

THE NON-LOCAL MIND

Some advances in theory, research and measurement of "subtle energy/information system" of the body

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Bibliography and sources with some content articles

Over a hundred years ago William James noted, "Our normal waking consciousness...is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are all there in all their completeness." (The Varieties of Religious Experience, Modern Library, 1902/1929, p. 378) The field of mainstream canonical psychology has yet to take up this insight in its research and theory; indeed, it is phobic about the subject of spirit.

Most of the modern (20-21st century) theory and research is being done by physicists and biophysicists! See physicist Claude Swanson (2003) The Synchronized Universe: New Science of the Paranormal, Poseidia Press. Information available at:

<http://www.synchronizeduniverse.com/index.html> and

<http://www.rebprotocol.net/synchrouniv.pdf>

and complexity theorist James. N. Gardner (2003) BioCosm: The New Scientific Theory of Evolution: Intelligent Life is the Architect of the Universe, Inner Ocean Pub.)

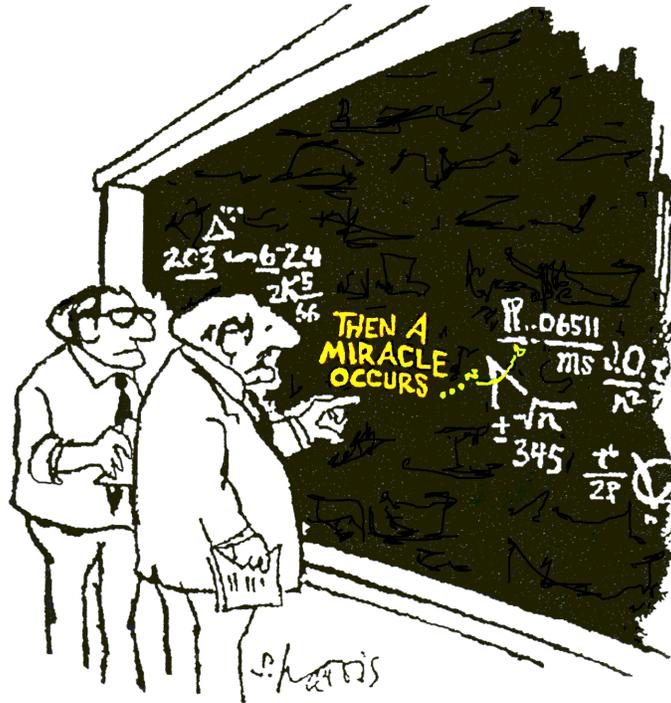
<http://www.biocosm.org/index.htm> and James Gardner papers (available on Kurzweil's website)

"The Physical Constants as Biosignature: An anthropic retrodiction of the Selfish Biocosm Hypothesis"

<http://www.kurzweilai.net/meme/frame.html?main=memelist.html?m=1%23647> and "Biocosm,

The New Scientific Theory of Evolution: Intelligent Life Is the Architect of the Universe"

<http://www.kurzweilai.net/meme/frame.html?main=memelist.html?m=1%23647>



I think you should be more explicit here in step two.

"You can recognize pioneers by the arrows in their backs!" Raymond Damadian, inventor of the MRI (Magnetic Resonance Imaging) machine on his experiences with canonical scientists' judgments of his ideas.

Many people have the hallucinatory image of scientists and academicians as noble and courageous knights bravely riding white steeds of reason and wielding the weapons of methodology and self correction to cut down superstition, error, fear and suppression so that beautiful truth may shine forth to enlighten us. Should the reader have this image he need only contact the following web sites and become enlightened on the practices (as opposed to the ideals) of science:

1. Suppression, Censorship and Dogmatism in Science: <http://www.suppressedscience.net>
2. The Institute of Science in Society: (<http://www.i-sis.org.uk/index.php>)
3. Brian Josephson's home page on the Mind-Matter Unification Project:
<http://www.tcm.phy.cam.ac.uk/~bdj10/>
4. Archive Freedom: Addressing the Need for Freedom in Scientific Research. Archive blacklisting is a serious social and legal issue. <http://archivefreedom.org/>
5. Close Minded Science: Examining the negative aspects of the social dynamics of science:
<http://amasci.com/weird/wclose.html>
6. The Skeptical Investigations website is organized by the Association for Skeptical Investigation, the purpose of which is to promote genuine skepticism, the spirit of enquiry and doubt, within science. This includes an open-minded investigation of unexplained

phenomena, a questioning of dogmatic assumptions, and a skeptical examination of the claims of self-proclaimed skeptics. Skepticism is about enquiry and doubt, not about denial. <http://www.skepticalinvestigations.org/home.htm>

