



## INSTITUTE OF TRANSPERSONAL PSYCHOLOGY

### NEUROPHENOMENOLOGY CENTER UNDER CONSTRUCTION: *Studying the Effects of Meditation*



What is meditation really doing?

How do religious images emerge in the brain?

Can thinking, attention, memory and intuition be improved by meditation?

What are the long term effects of meditation on the brain?

What are the effects of various forms meditation on human performance such as control of motion sickness, development of visual memory, various types of intelligence, and navigation in space?

When ancient esoteric practices, such as Prayer of the Heart, cause deep personal transformation, does it affect the foundational mechanisms by which the brain constructs our identity?

These are just some of the questions Dr. Olga Louchakova seeks to answer. She has teamed up with Dr. Maria Kozhevnikov, a neuroscientist at George Mason University in Washington D.C., in a collaborative research project that connects transpersonal (aka “spiritual”) psychology with “hard core” neuroscience to measure what happens to the brain during various forms of meditation.

This Center will be the first of its kind in the world, using cutting edge interdisciplinary scientific methodology to answer major questions regarding religious/spiritual experience and the brain. This research will bridge the gap between spirituality and science. “As a result of this research,” says Dr. Louchakova, “we will be able to prove what we have known all along – that spiritual experience is real.”

However, this research is about more than that, she explains. “It's about improving ordinary brain function. Meditation targets all brain functions, including thinking and feeling, and with meditation, all levels of brain function improve. It's not so much about relaxing, but about sharpening the senses and improving overall performance in daily life.

“It's also about self regulation, the key to actualizing extraordinary human potential. Ultimately some forms of meditation are even likely to prolong life. Our research subjects are not only exalted yogis or enlightened Buddhists, but Western lay people who benefit from spiritual practice.”

To date, Doctors Louchakova and Kozhevnikov have completed five years of pilot studies of the effects of Kundalini Yoga, Prayer of the Heart, and Buddhist meditation, publishing

results in leading phenomenological, transpersonal psychological and scientific psychological journals such as *Analecta Husserliana*, *Journal of Transpersonal Psychology*, and *Psychological Science* (under review).

Studying the brain engaged in a variety of meditation styles, and experiencing various spiritual conditions, has allowed them to find the hidden resources useful for enhancing performance. “For example,” explains Dr. Louchakova, “our recent study of Tibetan Buddhist monks engaged in the practice of visualization, conducted with George Mason University, demonstrated that meditation could enhance access to the resources of visual memory not available in ordinary brain states. Similarly, our preliminary studies show that there are types of meditation that can enhance resistance to motion sickness, improve the capacity of navigation in space, and in general, enhance human performance in ways yet unknown to science.”

Research results to date are demonstrating the direct connection between spiritual experience and activities of the brain. These are an objective verification of spiritual experience. “Spiritual experience then becomes not a matter of faith or fantasy, but “real” as seen in the anatomical substratum of the brain. Thus, engaging transpersonal psychological knowledge of spiritual experience with neuroscientific studies can enhance, and even change, scientific perspectives on the brain and its cognitive functioning,” says Dr. Louchakova.

The intellectual merit of the Center will be in developing the understanding of scientifically grounded perspectives on spiritual experience. The Center will bridge the gap between transpersonal psychology and neuroscience, providing the scientific basis for transpersonal psychological findings.

The goals of the Center will be attained in collaboration with the Laboratory of Applied Cognitive Psychology at George Mason University in Washington D.C., and with the aid of such leading experts as B. Baars (Neurobiology), M. Friedman (UC Berkeley, Electrophysiology) and M. Kozhevnikov (GMU, Cognitive Science).

ITP has received a generous \$120,000 grant from the Spitzer Family Foundation and a \$20,000 grant from the Zimmer Foundation to start the Neurophenomenology Center. However, to continue this ground-breaking research, a total of \$500,000 will be required over the next five years.

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