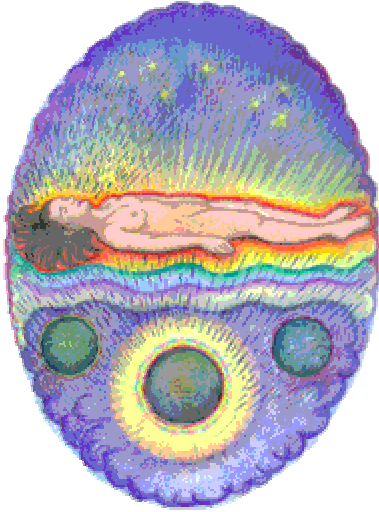


A Tentative Mechanism for Healing

by Toni Bunnell PhD



Introduction

A criticism often levelled at healing, hands-on healing, bioenergy therapy, therapeutic touch, or whatever you choose to call it, is that there is little irrefutable proof that healing per se is effective; Also, that of the few scientific studies conducted, most could not be considered due to poor experimental design, making them invalid. This, in fact, is not the case and many examples of sound research into healing have been documented by Daniel Benor.¹

My own research into the effects of hands-on healing on enzyme activity has been published² and subsequent work has confirmed the original findings (submitted for publication).

Tuning in before healing

Studies have shown that the vibrations from rhythmic sounds have a profound effect on brain activity. In shamanic traditions, drums were used in periodic rhythm to transport the shaman into other realms of reality. Like sound waves, the brain has its own set of vibrations which it uses to communicate with itself and the rest of the body; EEG equipment distinguishes these waves by measuring the speed with which neurons (nerve cells) fire in cycles per second. Alpha brain waves range between 7 – 12 Hz, which causes deep relaxation.³

Before a healer commences healing s/he centres themselves and tunes in with the person receiving healing (the healee). Studies have shown that a person healing with intent will typically exhibit a (alpha) brain waves as demonstrated using an EEG and known as the a state.

Studies have also shown that during healing the healer's alpha brainwaves synchronise with those of the healee, so both will be resonating at the same frequency (sympathetic resonance).⁴ In other words, channelling energy through the healer and to the healee involves both being in the a state.

Sympathetic resonance, as with the strings on a Hardanger fiddle or Hurdy Gurdy (vielle), or indeed the solid material of a bridge when marching soldiers fail to break step, results in constructive interference taking place. Constructive interference is when two wave forms produced in separate 'structures' resonate in sympathy and, in so doing, increase the amplitude of the wave form without altering its frequency. In the case of the bridge, this can eventually result in the collapse of the bridge. In the case of the human brain might it facilitate the transmission of a signal(s) from the brain to the body via the A.N.S. for instance?

Tapping the universal energy source

Alpha is also the home of the window frequency known as the Schuman Resonance, which is the vibrational frequency of the earth's electromagnetic field (emf). This means that the brain waves of a person in the alpha state will resonate in sympathy with the earth's emf producing constructive interference which amplifies the vibration. This might explain how healers (having tuned into the healee) are able to draw on energy (universal energy source?) from outside themselves i.e. channel energy through them to the healee. It also might explain the discrepancy between the magnitude of the biomagnetic field produced by the hand during healing (at least 1000 times greater than that of normal human bio-magnetism when healing is not taking place) and the corresponding 'electric' current which is detected flowing through the hands i.e. the extraordinary large bio-magnetic field strength was shown not to derive from internal body current alone.⁵ The above phenomenon only seems odd if we attribute the human biofield solely to electricity produced within the human body. Surmising that the extra large field produced during healing might be produced by drawing on the 'infinite energy source' via the Schuman resonance makes much more sense.

The discovery of millions of crystals in the cells of the brain suggests that the brain might be able to tune in (similar to a radio receiver) to the surrounding earth's emf, the crystals providing the vibratory link between the earth's emf and the alpha brain waves, resulting in the Schuman Resonance. The transmission of waves from the brain throughout the body – in possibly a similar way to transmission of radio waves from a radio tuned to a certain frequency – could help the body achieve its own particular resonant frequency thought to achieve, or be conducive to, optimal health.

