

One day Dr. Green finished writing a grant proposal concerning the possibility of detecting static electrical effects from the body during meditation and during the process of bioenergetic healing. As described in the following paper, this topic was central in his dreams and visions for decades, springing from his study of the esoteric literature and his recognition that electrostatic energies were being used in training *chelas* (as described in the articles below) perhaps for hundreds of years. The very *week* he completed the grant proposal, he received a phone call on behalf of John Fetzer of the Fetzer Foundation, Kalamazoo, Michigan. Fetzer thought of the mind as a “subtle” radio transmitter and was looking for someone interested in measuring how the mind could be used to affect the world in a similar way a radio transmitter affects a radio. After conversation he asked for Green’s grant proposal. This synchronicity led to several years of scientific efforts studying electrostatic correlates of the body during meditation, and to the eventual selection of a group of individuals with “special abilities”—bioenergetic healing and intuitional diagnosis—with whom he conducted laboratory studies. The following three papers describe this work. The first summarizes the history of this work in Dr. Green’s own words. [Eds.]

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## COPPER WALL RESEARCH; PSYCHOLOGY AND PSYCHOPHYSICS

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**I**n 1940, while a student in the Department of Physics, University of Minnesota, I ran across a book written in the 1880’s, which nowadays we would say was an “energy medicine” forerunner. In addition, it spoke of psychology, psychophysiology, and psychophysics. Not the psychophysics of Titchener and S. S. Stevens of Harvard, but the psychophysics of G. Fechner. And not Fechner’s exoteric psychophysics of matter on mind, MAOMI, which laid the groundwork for Titchener, Stevens, and all other traditional psychophysicists, but his esoteric psychophysics of mind on matter, MIOMA. Not the inside-the-skin matter of psychophysiologic self regulation, but outside-the-skin matter.

Most psychophysicists, the ivory tower people of psychology, ignore the fact that Fechner was highly interested in the way the environment could be influenced directly by mind, without muscle. Fechner was impressed by the physical phenomena of H. P. Blavatsky, the founder, with Col. O. S. Olcott

in 1875, of The Theosophical Society, and several pieces of correspondence passed between them.

Stevens was painfully aware of Fechner's esoteric interests and wrote a paper called, "To Honor Fechner and Repeal His Law." But he made two mistakes. The first was that Fechner's logarithmic "discriminability law" for sensory systems was correct under certain conditions. It could not be repealed, for both it and Stevens' own "power law" of sensory discrimination were merely special limiting cases of a more general law which incorporated sensory adaptation to stimulus levels.<sup>1</sup>

Stevens' second mistake was to say that Fechner's esoteric interests set the science of psychophysics back 100 years. Fechner had already said, however, in answer to that type of criticism, that it would take 100 years before psychophysicists began to understand what he was talking about. He was right.

**N**ow, somewhat over 100 years later, a MIOMA science is beginning to develop. Of the several examples of this development, perhaps the best known is work by Robert Jahn, Brenda Dunne, Roger Nelson and others at the Princeton Engineering Anomalies Research (PEAR) laboratory. In main, though, anomalies being studied around the world can be classed as micro-anomalies. As is well known, results are highly significant in a statistical sense, but it would be useful to have macro-anomalies to experiment with, something more like switches that could be turned on and off.

The research I am reporting here is a step in that direction. The book referred to in the first sentence above is *The Mahatma Letters to A. P. Sinnett*. The Mahatmas referred to were the Teachers of Blavatsky. Mr. A. P. Sinnett was the British editor of *The Pioneer*, perhaps the most prestigious English-language newspaper in India 100 years ago. The letters, written mostly in the early 1880's, included one in particular that riveted my attention, for it implied the presence of measurable electric fields associated with a particular method of meditation. Specifically, Mahatma Kuthumi says to Mr. Sinnett:

"The methods used for developing lucidity in our chelas (student monks) may be easily used by you. Every temple has a dark room, the north wall of which is entirely covered with a sheet of mixed metal, chiefly copper, very highly polished, with a surface capable of reflecting in it things, as well as a mirror.

The chela sits on an insulated stool, a three-legged bench placed in a flat-bottomed vessel of thick glass,—the lama operator likewise, the two forming with the mirror wall a triangle. A magnet with the North Pole up is suspended over the crown of the chela's head without touching it. The operator having started the thing going leaves the chela alone gazing on the wall, and after the third time is no longer required.”<sup>2</sup>

This outline of a method of bringing Tibetan chelas to a deeper level of awareness suggested that both electric and magnetic fields could be of use in studying consciousness, and the fact that the lama operator is not needed after a few sessions indicates that the chela's body potential (and/or “chakra” stimulation, in Tibetan theory) can be self generated under the above conditions.

**O**n reading this material, questions which immediately spring to the minds of students in Departments of Physics are: What does the magnet do? Why is it positioned North Up? Why is it necessary to face north? What would happen if the magnet were oriented South Up? Why is the wall made of copper? What if it were made of silver, or gold? Is the body isolated from ground in order to conserve an electrical charge that builds up? If so, what is the purpose in conserving it? And psychologically, what does the chela see when he gazes at his reflection in the wall? And last of all, what is “lucidity?”

