

The Heart, a Mind of its Own - Bill Strubbe

IHM's mission is to facilitate a fundamental cultural shift by putting the heart back into people's personal and professional business. Love is more than mere sentiment — it nourishes the body, as well as the soul. For most of us, the heart is merely the symbol of love, but the Institute of HeartMath (IHM) has gathered impressive scientific data verifying this 10-ounce muscle actually does function as a physiological locus of love in the center of our being. Better yet, we have the ability to induce the human heart into states of love. If this “think tank” — perhaps “feel tank” would be more appropriate — amidst the towering redwoods in the Santa Cruz Mountains of California were merely dispensing more New Age wishful thinking, it's doubtful Fortune 500 companies, Motorola, Royal Dutch Shell, the Canadian Imperial Bank, school districts, and even the U.S. Armed Forces would have sent more than 25,000 employees to IHM's three-day workshops. So impressive is IHM's research into the heart's “brain” that the American Journal of Cardiology, Stress Medicine, and Journal of Advancement in Medicine have published articles on its findings. If IHM's work could be patented into a pill, it likely would be heralded as the biggest medical miracle since penicillin. In exploring the physiological mechanisms by which the heart communicates with the brain, IHM found that the coherence of the Heart Rate Variability (HRV) — measurement of the heart's beat-to-beat changes is a clear indicator of inner emotional states and stress. Even more intriguing was the discovery that by utilizing simple, user-friendly techniques to feel positive emotions — rather than thinking about them — you can instantly increase HRV coherence, thus effecting measurable physiological and psychological shifts, which allows you to make less reactive, more authentic, loving decisions. IHM's mission is to facilitate a fundamental cultural shift by putting the heart back into people's personal and professional business, and affect solutions to some of the problems facing individuals and society today. “The planet is really moving through a paradigm shift,” said Rollin McCraty, the head researcher at the Institute of HeartMath. “A shift from the head to the heart. The heart is the base frequency that we're hard-wired to live in.”

Historical Research into the Heart's Brain

It was once popularly believed human beings had but a modicum of control over their minds and emotions, thought to be dictated entirely by the brain's responses to external stimuli. Researchers showed changes in emotions were accompanied by foreseeable alterations in heart rate, blood pressure, respiration and digestion — physiological responses moving in concert with the brain's response to given stimuli.

In the 1960s and 1970s, John and Beatrice Lacey observed this model only partially matched actual physiological behavior. The heart, seeming to have its own peculiar logic which frequently diverged from the command of the autonomic nervous system, sent meaningful messages to the brain which could alter a person's behavior.

In 1974, the French researchers Gahery and Vigier, stimulated the Vagus nerve (which carries signals from the heart to the brain) in cats and found that the brain's electrical response was reduced to half its normal rate. In other words, the heart and nervous system were not simply following the brain's directions.

In 1983, the heart was reclassified as an endocrine gland when a new hormone called atrial natriuretic factor (ANF), which affects blood vessels, kidneys, adrenal glands and regulatory regions in the brain, was found being produced by the heart. Dr. J. Andrew Armour discovered the heart also contains a cell type known as intrinsic cardiac adrenergic (ICA), which synthesizes and releases neurotransmitters once thought to be produced only by neurons in the brain and nerve ganglia. Dr. Armour introduced the concept of a functional “heart brain” in 1991, and his book Neurocardiology, co-written with Dr. Jeffrey Ardell, affords a comprehensive overview of the heart's intrinsic nervous system. Considered an independent entity, the heart's brain is composed of an elaborate network of neurons, support cells and neurotransmitters which enables it to process information, learn, remember and produce feelings of the heart and then transmit information from one cell to another, including emotional information. “We observed the heart was acting as though it had a mind of its own and was profoundly affecting perception, intelligence and awareness,” explained McCraty, whose background is in electrical instrumentation design and high-tech problem-solving. “Our studies dovetail with other researchers doing related work that more than simply being a blood pump, the heart is a highly complex, self organized sensory organ with its own functional, intrinsic brain.”

Some of the more fascinating evidence supporting the notion of a heart brain are the numerous documented stories (in the book, *Change of Heart* by Claire Sylvia) of heart transplant patients who have taken on the habits, expressions, tastes and memories of the dead donor. One woman knew the name, address and family of the dead donor — information that had been withheld from her. In a most dramatic case, a teenage girl received the heart of a woman who had been murdered. Shortly thereafter, in dreams and in quiet moments, the woman was able to reconstruct details from the crime scene so as to enable the police to gather enough evidence to convict the killer. “These stories take this phenomena out of the realm of coincidence,” said McCraty. “The same type of memory-encoding neurons found in the brain is also found in the heart. After an operation, it takes some time for nerves to reconnect, so that can't explain all the heart-transplant phenomena, because sometimes personality transfers happen immediately. I think that it's on electromagnetic and energetic levels where the real activity is going on.” Indeed, other researchers in the country have come to similar conclusions. Psychoneuroimmunologist Paul Pearsall Ph.D, author of *The Heart's Code*, believes the heart resonates an intelligence field to every cell in our body. Gary Schwartz, Ph.D. and Linda Russek, Ph.D., of the University of Arizona's Human Energy Systems laboratory in Tucson, are of the opinion that the heart “pumps” patterns of energy and information throughout the body.