Also, under normal, healthy circumstances, does the brain transmit correct frequencies to all cells of the body to keep them resonating at the optimal frequency? If, for some reason, the cells begin to oscillate at a less than optimal frequency due to: localised injury, emotional trauma, magnetic field deficiency etc., then hands-on healing may be exerting its effect by jump-starting the system to redirect (divert) energy flow. Following a myocardial infarction (heart attack), electrical waves travelling through the heart muscle have to re-route themselves round the area of damaged cardiac muscle so that the heart can display normal rhythmia once more.

To sum up, channelling of energy through the healer to the healee involves both being in the alpha state, with the healer tuned into the earth's emf via the Schuman Resonance.

Magnetic Field Deficiency Syndrome

The importance of existing in harmony with the earth's natural emf has been brought to our attention with the emergence of diseases attributed to magnetic field deficiency syndrome, such as many degenerative diseases, certain types of memory loss, or conditions such as M.E.

Human beings, and all other living creatures, have their own electrical-magnetic energy balance. Since our first appearance on the planet. we have also encountered

external emfs. The human body floats in a sea of magnetic fields – those of the earth, moon, sun and other galactic fields.⁶ The earth itself has an iron core that generates a halo of electromagnetic energy, reaching far beyond our atmosphere. All life on earth has adapted to and existed in this natural electromagnetic environment for millions of years.

The body is full of magnetisable materials, such as iron in the haemoglobin of the blood. The biomagnetic fields of the body have been measured using SQUIDS (super-conducting quantum interference devices) and found to be 100,000 times weaker than the earth's fields.⁷ We are so dependent on the earth's fields that when we leave the planet for prolonged periods we suffer. Astronauts in space for long periods require artificial magnetic fields to maintain health.

In the last one hundred years we have radically altered our environment with human-made emfs with a different waveform, coherence, and frequency to natural emfs, and their effects on living biological systems are only just beginning to be understood. Naturally-occurring emfs do not seem to significantly alter the body's innate electromagnetic balance and are thought to be necessary for its proper functioning.⁸ Most concern comes from alternating currents (AC electricity) which create an energy field that is both electrical and magnetic. Electrical fields are of little concern as they do not penetrate the body, while ac magnetic fields do penetrate organisms.

Nature of the Healing Energy

John Zimmerman at the University of Colorado has adapted a machine to measure the brain's magnetic field to monitor the entire body. When a trained healer attempts to heal, Zimmerman observes distinct changes in the body's fields. Signals up to several hundred times larger than background noise appear while the healer works. Some seem to be associated with frequencies in the range of alpha and theta waves as seen in the brain. As the signals' frequencies decrease in cycles per second, their amplitudes increase.⁷

Also, William Tiller at Stanford University, CA, reported in 1986 that he had constructed a device that released bursts of electrons in response to focused healing energy from a healer's hands. The device was in a Faraday cage which shields it from any form of electromagnetic energy such as radio, microwave, infrared, visible light, UV, X-rays or Gamma rays. 70 volt pulses of electricity were produced at will by healers' hands and recorded.

Professor Fritz-Albert Popp, a well-known biophysicist at Kaiserslautern University, Germany, states that:

"All living organisms emit certain electromagnetic waves. If they are in a healthy condition, they emit more. If not, they emit less. This electromagnetic emission is called biophotons."

Glen Rein, a biophysicist at the Institute of HeartMath, CA, has been doing some work on detecting subtle energies. He calls this energy non-Herzian or scalar energy (after maverick scientist Thomas Bearden's theories). He found that exposing neurons (nerve cells), cultured in a petri dish, to healing energy, caused them to fire in their synapses (gaps between the neurons): that is. impulses passed along the

nerves, and from one nerve to another, when they were exposed to the scalar energy.

A survey of the literature suggests that 'scalar' energy is the most appropriate description of healing energy up-to-date, as it allows for the fact that healing energy has been shown to be not part of the electromagnetic spectrum as we understand it. According to Robert Jacobs,⁹ scalar waves are capable of acting on living organisms at a sub-atomic level, and certain frequencies of scalar have been shown to destroy viruses and bacteria. The most efficient use of scalar waves appears to be when the body is exposed en masse to a sweeping range of beneficial frequencies (similar to those delivered by a healer), which enhances its own healthy resonance and helps to restore energetic order.

