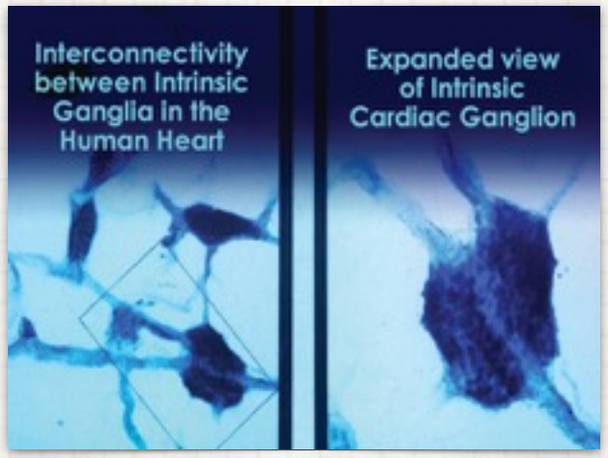
THE POWER OF HEART COHERENCE

HEART COMMUNICATION

The Heart Communicates With the Brain and Body in Four Ways:

- Neurological
  - (nervous system)
- Biochemical
  - (hormones)
- Biophysical
  - (pulse wave)
- Energetic
  - (electromagnetic fields)

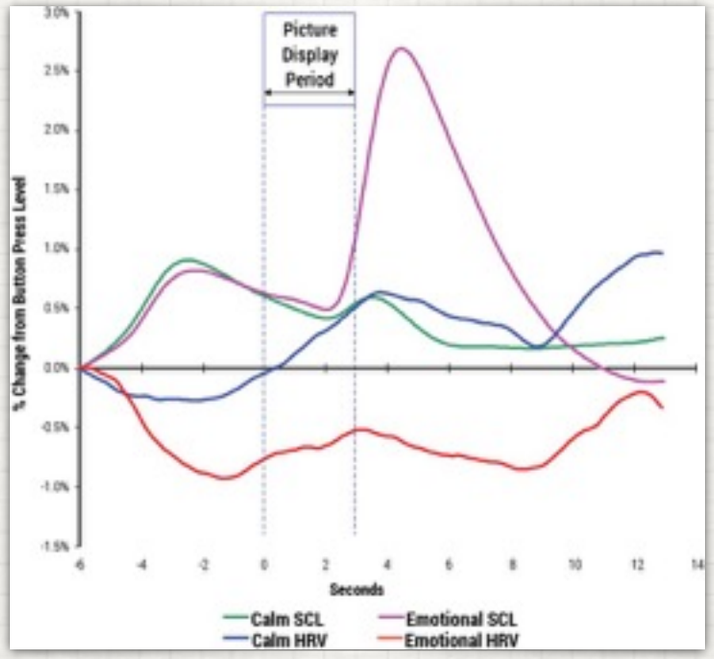


Traditionally, the pathways between the head and heart has been approached from a rather one-sided perspective, with scientists focusing primarily on the heart's responses to the brain's commands.

More recent research shows that the neural interactions between the heart and brain are more complex than previously thought and the heart sends more information to the brain than the brain sends to the heart.

