved the final manuscript.

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