Experiments involving the Canadian healer Olga Worrell showed her hand temperature, during healing, to remain normal and constant. The absence of thermal transfer led Clyde Ford, one of the researchers, to speculate that biological microwaves or an organising field might be transferred from the healer.¹⁰

The absence of a temperature rise in the air surrounding a healer's hands has also been recorded using a thermistor. Jochen Edrich of the University of Colorado reported that "Since microwave emissions can be detected at depths well below the surface of the skin, we felt this would be the best region for diagnostic monitoring of biological radiation." Tissue under stress emits increased levels of microwave radiation. Although the difference is small, it can be detected by a radiometer. Edrich used this technique to detect areas where tumour growth had caused tissue stress. Microwaves may help to account for reports from healers that they can sense/feel problem areas in the body, during scanning of the body during healing. They may also explain sensations of heat reported by healees during healing.¹¹

Fire and electricity convey heat to a substance, but microwaves induce heat within a substance by altering its molecular motion. This altered molecular motion might be the mechanism of unconventional healing. Internal sensations of heat generated by microwaves would not necessarily be detected on the surface.

As James Oschman so ably recounts in his excellent series of articles on healing energy,¹² Zimmerman, observing biofields produced by a healer's hand, recorded a pulsed signal of variable frequency ranging from 0.3 to 30Hz, with most of the activity in the range of 7–8 Hz.¹³ The signal emitted is not steady or constant, but rather sweeps through a range of frequencies. This range covers the low frequency pulses produced by some pieces of physiotherapy equipment used for soft tissue regeneration etc. Only healers were able to produce the biomagnetic pulses.¹²

How Healing Energy Acts Upon the Body

So far then, we can see that healing may be operating in two ways, one by inducing the alpha state in the healee and the other by the direct action of healing energy upon the body. As the body is thought not to consist of dense matter but rather vortices of energy spinning continuously,¹⁴ the boundary between the physical body and the etheric body becomes less distinct. However, I will endeavour, where possible, to be specific regarding which part of the body I am referring to.

The pulsed biomagnetic signal produced by a healer's hands can penetrate body tissue with ease. a phenomenon which is made use of during magnetic resonance

imaging (MRI) diagnostic procedures in hospitals. In addition, the use of an electric coil positioned round a broken bone that refuses to heal, will produce a magnetic field which stimulates bone cells to begin dividing again. I saw this latter procedure in action while living in Heidelberg, Germany in 1980, when a friend of mine had opted to use the (then) controversial treatment for an upper-arm fracture that refused to heal, and had to pay for it herself as it was unrecognised by the medical profession and hence the medical insurance company.

In addition to the transmission of a signal from brain/mind to the body via the ANS, the healing energy might also travel via connective tissue/fascia, the tissue found to have its own pulsing activity,¹⁵ a fact made use of during cranio-sacral therapy.

The healing energy could access the body via the biomagnetic field (aura), a slight misnomer as this implies a solid physical body surrounded by a biofield, when the current thinking is that our 'dense' bodies consist of vortices of energy¹⁴ vibrating at very high frequency and giving the appearance of hard matter.

Healing energy could be carried round the body by (a) magnetising the blood, (the iron content of haemoglobin being reported by Linus Pauling as conferring magnetic properties on the blood), (b) the ionic current created by the electrolytes in the plasma of the blood (dissolved sodium, chloride, potassium, bicarbonate), (c) proteins which serve as semi-conductors, (d) the nerves, (e) the fascia (connective tissue and sheaths surrounding the spinal cord etc.), and (f) water.

The human body consists of approximately 70% water. Many biologically active compounds are switched on or off by changes in the concentrations of dissolved ions such as sodium and potassium. Individual water molecules, with their tendency to form hydrogen bonds, also stabilise the structure of proteins, whose action depends crucially on their shape.¹⁶

If the hydrogen bonding angles of one molecule are altered, those in the other molecules might be expected to follow suit (as in a domino effect). Alteration of bonding angles shown to follow healing^{17&18} might also be the way in which homeopathy works, when the resonant frequency of certain plants is thought to electromagnetically imprint upon the water following potentisation and succussion of remedies.