THE HEART'S PRE-STIMULUS RESPONSE

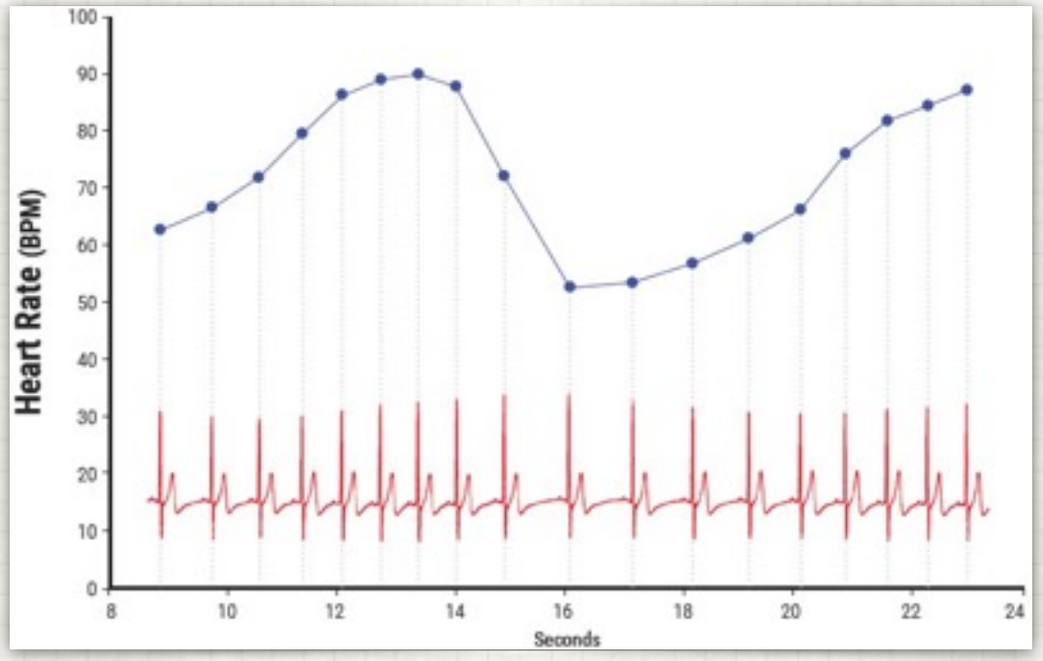
NONLOCAL INTUITION



brain response (EEG) and heart-rhythm activity (ECG) and found that not only did both the brain and heart receive the pre-stimulus information some 4 to 5 seconds before a future emotional picture was randomly selected by the computer, the heart actually received this information about 1.5 seconds before the brain received it

IRREGULAR BEHAVIOR OF THE HEARTBEAT

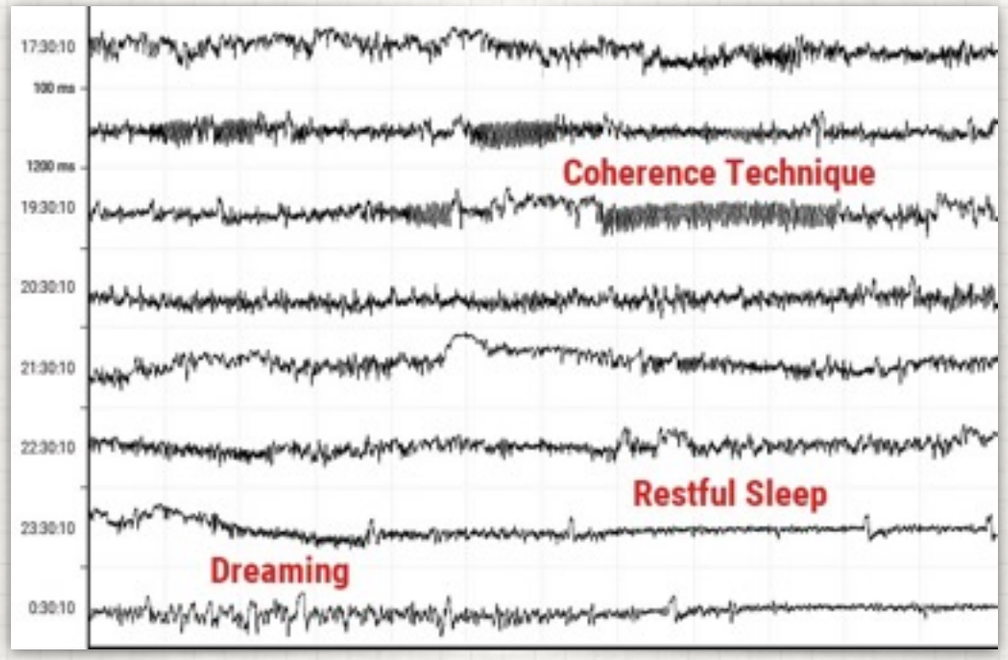
HRS



These fluctuations in heart rate result from complex, nonlinear interactions among a number of different physiological systems