It's time to awaken from CSICOP's* sleep (apologies to William Blake) and bring the Weltansicht of mainstream (canonical) science, especially psychology, biology and medicine into the 20th if not the 21st century! Unfortunately, too much of science is now closer to absolutism and the religion of "scientism" in its worship of theory. Too many modern universities are like their medieval counterparts in that they preserve the past and support the current power systems (the government/military/industrial/corporate/religious/education complex to expand Eisenhower's warning) rather than provide a critique of them.

*CSICOP = **C**ommittee for the **S**cientific Investigation of **C**laims **O**f the **P**aranormal which see themselves as the defenders of the faith and religion of Scientism. Robert Anton Wilson [(1986/1991) The New Inquisition: Irrational Rationalism and the Citadel of Science, New Falcon Pubs] says the acronym should more accurately stand for **C**ommittee for **S**lander, **I**nvective and **C**alumny of **O**pen-minded **P**eople (see http://fosieht.tripod.com/humor/Illuminati_proverbs.htm). Indeed, they function as the religion of Scientism's version of the Catholic Church's "Congregation of the Doctrine of the Faith" whose function is to silence dissenters.

"Science is conservative: burdened with personal and institutional self-interests, as was the medieval Church; infiltrated and corrupted by massive government and commercial funding." Bauer, H.H. (2005) "Review essay of James P. Hogan's Kicking the Sacred Cow: Questioning the Unquestionable and Thinking the Impermissible." Journal of Scientific Exploration, v. 19, #3, 419-435. p. 421

Two relatively recent accounts of canonical scientists (CSICOPian fanatics?) vicious attacks of leading edge theory and research are available in:

Burr, Chandler (2004) The Emperor of Scent : A True Story of Perfume and Obsession, Random House

Krivit, Steven B. and Nadine Winocur (2004) The Rebirth of Cold Fusion: Real Science, Real Hope, Real Energy, Pacific Oaks Press



"Urizen Struggling in the Waters of Materialism" (Plate 12 of *The First Book of Urizen*) by William Blake
"*The First Book of Urizen*, as its title suggests, can be seen as the first book of Blake's "Infernal Bible". In it he offers an alternative view of creation in a rewriting of the biblical Book of Genesis. According to this view, creation itself needs to be seen as an evil act because it follows from a command; it is the despotism of the god of reason and law, Urizen, that has called the world into being, and this is why it has automatically assumed a fallen form. In the poem, Urizen, having created the fallen world, is then drawn down into it himself, finding himself bafflingly and chaotically embroiled in his own nets and webs. The god Los, standing for the imaginative power, has been set to watch over Urizen, but instead he too gets drawn into the general collapse." From David Punter, University of Stirling. "The Book of Urizen." [The Literary Encyclopedia](#). 17 Jul. 2001. The Literary Dictionary Company. 14 March 2007.
<<http://www.litencyc.com/php/sworks.php?rec=true&UID=1402>>

Abstract

Cutting edge theory and research about the properties of mind and consciousness are melding ancient wisdom (mainly from Asia) with contemporary quantum theory to provide a fascinating and exciting blend of thought regarding mind and its quantum holographic and non-local properties. The human body is now considered to function as a quantum liquid crystal with instantaneous intercommunication within the body and the potential to tap into the quantum vacuum.

This melding of traditions provides a much more sophisticated approach to the mental abilities that have been a mystery to mainstream psychology such as energy medicine and distance healing, general parapsychological phenomena, savant syndrome, extraordinary human abilities etc."

Starting with topics most immediate, our body, this paper then moves on to more "cosmic" connections between us and "the all."