Sweeping/scanning of the body during healing could result in re-magnetising of the blood. This could have the two-fold action of transferring healing energy throughout the body via the circulation to parts where it is needed, and of helping to restore the particular vibrational frequency of the person receiving healing. Vibration of the body will occur as a whole, at a very minute level, affecting water molecules, individual cells and helping to restore the normal L-field¹⁹ and resonant frequency of DNA within the nucleus. It was Linus Pauling in the 1920s who first pointed out that at the heart of the covalent hydrogen bond is resonance.²⁰ As the hydrogen bond is an integral part of water molecules, enzymes, DNA, all food substances etc., it follows that if healing energy affects this bond it will be able to influence every part of the body, in particular DNA and enzyme activity.² Also, is it possible that the vibrational frequency of water molecules is unique for each individual when in a state of optimal resonance? Each person may have a particular frequency for tuning in with the earth's emf i.e. each person could be viewed as a

radio receiver capable of picking up a particular frequency. The enormous number of different frequencies involved is not prohibitive to this idea when we consider the existence of many different frequencies for individual reception/transmission for mobile phones or the totally unique fingerprints that each one of us possesses.

Cells communicate with each other, and the vibratory energy will reach within the cell via the cytoskeleton and microtubules. Lakhovsky²¹ discovered in 1935 that the individual cell possesses two characteristics – capacitance and inductance – which are the elements of a tuned circuit. Like a radio, the cell must be tuned to the desired frequency i.e. that necessary to sustain life. As Becker⁸ has shown, the requirements for normal differentiation of cells and final shape and size attained by body tissue is dictated by minute (micro) electric currents, which are in turn dictated by the biomagnetic field of the body. This also relates to healing energy which is thought to produce tiny eddy currents in body tissue.

The maintenance or restoration of the L-field, or as Rupert Sheldrake terms it 'morphic resonance', is crucial to health. The removal of cells from a specific organ in the body (away from its defining L-field) leads to the development of an amorphous mass (cancer) in the absence of this template of energy which determines normal shape and size.

Distortion of this field either by geopathic stress/trauma/exposure to mutagenic agents etc. could result in failure of the body cells to differentiate (divide to form specific cells) properly, leading to abnormal and unrestricted growth e.g. leukaemia.

Healing might be helping to restore the normal morphic field, which could account for some of the cases of what are often termed 'remarkable recovery' or spontaneous remission.

Energy Blockages

There is nowhere in the body that is unable to receive healing energy except where 'blockages' exist. Could these 'blockages', often sensed by healers as warm areas, be pockets of electrical resistance encountered within body either at cellular/tissue/meridian level?[†] If so, healing might have the effect of stimulating the flow of ions again [ions (or proteins, which serve as semi-conductors), cause 'electricity' to flow round the human body as compared with a non-living electrical system which uses the flow of electrons to create electricity]. In other words healing could be used to stimulate energy flow through or round the areas where resistance to flow has built up. As mentioned earlier, this can be compared with electrical waves travelling through heart muscle which have to re-route themselves following damage to the heart muscle resulting from a myocardial infarction (heart attack) in order to restore normal cardiac rhythm.

Potential benefits of healing energy

As well as altering the state of the body by acting upon it at an atomic level, electromagnetic applications in energy medicine induce changes in tissue voltage, improve the activities of the body's enzymes, enhance ion transport at a cellular level and affect membrane potentials.[‡] This in turn results in heightened tissue repair and

wound healing, enhanced immune functions, and the reduction of inflammation. It can also bring about the elimination of allergic sensitivities and the re-establishment of energetic harmony in the body as a whole.⁹ In addition, healing often brings a sense of well-being and peace – a general uplifting of the spirit.

Example:

Sudden relief from back pain (sciatica) might be due to reduction of inflammation of soft tissue surrounding (trapped) nerve, therefore restoring to normal the size of the hole in the vertebra through which the nerve passes, and eliminating the sensation of pain. It could be noted that relief from pain, in this case, should be long-lasting, as it would be due to a physical change rather than just the enhanced release of the body's own endorphins.

Hopefully this description of a tentative mechanism for healing will serve to stimulate further ideas and discussion and help to develop a better, more comprehensive picture of what is actually happening during healing. There are other aspects of healing, such as emotional and spiritual, which have not been addressed in this article; suffice it to say that they are no less important than the physical aspects, and I hope the reader will bear this in mind.

Footnotes

† Compare with the the electrical circuitry of a car, where using too great a fuse strength may result in increased resistance to the flow of electricity, a localised build-up of heat and occasionally fire.

‡ The importance of maintaining a certain polarity within cells is illustrated in Robert Charman's excellent series of articles,²² where he states that living cells employ many of the properties of living systems and continually work to generate and maintain regions of differing electrical properties against continual leakage of charge. In fact, the ceaseless work involved in achieving and maintaining these electrical needs consumes some 50–60% of the metabolic activity of the cell.²³

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