HEARTBEATS OVER AN 8-HOUR PERIOD

36-YEAR-OLD MALE

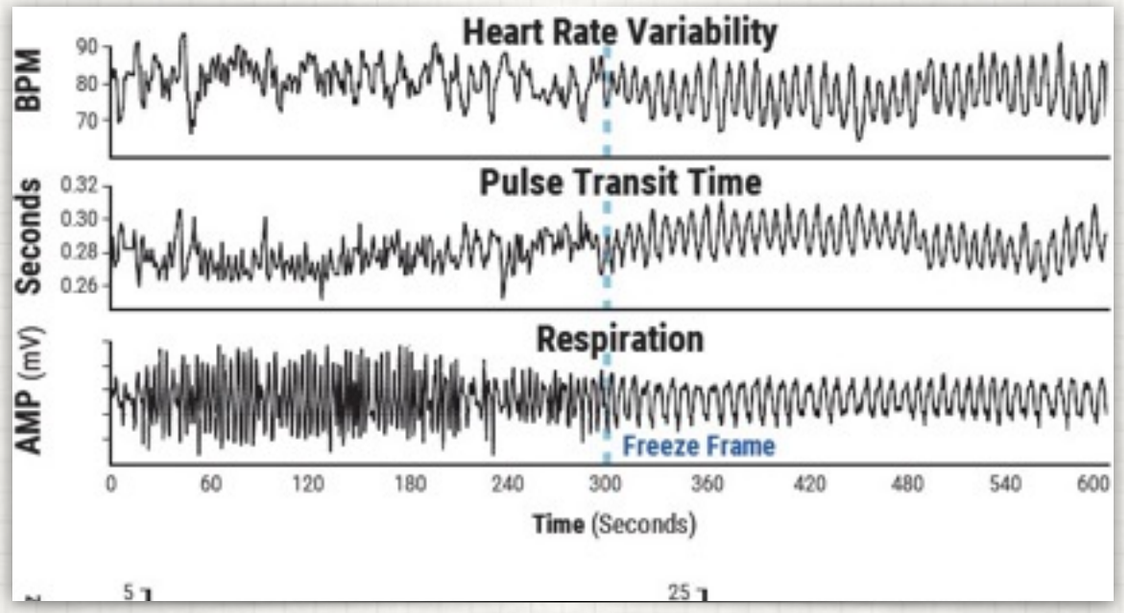


A 15-minute period of HRV coherence can be seen in the latter part of the hour, starting at 19:30 when this man practiced HeartMath's Heart Lock-In® Technique.

The latter part of the hour, starting at 23:30, is typical of restful sleep.

FREQUENCY PULLING AND ENTRAINMENT

ELECTRICAL POTENTIALS MEASURED ACROSS THE SKIN

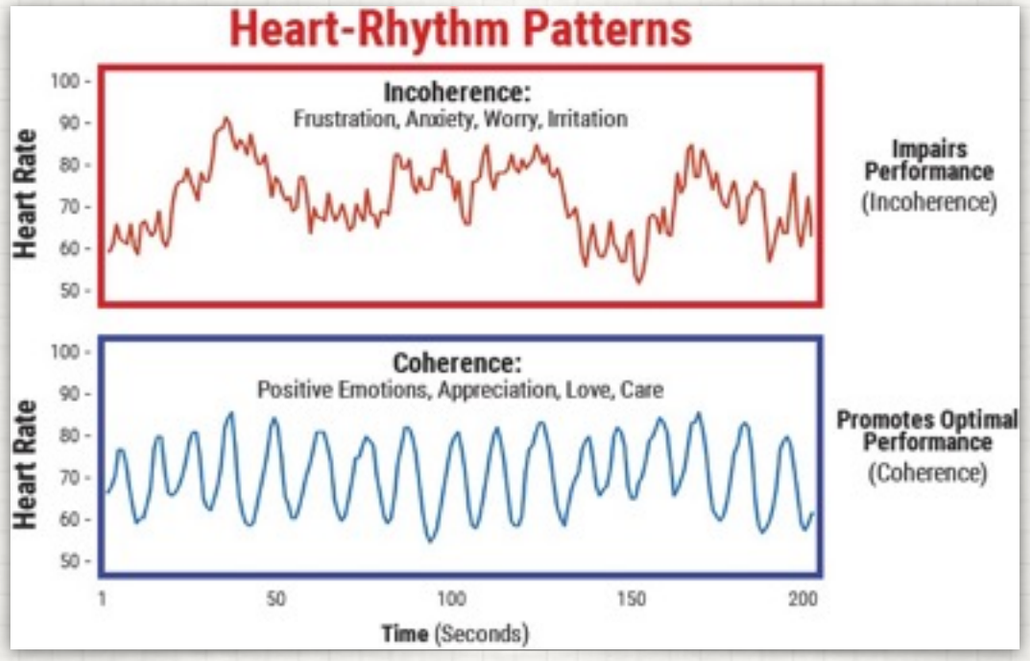


When functioning in a coherent mode, the heart pulls other biological oscillators into synchronization with its rhythms, thus leading to entrainment of these systems

