

Rollin McCraty

Rollin McCraty is an American psychophysiological who has carried out research in the relationship between heart and mind.

Career

Rollin McCraty is a psychophysiological and a professor at Florida Atlantic University, where his research interests include the physiology of emotion, and how emotions influence cognitive and behavioural processes. He is a founding member and current director of research at the HeartMath Institute, a research and educational facility dedicated to researching the science of the heart since the 1990s.

He has appeared in numerous documentary films, such as [The Joy of Sox](#), [The Power of the Heart](#), [Solar Revolution](#) and [The Living Matrix](#).

Research

Presentiment

In studies reported in 2004, McCraty and co-workers at Heartmath describe a conceptual replication of previous experiments¹ that suggested human physiology can respond to an emotionally arousing stimulus seconds before it is actually experienced.

Participants' skin conductance levels and heart-rates 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.²

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,³ 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.⁴

Energetics

McCraty has carried out studies on energetics, an energy transfer which it is proposed occurs 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 ($p = 0.05$).[5](#)

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.[6](#)

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[7](#) and other groups.[8](#)

Geomagnetic Coupling

In experiments reported in 2017, McCraty and co-workers examined the possibility of a link between 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.[9](#)

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 work week, indicating the influence of fatigue on sensitivity to local geomagnetic fields.[10](#)

Michael Duggan

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., Grygieńć, 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.

Endnotes

Footnotes

- [1.](#) McCraty et al. (2004).
- [2.](#) McCraty et al. (2004).
- [3.](#) Gillin et al. (2007).
- [4.](#) Bradley et al. (2011).
- [5.](#) Rein & McCraty (1994).
- [6.](#) Tomasino (1997).
- [7.](#) Morris (2010).
- [8.](#) Ruiz-Blais et al. (2020).
- [9.](#) McCraty et al. (2017).
- [10.](#) Nasutavičienė et al. (2019).