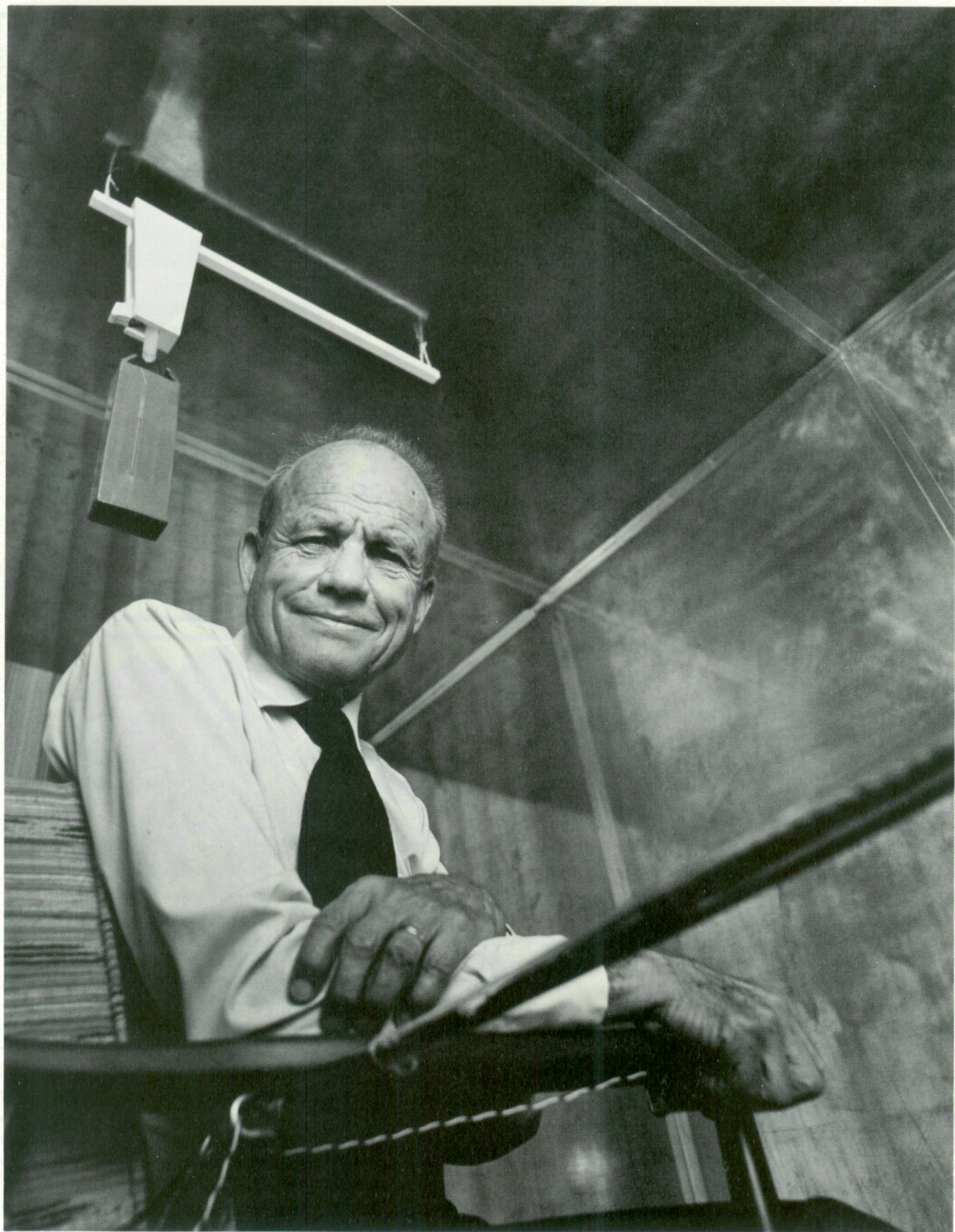


# Menninger Perspective

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# Seeking the unknown treasure of human potentiality

**Dr. Elmer Green, the father of autogenic biofeedback training, and his wife, Alyce, are exploring a new frontier: man's consciousness.**

*"The problem is how to achieve the maximum utilization by homo sapiens of those amazing cerebral hemispheres of his. He has wit enough to make for himself a happy sojourn on this planet and to realize gradually more and more of his creative powers. He has wit enough to study, to understand and to control the predatory impulses of his kind, and to enrich and magnify the impulse to tenderness and good will. Yet he foams and frets, exhorts and moralizes."* Human Potentialities, Gardner Murphy, PhD

*"The methods used for developing lucidity in our chelas (meditating students) 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 (the operator) is no longer required."*—The Mahatma Letters to A.P. Sinnett, edited by A.T. Barker

One of the leading psychologists of this century (president of the American Psychological Association, chairman of the psychology department at The College of the City of New York, consultant to UNESCO), Gardner Murphy had high hopes and expectations of what man might become and accomplish if he could achieve what Dr. Murphy believed to be his virtually unlimited potentialities. As director of research at The Menninger Foundation from 1952 to 1964, he encouraged his staff members to break down rigid barriers to inquiry, to explore such fields as parapsychology, from telepathy to healing and even the mental manipulation of objects.

So, eyebrows were barely lifted when in 1964 Dr. Murphy recruited a former Navy physicist and his wife, Elmer and Alyce Green, with new degrees in psychology from the University of Chicago, to come to The Menninger Foundation to establish a psychophysiological laboratory and to bridge the gap between biomedical engineers and psychiatrists and psychologists.