For example, frequency pulling and entrainment can easily be seen between the heart, respiratory and bloodpressure rhythms as well as between very-low-frequency brain rhythms, craniosacral rhythms and electrical potentials measured across the skin

ACTIVELY SELF-GENERATING POSITIVE EMOTIONS

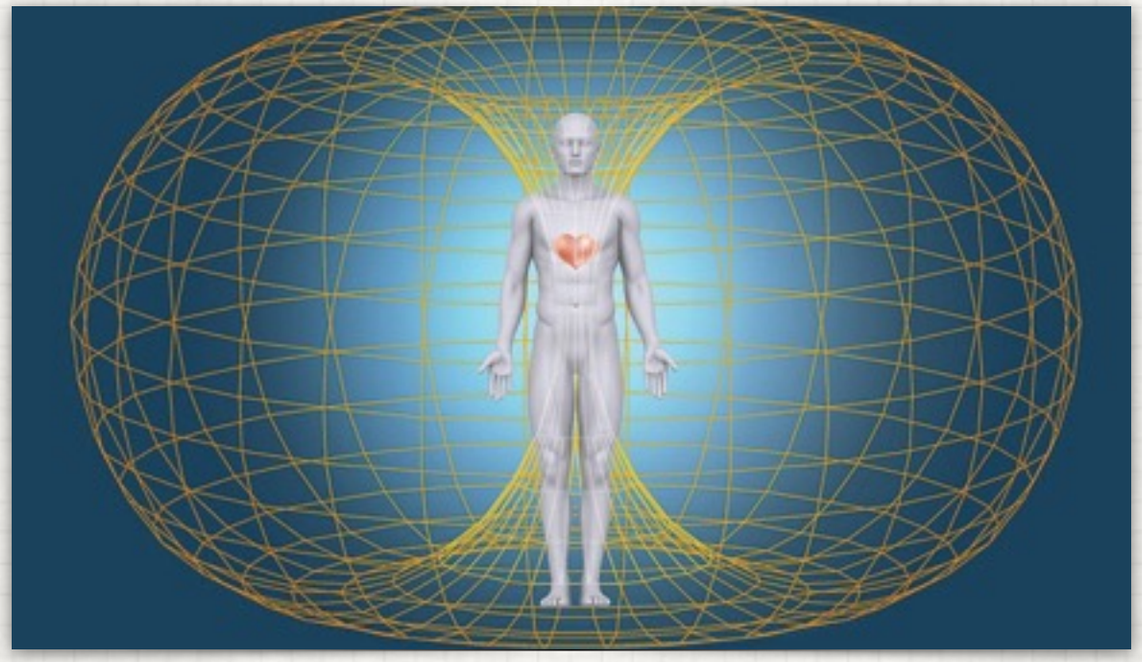
PHYSIOLOGICAL COHERENCE



Positive emotions not only "feel better," they actually tend to increase synchronization of the body’s systems, thereby enhancing energy and enabling us to function with greater efficiency and effectiveness.