TABLE OF CONTENTS:

A. NEW CONCEPTS OF BIOLOGICAL FUNCTIONING

1. The role of the cerebellum in cognition, thinking and learning
2. The role of the heart in cognition, thinking and feeling (Neurocardiology)
3. The role of the nose in regulating and balancing the Autonomic Nervous System (ANS)
4. The role of glia and schwann cells in information processing and healing
5. The new biology of the cell and genetics

Doug Parks' introduction to How your thoughts rewrite your Genes! Bruce Lipton and his "Biology of Beliefs"
Plant and cellular consciousness

6. The "Neuro Theology" approach
7. The body as a Quantum system
Coherence in Biology, Biocommunication, Biophotonics

B. QUANTUM RESEARCH AND EXPLANATIONS OF MIND-MATTER RELATIONS

Summary of the results of William Tiller's Science Adventures with Real Magic research program

C. NEW CONCEPTS OF REALITY AND THE UNIVERSE

1. Evolution of consciousness and the Integral approach of Ken Wilber and others
The Main Concepts of the Integral Approach of Ken Wilber
Indigo Children

2. New concepts of matter: Wave Structure of Matter
3. The Holographic, Undivided, Interconnected, Conscious, Spiritual, Reflexive, Self-Aware, Informed, Creative, Intelligent Kosmos [Universe] (Pan-Psychism and Pan-Experientialism: "All the way up and all the way down")

D. PALEO-SCIENCE AND TECHNOLOGY

E. APPLICATIONS OF THE PERSEPCITVE TO MENTAL AND PHYSICAL HEALING AND FUNCTIIONING.

- 1, General Energy/Information Medicine
 The Three Eras in the Evolution of Medicine
 Psychic Healing and the Anisotropic Universe
2. Energy/Information Psychology and Psychotherapy

Some Online Sources:

1. The web site containing The Journal of Non-Locality and Remote Mental Interactions is set up "as an open venture between scientists, scholars, meditators and all those who believe that we are approaching a conceptual threshold in our understanding of how physics, physiology and consciousness interact." <http://www.emergentmind.org/journal.htm> at <http://www.emergentmind.org/>
2. Mind and Matter: An International Interdisciplinary Journal of Mind-Matter Research, (Imprint Academic, PO Box 200, Exeter EX5 5YX, UK)."...is aimed at an educated interdisciplinary readership interested in all aspects of mind-matter research from the perspectives of the sciences and humanities. It is devoted to the publication of empirical, theoretical, and conceptual research and the discussion of its results." <http://www.mindmatter.de/index.htm>
3. The Institute of Noetic Sciences (IONS) explores the frontiers of consciousness to advance individual, social, and global transformation. <http://www.noetic.org/index.cfm> Their magazine Shift: At the Frontiers of Consciousness "...communicates the Institute's mission of exploring ways of knowing and being that open us to transformations in our beliefs, values, and actions. Shift articles engage, challenge, and inspire both scientific and lay readers to expand perceptions of what is real and what is possible." <http://www.noetic.org/publications/magazine.cfm>
4. **TASTE** (The Archives of Scientists' Transcendent Experiences) is an online journal, founded by Charles T. Tart (<http://www.paradigm-sys.com/cttart/index.cfm>), devoted to transcendent experiences that scientists have reported. It lets scientists express these experiences in a psychologically (and professionally) safe space. <http://www.issc-taste.org/index.shtml>
5. Integral Visioning on the net is a place for integrally aligned people to gather and collaborate and a place for integral activists, artists, communicators and visionaries to present their views and works. <http://integralvisioning.org/index.php>
6. Dynamical Psychology An International, Interdisciplinary Journal of Complex Mental Processes <http://www.goertzel.org/dynapsyc/dynapsyc.html>

General Overviews of the issues addressed in this paper are available in:

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Woodhouse, Mark (1996) Paradigm Wars: Worldviews for a New Age, Frog Ltd.