What's Love Got to Do With It?

To the ancient Greeks, the contrasting aspects of the soul — intellect and emotion — were engaged in perpetual struggle for control of the human psyche. Plato viewed emotions as wild horses needing to be restrained by the intellect, while Christian theology demoted emotions as sins and temptations to be resisted by reason and willpower. This false dichotomy of head vs. heart cannot be resolved by the mind gaining dominance over emotions, but by increasing the balance between the two systems.

Neuroscience confirms emotion and cognition are separate but interacting systems, each with its own unique type of

intelligence. In his recent, best selling book *Emotional Intelligence*, Daniel Goleman builds a case, for the largely overlooked domain of "EQ" (Emotional Quotient) — based on such qualities as self awareness, motivation, altruism and compassion, and argues that the commonly accepted view of human intelligence is far too narrow. According to Goleman, it's a person's EQ as much or more than their IQ that enables them to succeed in life. When the heart sends coherent (smooth HRV waves) information to the brain, positive feelings are facilitated, perhaps explaining why many people "feel" or "sense" love and positive emotions in the area of the heart. Doc Lew Childre, HeartMath's president and CEO, believed the key to practical application of this new knowledge would be to develop simple tools allowing people to gain more conscious control in creating increased coherence. Through intentional heart focus, these IHM techniques - Freeze-Frame, Heart Locking, and Cut-Thru - help people bring their bodies and spirit back into balance.

Simple Tools - Freeze-Frame, the most basic IHM technique employed in moments of agitation, stress or danger, involves shifting your focus to your heart, re-experiencing a feeling of appreciation or love for just 10 or 15 seconds, then asking your heart what would be a more efficient response to the stressful situation at hand. Heart Lock-in is similar to Freeze-Frame, though done for a longer period of time - perhaps once a day for five to 15 minutes - often while listening to music specifically designed by IHM. Cut-Thru aims at addressing recurring negative emotional reactions and patterns - negative "thought loops" - to a particular recurring theme or issue in your life. Just as physical movements such as walking, driving, etc., become automatic through repetition, so do mental and emotional responses and attitudes.

Here's an example of how I applied Freeze-Frame - taking a moment to shift attention to the heart and feel appreciation, love or caring - in my own life: A friend dropped me off at the airport at 6:15 a.m. for my 7 a.m. flight. When I reached check-in they wouldn't let me on the flight because I'd left my picture I.D. back in San Francisco. I was furious at myself, and realized I'd have to make a round-trip back to San Francisco and hope to catch a later flight. At the curb, about to hail a cab, I suddenly remembered Freeze-Frame. After a half minute of appreciating the gorgeous day and crystal blue sky, my inner voice suggested I return inside and make sure they noted I wasn't a no-show. This second woman at check-in then asked if I had any other I.D. I gave her a few credit cards, library card and health insurance card and I caught the next flight only 45 minutes later. "The heart has a mind that some might call the spirit, the higher self, intuition, or the still, small voice within," said McCraty. "How many times have you said to yourself, 'If only I had listened to my heart.' By not listening, we often pay a price in time and energy in cleaning up the mess afterwards."

It was pouring rain the summer day I visited HeartMath's camp-like facilities, nestled among the redwoods, broad lawns and a willow tree-shaded pond. After touring the sleeping lodges, dining room and meeting hall, I was led to the research building full of computers and mysterious electronic devices. I placed my forefinger into a fingertip pulse sensor linked to a computer booted with a new software program developed by IHM. An incoherent HRV (jagged) appeared on the screen as I re-experienced an unpleasant situation - a recent argument with my mother. After a few minutes, a coherent (smooth) wave appeared on the screen as I settled into feelings of deep appreciation for the incredible beauty of an atoll in the South Pacific I visited last year. When I later experienced a moment of performance anxiety, the HRV line went jagged again. Another instant feedback option on the software is a black and white picture of a nature scene which slowly comes to life as the subject sustains a coherent HRV; the picture colorizes, leaves sprout on trees, flowers bloom, water runs in the stream and a bunny hops by. A third option is keeping a hot air balloon aloft over beautiful landscapes with a sustained coherent HRV

This is a positive, life-affirming computer "game" that most parents would be thrilled to have their kids play. After becoming proficient, they might be able to instantly recreate a loving heart space in the schoolyard or on the street, thus altering the outcome of a stressful or threatening confrontation. Indeed, I was pleased to hear students and teachers in more than 200 schools in the United States are already using HeartMath techniques. But more than just creating pretty pictures or allowing you to make more authentic, less reactive choices, by practicing Freeze-Frame or Cut-Thru, HeartMath has established that we engender a physiology of love or anger in our bodies which has short- and long-term effects. When the HRV is in coherence and in entrainment with the brain, it causes dramatic and favorable changes in a number of key indicators of physical and mental well-being, such as the levels of secretory immunoglobulins A (Sig A) levels, DHEA - the "anti-aging hormone," and the stress hormone cortisol, as well as being beneficial to those with AIDS symptoms, obesity and high blood pressure.