THE HEART'S MAGNETIC FIELD

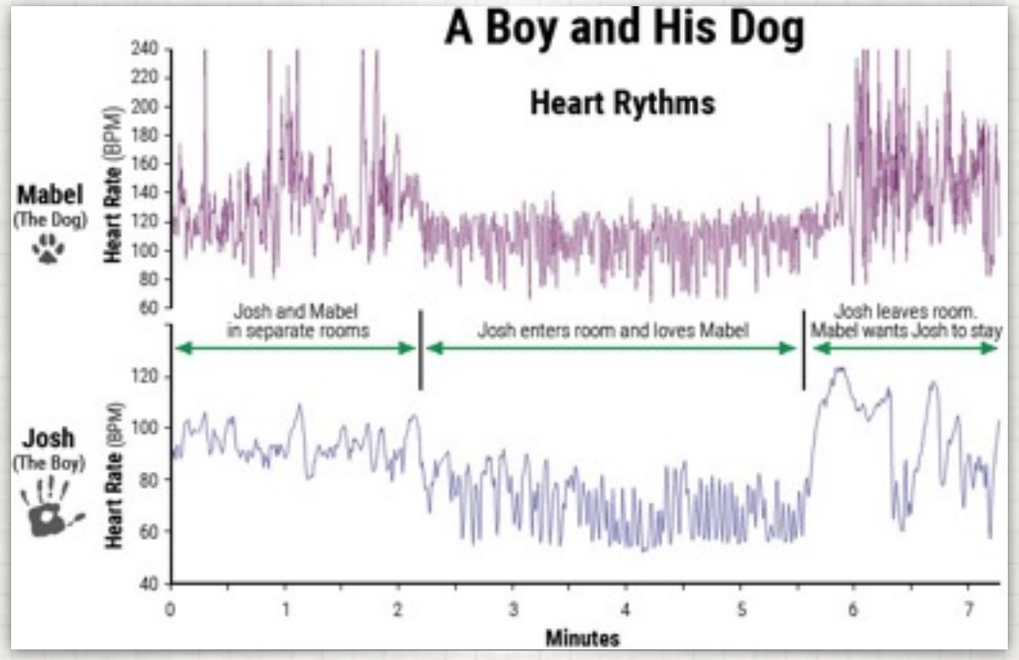
THE STRONGEST RHYTHMIC FIELD PRODUCED BY THE HUMAN BODY



Prompted by our findings that the timing between pulses of the heart's magnetic field is modulated by different emotional states, we have performed several studies that show the magnetic signals generated by the heart have the capacity to affect individuals around us.

HEART-RHYTHM PATTERNS OF A BOY AND HIS DOG

USING AMBULATORY ECG RECORDERS

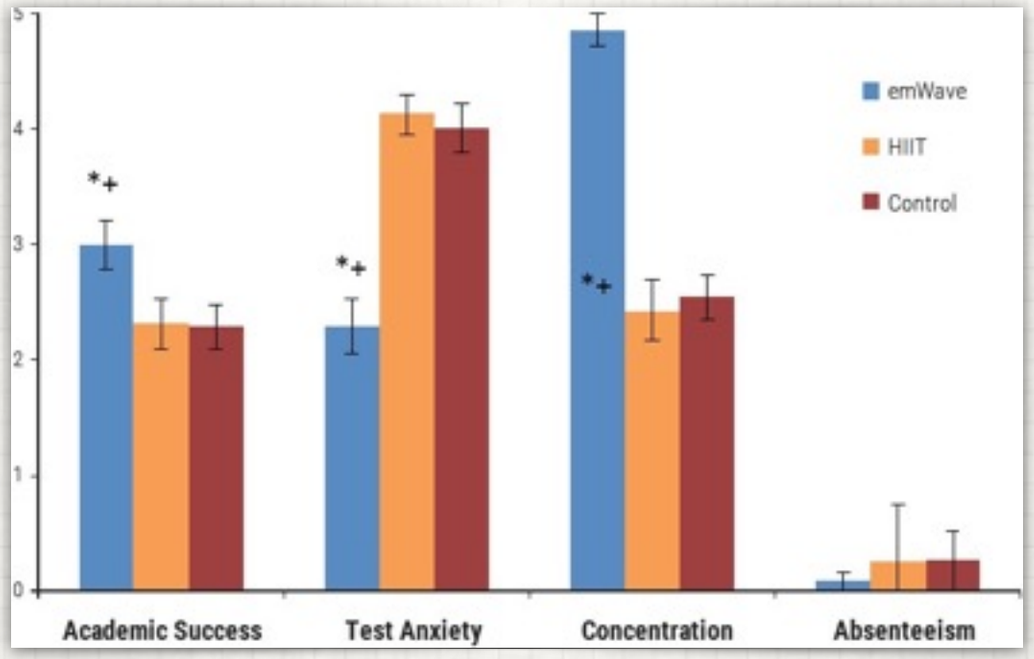


Heart-rhythm patterns of a boy and his dog.

These data were obtained using ambulatory ECG recorders fitted on both Josh, a young boy and Mabel, his pet dog.

When Josh entered the room where Mabel was waiting and consciously felt feelings of love and care towards his pet, his heart rhythms became more coherent and this change appears to have influenced Mabel heart rhythms, which shifted to a more coherent rhythm.

ACADEMIC SUCCESS, TEST ANXIETY, CONCENTRATION AND ABSENTEEISM



The HeartMath resilience training and HRV coherence sessions were conducted at the university wellness center by trained student instructors three times per week over a four-week period.