Fifty years after first pondering these questions, and after 8 years of research, some of the queries are beginning to be answered in our project called “Lucidity, Body Electricity, and Psychophysical Learning.” This work, funded by the Fetzer Institute of Kalamazoo, Michigan, and also made possible by Menninger support of our Copper Wall Laboratory, has focussed primarily, up to now, on (1) psychological effects of the copper wall milieu, and (2) electric field phenomena around the bodies of subjects. The main focus of the present discussion will be on item (2).

**PSYCHOLOGICAL EFFECTS:** A 411-item Experiential Questionnaire was answered 600 times in our initial copper wall study (20 subjects times 30 sessions/subject), and three months ago I made our first formal report on statistical analysis of psychological effects in Dallas, at the Annual Meeting of the Association for Applied Psychophysiology and Biofeedback.<sup>3</sup> Detailed information on these results can be obtained by sending Copper Wall Technical Notes

24, 25, and 26, written by Steven Fahrion, statistician Lolafaye Coyne, and myself.<sup>4</sup>

I do not have space to discuss these reports, except to say that through multivariate analysis it was found that in a double-blind protocol in which the overhead bar magnet was oriented either NORTH UP, SOUTH UP, or was ABSENT, men and women responded in opposite ways. Men were stimulated both physically and emotionally, by NORTH UP, and women were somewhat inhibited. When the magnet was SOUTH UP, however, women were stimulated both physically and mentally and men were inhibited. Incidentally, the bar magnet presently being used in the study of psychological processes measures 1x2x9 inches and is placed so as to give a field density of 140 gauss at the crown of the head.

**E**LECTRIC FIELD PHENOMENA: In pondering the Mahatma's suggestion for the development of lucidity I was struck by the fact that the body and the copper wall form an electrostatic dipole. The wall is an electrostatic mirror which generates a virtual electrostatic image of the subject. So, what would the wall reveal about the electrical situation if it also were isolated from ground and monitored by an electrometer? our present implementation of this idea consists of four electrically isolated copper walls surrounding the subject, in front, in back, above, and below. Each has its own electrometer. A fifth electrometer is connected to the subject's body. Also (though not discussed here), physiological data from the subject is telemetered by optical link to polygraphs and digital recording devices. A series of Copper Wall Technical Notes gives details.

**SUBJECTS:** Two groups of meditators have participated in copper wall sessions. The first is made up of "regular" subjects (mostly Menninger psychologists, psychiatrists, and other physicians). The second group consists of "exceptional" subjects, 7 men and 7 women. These people are nationally known "sensitives" and "healers," and it is this group's results which are discussed here.

In the 600 sessions conducted with regular subjects we observed interesting electric field perturbations on wall records, such as respiration cycles and heart beat, but no anomalous voltages were seen, phenomena that might have been anticipated from the Mahatma's letter. In thinking of this lack of anomalous data, it occurred to me that in the absence of Tibetan chelas, it might be useful

to enlist the aid of known “healers” and “sensitives,” some of whom, it was said (by many patients and some physicians, but not by scientists), were able to manifest electric field phenomena. With such exceptional subjects it might be possible to study electric field perturbations during “healing” sessions. Also, this group could experience the Mahatma protocol, answer experiential questionnaires, and help with the definition of “lucidity.” Of 15 exceptional individuals approached, 14 were interested.

Concerning electric field phenomena, the upshot was that during “healing” sessions several of these exceptional subjects generated anomalous voltage spikes in the body-potential record and in electrometer records from all four walls, occasionally with the “patient” in another part of the Gardner Murphy Research Building (which contains the copper wall lab).

**C**AUTION: The major artifact which must be guarded against in this kind of research is spurious voltage surges generated by body motion relative to a wall. (Body and wall act as a capacitive pair whose capacity, and therefore voltage under conditions of fixed charge level, is a function of in-between distance.) To identify electric field perturbations caused by body motion in the copper wall milieu, we use two video cameras to watch the subject (from about 45 degrees off center, both left and right front view). A third camera, mounted overhead in the control room, watches the physiologic polygraph record. A fourth camera watches the 5-electrometer polygraph. These four video signals are combined in a “quad splitter” that gives a single four-camera screen, recorded throughout each session.

**CONTROLS:** Control sessions of body motion effects showed that a large head motion lasting one second (from head down with chin on the chest to head straight up) could produce, in our copper wall milieu, body-potential perturbations reaching as high as 6 volts.

**ANOMALOUS ELECTRIC FIELD PHENOMENA:** On the other hand, several “exceptional” subjects generated a number of body-potential surges higher than 60 volts, with no discernible body motion in the video record. These anomalous field effects suggest that whatever the “healing carrier” may be (and there are many theories to choose from in this regard), electric field effects can provide an interesting avenue of investigation for the study of MIOMA phenomena.

**QUESTIONS FOR FURTHER RESEARCH:** We have noticed that the walls do not respond in identical ways to “healer” efforts, and questions have been raised about how the “energy,” whatever its nature, is focussed. Does it move in a tight beam like laser light? Does it spread with distance? Weaken with distance? Travel as a packet? Light usually weakens with distance, even coherent light. But a letter arrives at its destination with none of its information diluted.

**CONCLUSIONS:** Clearly, if replication in other labs gives similar results, questions and possibilities for future investigation and application will proliferate. With physics-type data to work with, hypotheses can be constructed and tested in a way not unlike early electricity research before the development of electron theory. Differing from historical electricity, however, the added factor of mind, or intention, or volition, opens an interesting new window on MIOMA possibilities. Fechner would have enjoyed these developments.

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#### REFERENCES & NOTES

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