

Heartmath Institute

The Heartmath Institute is a non-profit founded in 1991 by Doc Childre with the aim of gaining a greater understanding of the relationship between heart and mind. The institute, based in Boulder Creek, California, conducts research on intuition, human energetic interactions and physiological investigations of global coherence. This research overlaps with parapsychology, in particular experiments on presentiment.

Heart Coherence

[Heartmath](#) researchers claim to have discovered evidence for 'heart coherence', a state of increased heart-brain synchrony where the heart's magnetic field radiates a coherent signal from the body.

This field is said to be affected by attitudes, emotions and intentions, and to be able to influence the emotional states of others in a shared environment.

An extension of this research, named the Global Coherence Initiative (GCI),^[1] looks for a relationship between the Earth's geomagnetic fluctuations and people's collective emotions.

Presentiment

In studies reported in 2004, the institute's director of research Rollin McCraty and co-workers describe a conceptual replication of previous experiments^[2] that suggested human physiology can respond to an emotionally arousing stimulus seconds before it is actually experienced.

Skin conductance levels and heart-rates of participants were measured while they were shown images, during either a normal state of consciousness or a state of coherence associated with positive emotions. There was no change in skin conductance; however, a statistically significant change was noted in heart-rate ($p = 0.001$). Gender differences were noted in EEG data in the way individuals processed pre-stimulus information.^[3]

Entrepreneurial Intuition

In a paper published 2007, McCraty, Bradley and Atkinson tested eight entrepreneurs for intuition in a roulette style game, the outcomes being determined by a random number generator. Skin conductance and heart rates were measured while participants made their guesses. Scoring was at chance, but both measures showed marked differences before winning and losing bets ($p = 0.01$).

A second stage sought physiological evidence of intuition while individuals were making investment choices,^[4] but no evidence of this appeared.

A follow-up study found emotional regulation training was effective in cultivating presentiment in heart rate variability responses for non-entrepreneurs.^[5]

Energetics

Heartmath has carried out studies on energetics, an energy transfer said to occur between people or between people and living systems and objects (also referred to as 'bioenergy', 'subtle energy', 'biofield' and 'bioelectromagnetic'). These overlap with psychokinesis (PK) experiments carried out by parapsychologists.

In a study published in 1994, McCraty and Glen Rein, founder of the Quantum Biology Institute, tested the PK ability of participants schooled in an 'entrained' mindfulness technique, in which attention is shifted towards the heart and positive emotions. Participants were encouraged to enter this 'entrained' state – which was confirmed by electrocardiography – and attempt to change the molecular structure of water samples. UV spectroscopy revealed significant changes ($p = 0.01$) around 200 nm absorbance line, as compared to control water samples left in another room.

Other experiments showed that DNA molecules unwound faster when in contact with the treated water than with the untreated water, at a marginally significant level ($p = 0.05$).^[6]

Similar research by Tomasino indicated water sourced from the Catholic pilgrimage site of Medjugorje produced significant spectroscopic changes in DNA samples compared to untreated distilled water.^[7]

Group Coherence

In a study reported by Steven Morris in 2010, untrained volunteers attempted to synchronize heart activity with three other individuals trained in heart rate variability coherence (HRVC). This was achieved by half of them during 48 ten-minute trials, as indicated by various measures. A significant relationship was observed between the closeness of participants' relations with each other and heart rate variability coherence. Morris concluded that a coherent 'energy field' can be generated within small groups of participants who have been trained in facilitating group coherence.^[8]

Heart to Heart Communication

In a chapter in *Clinical Applications of Bioelectromagnetic Medicine*, in 2015, McCraty outlines an electromagnetic basis for heart communication within and without the body. Electromagnetic fields that are generated by the heart reach throughout the body and act to synchronize various physiological processes. McCraty highlights evidence demonstrating that the heart's electromagnetic energy is detectable by others up to several meters radius, providing a mechanistic basis for group coherence effects seen by Heartmath^[9] and other groups.^[10]

Global Coherence

Other research at Heartmath probes the energetic relations between people and their environment.

Geomagnetic Coupling

In a 2017 publication McCraty and co-workers seek to understand the coupling of human physiology and geomagnetic fluctuations. Ten individuals going about their normal lives had their heart rate variability (HRV) continuously monitored during daytime for 31 days. HRV synchronized across the group after two days, giving evidence of the effect of environmental variables on collective cardiac function.^[11]

Similar research in collaboration with Lithuanian scientists found significant correlations between local geomagnetic field fluctuations and the heart's electrical activity. Correlations changed from negative to positive during the workweek, indicating the influence of fatigue on sensitivity to local geomagnetic fields.^[12]

Global Coherence Initiative

[The Global Coherence Initiative \(GCI\)](#)^[13] aims to extend research done on groups of individuals to

millions of people around the world. Geomagnetic fluctuations – as measured by over a hundred globally distributed ultra-sensitive detectors – are correlated with people’s heart activity, as measured by a [mobile app](#)^[14] connected to a sensor. The Global Coherence Initiative aims to utilize these findings to cultivate increasing harmony between people and their environment.