Each student practiced shifting and sustaining heart-rhythm coherence while using an emWave device and was encouraged to use the techniques and device on a regular basis

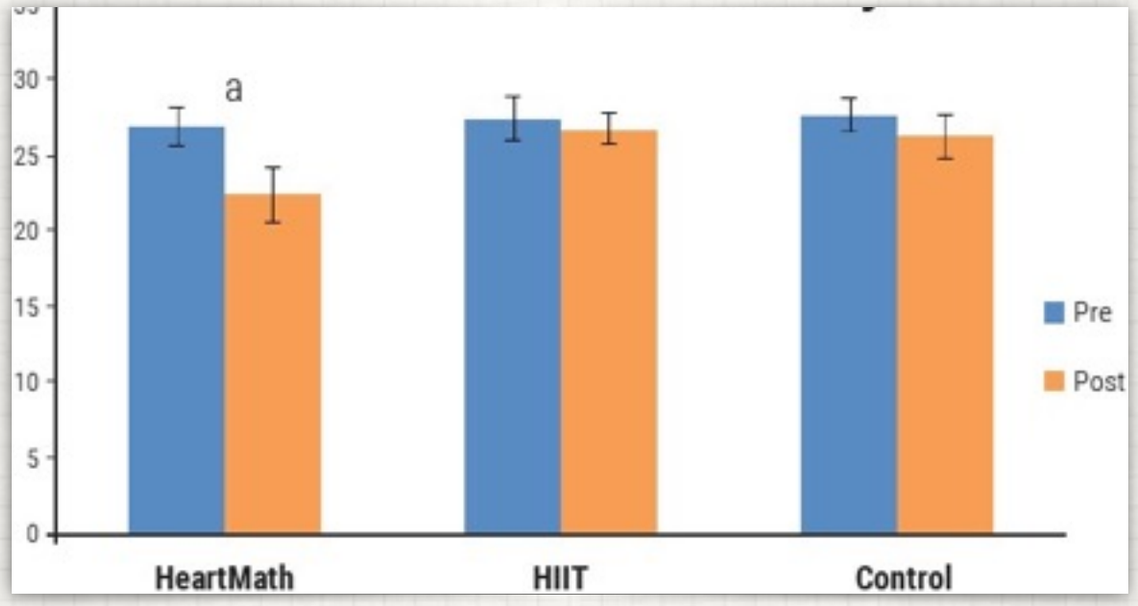
The high-intensity interval training (HIIT) comprises brief bursts of intense exercise separated by short periods of recovery.

The HIIT training sessions were conducted at the university wellness center by trained instructors three times per week over four weeks.

The control group visited the wellness center to report their normal daily activities for the duration of the study.

Participants were encouraged to not change their normal daily routines.

SCHOOL BURNOUT INVENTORY



The HeartMath group also was the only group to show a significant reduction in school burnout from the pretests to posttests


11%
15%
74%
Avg Coh
1.6
Length
07:35
Achievement
142
Coherence Over Time
4.0
0.9
0.5
00:00
00:30
01:00
01:30
02:00
02:30
HRV
90
85
80
75
70
65
00:00
00:30
01:00
01:30
11%
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Coherence Over Time
4.0
0.9
0.5
03:00
03:30
04:00
04:30
05:00
05:30
HRV
90
85
80
75
70
65
03:00
03:30
04:00
04:30

Heart Math

Physiological Coherence

A state characterized by:
High heart-rhythm coherence (sine-wavelike rhythmic pattern).
Increased parasympathetic activity.
Increased entrainment and synchronization between physiological systems.
Efficient and harmonious functioning of the cardiovascular, nervous, hormonal and immune systems.

LARGE NUMBERS OF PEOPLE CREATING HEART-CENTERED STATES OF CARE, LOVE, AND COMPASSION WILL GENERATE A MORE COHERENT FIELD ENVIRONMENT

- A study conducted in 1993 in Washington, DC, showed a 25% drop in the crime rate when 2,500 meditators mediated over specific periods of time
- During the peak of the Israel-Lebanon war in the 1980s. Drs. Charles Alexander and John Davies at Harvard University organized groups of experienced meditators in Jerusalem, Yugoslavia and the United States to meditate and focus attention on the area at various intervals over a 27-month period
- After controlling statistically for weather changes, Lebanese, Muslim, Christian and Jewish holidays, police activity, fluctuation in group sizes and other variant influences during the course of the study

LARGE NUMBERS OF PEOPLE CREATING HEART-CENTERED STATES OF CARE, LOVE, AND COMPASSION WILL GENERATE A MORE COHERENT FIELD ENVIRONMENT