In addition to their expertise in physics, biopsychology, and psychology, the Greens brought with them a long-standing interest in physiological self-regulation, in extrasensory perception, in the effects of energy fields—magnetic, electric, gravitational, ionospheric—on

people. In fact, it was this interest that led Dr. Green to change careers at the age of 41.

The Greens' first area of mind-body study at Menninger was something called autogenic training, developed in Germany by psychiatrist Johannes Schultz to promote self-regulation of physiology, emotions, and mind. It involved use of a series of verbal formulas—phrases used by the subject—to achieve relaxation and psychophysiological self-control. But, in formal autogenic training the subject or patient was dependent upon his own subjective feelings—warmth or coolness, for example—in determining whether the training was successful.

Then came the idea of giving the subject visual or audible information about what was happening inside the body as a way of developing self-control of psychosomatic problems. They called the process biofeedback training, and Elmer Green is widely recognized as the father if not the founder of autogenic biofeedback training.

Working with volunteers from the Topeka community, the Greens pursued their experiments in biofeedback training. One day, in 1966, serendipity struck. They were recording the efforts of a subject who was trying to learn to relax when they noticed simultaneous, dramatic increases in her hand temperature and in the blood flow in her hand. When they asked her what had happened, her response was, "How did you know my migraine headache went away?"

Left: Dr. Elmer Green surrounded by walls of copper.

## Human potentiality

### A new treatment tool

From the research laboratory had come a promising clinical tool, and its applications mushroomed. If the state of deep quietness associated with warming the hand through increased blood flow would relieve headaches, might it not also help reduce blood pressure? And what about Raynaud's disease, a painful circulatory disease affecting the hands? If a person could learn to control nerves which controlled muscle tension, might he not also learn new control over nerve circuits damaged say by stroke?

The answers to all of the questions have been yes and, as a result, man had made a rather substantial gain in his human potential. He could, indeed, gain voluntary control over what had previously been thought of as involuntary, autonomic physiological processes in the body in a beneficial way.

### Exploring human consciousness

With biofeedback training almost a standard tool in the clinical armamentarium, in 1984 Elmer and Alyce Green set out to explore a longstanding interest in physical fields and states of consciousness. It involves the study of the effects on human consciousness of a magnetic field used in conjunction with an electrostatic mirror. The concepts are based on procedures used in the last century for developing awareness of normally unconscious states of consciousness in student yogis in Tibet.

Sound weird? So did getting rid of a throbbing terror of a migraine headache by warming your hands.

The Greens discovered the technique in a volume of collected letters to A.P. Sinnett, editor of the leading English-language newspaper in India in the last century.

And so, in the basement laboratories of the Gardner Murphy Research Building, a sturdy wood chair faces a copper wall, seven feet high, nine feet wide. The copper sheeting, about half the thickness of a penny, has been polished to a mirror-like finish which

gives the artificial light a golden glow. The chair sits on a layer of glass bricks. Over the chair is suspended a large bar magnet 10 inches long. From the chair and from the wall come spaghetti strands of electronic cables used to measure physiological changes in human subjects—heart beat, skin voltage, respiration, changing muscle tension—and electrical changes in the copper wall reflecting heart beat, respiration, changing posture, and GI tract motility.

Over the past two years, nine men and eleven women, all of whom had previously practiced meditation of one kind or another, have sat in the chair and meditated for 45 minutes a week for 30 weeks. Through their experiences, the Greens were seeking the answers to three questions:

- ☐ What is lucidity?
- ☐ Is there a difference in the experience if the magnet is oriented north up, south up, or if there is no magnet at all?
- ☐ What electrical perturbations are detectable in the copper wall during the test periods?

After each session, the subjects answered a 411-item questionnaire relating to five experiential domains—physical, emotional, mental, extra-personal (parapsychological), and transpersonal (spiritual), which were further divided into 13 qualitative subcategories—passive, energized, positive, negative, left cortex, right cortex, etc. In addition to answering the questionnaire, each subject was asked to keep a diary of experiences for free non-structured reporting.

What are the results?

So far, it has not been possible to develop an exact definition of lucidity, Dr. Green reports. "This was partly because men and women responded differently to the magnetic field, suggesting that if lucidity has general meaning, it may be approached in different ways in men and women."

Lucidity, to the extent it can be defined, seems to be concerned with the

basic question of most Eastern meditation systems, namely, "Who am I?" From a Western point of view, lucidity seems to consist of enhanced awareness of normally unconscious psychological processes.

The most significant statistical finding, Dr. Green pointed out, was that under double-blind test conditions, men and women often responded in different ways to north up and south up magnetic orientations. North up tended to energize men, physically and emotionally, and made women more passive. South up, on the other hand, seemed to energize women, physically and emotionally, and make men more passive.

In the next phase of their study, which is supported by the John E. Fetzer Foundation, Kalamazoo, Michigan, the Greens will further explore the nature of lucidity by increasing the strength of the magnetic field. Since the copper wall is such a sensitive electrostatic detector, subjects will be given auditory feedback under the hypothesis that possibly they can learn control of their own electrostatic potential. Finally, the Greens will study 10 reputed "healers" to determine differences, if any, in their electrostatic correlates from normal subjects. If such differences are related to "healing," could average people be trained through feedback to "heal"?

In 1972, the Nobel prize winners in physics and chemistry were asked what the awards in their fields would be given for in the year 2000. Their answer: "for the study of man's consciousness. This is the new frontier." Clearly the Greens, in the tradition of The Menninger Foundation, have opened an outpost on this frontier. [Emlin E. North, Jr.]