Guiding hypotheses are:

- Human and animal health, cognitive functions, emotions and behaviour are affected by solar, geomagnetic and other earth-related magnetic fields.
- The earth’s magnetic field is a carrier of biologically relevant information that connects all living systems.
- Every person affects the global information field.
- Collective human consciousness affects the global information field. Therefore, large numbers of people creating heart-centred states of care, love and compassion will generate a more coherent field environment that can benefit others and help offset planetary discord.

Allied with the Global Coherence Initiative is a [global tree monitoring network](#) designed to measure how trees are affected by collective human emotions.^[15]

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Literature

Bradley, R., Gillin, L., McCraty, R., & Atkinson, M. (2011). Non-local intuition in entrepreneurs and non-entrepreneurs: Results of two experiments using electrophysiological measures. *International Journal of Entrepreneurship and Small Business* 12/3, 343-72.

Cernouss, S., Vinogradov, A., & Vlassova, E. (2001). Geophysical hazard for human health in the circumpolar auroral belt: Evidence of a relationship between heart rate variation and electromagnetic disturbances. *Natural Hazards* 23, 121-35.

Gillin, M., La Pira, F., McCraty, R., Bradley, R.T., Atkinson, M., Simpson, D., & Scicluna, P. (2007). Before cognition: The active contribution of the heart/ANS to intuitive decision making as measured on repeat entrepreneurs in the Cambridge Technopol. *Proceedings of the Fourth AGSE International Entrepreneurship Research Exchange, Brisbane, Australia*.

Hammerschlag, R., Levin, M., McCraty, R., Namuun, B., Ives, J., Lutgendorf, S.K., & Oschman, S, J. (2015). Biofield physiology: A framework for an emerging discipline. *Global Advances in Health and Medicine*. January.

McCraty, R., Atkinson, M., & Bradley, R.T. (2004). Electrophysiological evidence of intuition: Part 1. The surprising role of the heart. *Journal of Alternative and Complementary Medicine* 10/1, 133-43.

McCraty, R., Atkinson, M., & Bradley, R.T. (2004). Electrophysiological evidence of intuition: Part 2. A System-wide process. *Journal of Alternative and Complementary Medicine* 10/2, 325-36.

McCraty, R. (2004). The energetic heart: Bioelectromagnetic communication within and between people. In *Clinical Applications of Bioelectromagnetic Medicine*, ed by P.J. Rosch & M.S. Markov, 541-62. New York: Marcel Dekker.

McCraty, R., Atkinson, M., Stolc, V., Alabdulgader, A.A., Vainoras, A., & Ragulskis, M. (2017). Synchronization of human autonomic nervous system rhythms with geomagnetic activity in human subjects. *International Journal of Environmental Research and Public Health* 14/7, 770-89.

Morris, S. (2010). Achieving collective coherence: Group effects on heart rate: Variability coherence and heart rhythm synchronization. *Alternative Therapies in Health and Medicine* 16/4, 62-72.

Mossbridge, J., Tressoldi, P., & Utts, J. (2012). Predictive physiological anticipation preceding seemingly unpredictable stimuli: A meta-analysis. *Frontiers in Psychology* 3/390.

Nasutavičienė, D., Grygień, S., Poškaitis, V., Tamulionytė, V., McCraty, R., & Vainoras, A. (2019). Interactions between Earth's local magnetic field and cardiovascular system parameters of women, performing sedentary work, during their workweek. *Journal of Complexity in Health Sciences* 2/1, 13-22.

Radin, D. (2004). Electrodermal presentiments of future emotions. *Journal of Scientific Exploration* 18/2, 253-73.

Rein, G., & McCraty, R. (1994). Structural changes in water and DNA associated with new physiologically measurable states. *Journal of Scientific Exploration* 8/3, 438-39.

Ruiz-Blais S, Orini M, & Chew E. (2020). Heart rate variability synchronizes when non-experts vocalize together. *Frontiers in Physiology* 11, 762.

Tomasino, D. (1997). New technology provides scientific evidence of water's capacity to store and amplify weak electromagnetic and subtle energy fields. Internal report, 1-4.

References

Footnotes

- 1.^ <https://www.heartmath.org/gci/>
- 2.^ <https://www.frontiersin.org/articles/10.3389/fpsyg.2012.00390/full>
- 3.^ McCraty et al (2004).
- 4.^ Gillin et al (2007).
- 5.^ Bradley et al (2011).
- 6.^ Rein and McCraty (1994).
- 7.^ Tomasino (1997).
- 8.^ Morris (2010).
- 9.^ Morris (2010).
- 10.^ Blais et al (2020): <https://www.frontiersin.org/articles/10.3389/fphys.2020.00762/full>
- 11.^ McCraty et al (2017).
- 12.^ Nasutavičienė et al (2019).
- 13.^ <https://www.heartmath.org/gci/>
- 14.^ <https://www.heartmath.org/gci/global-coherence-app/>
- 15.^ <https://www.heartmath.org/resources/videos/interconnectivity-tree-research-project/>