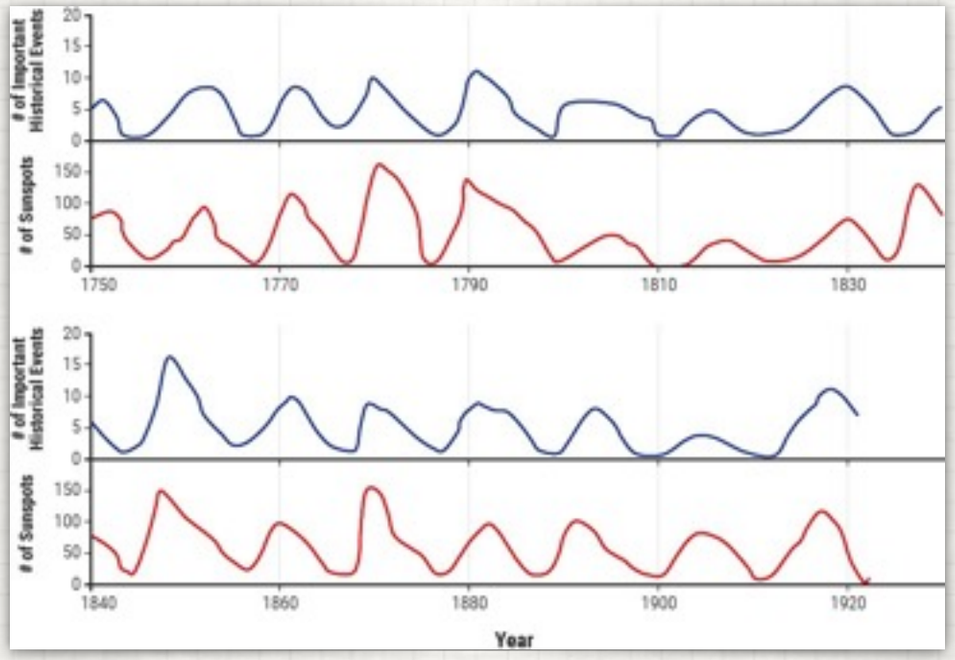
- Researchers calculated the levels of violence in Lebanon decreased 40% to 80% each time a meditating group was in place. With the largest reductions occurring when the number of meditators was largest.
- During these periods, the average number of people killed during the war per day dropped from 12 to three, a decrease of more than 70%.
- War-related injuries declined by 68%.
- Intensity level of conflict, another of the study's measures, decreased by 48%

FURTHER EVIDENCE OF AN INTERCONNECTION BETWEEN COLLECTIVE HUMAN EMOTIONALITY AND GLOBAL EVENTS

- Global Consciousness Project (GCP) maintains a worldwide network of random number generators, (RNG) which produced results that suggest that human emotionality affects the randomness of these electronic devices in a globally correlated manner.
- Multiple independent analyses of the network during the terrorist attacks that took place in the United States on the morning of Sept. 11, 2001 correlate with a large and significant shift in the output of the global network of RNGs.
- Although the mechanisms for how human emotions create more coherence in the randomness of this global network are not yet understood, the data clearly show that they do have such affects. Moreover, the data shows the odds-against-chance ratio is more than 1 billion to 1.[388]

TCHIJEVSKY'S ORIGINAL DATA

NUMBER OF SUNSPOTS FROM 1749 TO 1922



Tchijevsky's original data. The blue line plots the yearly number of important political and social events such as the start of a war, social revolutions, etc. The red line plots solar activity, as indicated by the number of sunspots from 1749 to 1922. The histories of 72 countries were compiled, and it was found that 80% of the most significant events occurred during the solar maximum, which correlates with highest periods of geomagnetic activity.

On a larger societal scale, increased violence, crime rate, social unrest, revolutions and frequency of terrorist attacks have been linked to the solar cycle and the resulting disturbances in the geomagnetic field.[345, 359, 368-371] The first scientific evidence of this belief was provided by Alexander Tchijevsky, a Russian scientist who noticed that more severe battles during World War I occurred during peak sunspot periods.[371] He conducted a thorough study of global human history dating back to 1749 and compared the period to the solar cycles through the period, up to 1926. Figure 11.4, reconstructed from Tchijevsky's original data, plots the number of significant human historical events compared to the solar cycle from 1749 to 1926.[371]