The limits of our conscious belief system to cope with the TOTALITY of reality is discussed in:

Norretranders, Tor (1991/1998) The User Illusion: Cutting Consciousness Down to Size,

Penguin. [The estimated information channel capacity in bits per second: Unconscious = ~ 50 million; Conscious = less than 50]

The importance of beliefs for good or ill are discussed in:
Dilts, Robert, Tim Hallbom and Suzi Smith (1990) Beliefs: Pathways to Health and Well-being,
Metamorphous Press

My personal koan: **The belief that “What I believe is true” is false**

The areas of investigation for modern science are outlined in Maret, Karl (2005) “Seven key challenges facing science,” Bridges, Magazine of the International Society for the Study of Subtle Energies and Energy Medicine, v. 16, #1, Spring, pp. 4-9

The IONS magazine Shift: At the Frontiers of Consciousness, #5, THE SCIENCE OF FIELDS 2004 Dec to 2005 Feb.(<http://www.noetic.org/publications/shift/issue5/main.cfm>) contains several articles written in layman’s language on some of the main the topics discussed below.

“Entangled Minds” by *Dean Radin*

“The Resonant Heart” by *Rollin McCraty, Raymond Trevor Bradley, Dana Tomasino*

“The Flame of Life” by *Beverly Rubik*

“The Unsolved Mystery of Healing” by *Larry Dossey*

“Fields of Form” by *Rupert Sheldrake*

“Sensing Fields” by *Betsy MacGregor, Chris Bache, Robert Gass*

A. NEW CONCEPTS OF BIOLOGICAL FUNCTIONING

Murphy, Michael (1992) The Future of the Body: Explorations Into the Further Evolution of Human Nature, (Jermy P Tarcher/Perigee) provides MANY (785 pages!) examples of what the human body can do. The many exceptions to normal functioning are where the most fruitful research studies should be.

1. The Role Of The Cerebellum In Cognition, Thinking And Learning

The Publishers description of the 1997 volume edited by Schumahmann, The Cerebellum and Cognition, reads "Cerebellar function has traditionally been understood as being confined to the control of voluntary movement. Recent research revises this narrow view and suggests that the cerebellum is critically involved in a number of nonmotor behaviors and cognitive operations. The Cerebellum and Cognition is a comprehensive work that defines this emerging field of investigation into the nature and extent of the cerebellar involvement in nonmotor processing, including thought, language, memory, and mood. Authoritative and in-depth discussions by a pre-eminent group of authors who have helped shape this field of inquiry..."

Sources

See also the philosophy/theory/etc. background resource papers on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

*Educational Kinesiology's slogan is "Movement is the doorway to learning." Website: <http://www.braingym.org/>

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*Goddard, Sally (1996) A Teacher's Window Into the Child's Mind, Fern Ridge Press

*Hannaford, Carla (1995) Smart Moves: Why Learning Is Not All In Your Head, Great Ocean Publishers

*Hannaford, Carla (1997) The Dominance factor: How Knowing Your Dominant Eye, Ear, Brain, Hand and Foot Can Improve Your Learning, Great Ocean Publishers

Leiner, H.C. and A.L. Leiner (1997a) "The treasure the bottom of the brain," (the cerebellum) available at www.newhorizons.org/neuro/leiner.htm and the background resource paper on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>

Leiner, H.C. and A.L. Leiner (1997b) "How fibers subserve computing capabilities: The similarities between brains and machines," in J.D. Schmahmann (ed.) The Cerebellum and Cognition, vol. 41 of the International Review of Neurobiology, Academic Press

*Promislow, Sharon (1998) Making the Brain-Body Connection: A Playful Guide to Releasing Mental, Physical and Emotional Blocks to Success, Kinetic Publishing Corp., West Vancouver, BC Canada

Schumahmann, J.D. (ed) (1997) The Cerebellum and Cognition, v. 41 of the International Review of Neurobiology, Academic Press

*Teplitz, Jerry V. with Norma Eckroate (1994) Switched-on Living: Easy Ways to Use the Mind/Body Connection to Energize Your Life, Hampton Roads Publishing Co.

2. The Role Of The Heart In Cognition, Thinking And Feeling (Neurocardiology)

Joseph Chilton Pearce (2002) The Biology of Transcendence: A Blueprint of the Human Spirit greatly reinforces my REB (Radiant Energies Balance Protocol) heart centered approach as being the most powerful and effective one for therapy and transformation. When you add the explicit activation of the Energy-Information system's Radiant Circuits, you have a potentially very powerful protocol. Pearce discusses the great importance of the frontal lobes connecting to the limbic system in Schore's "affect-regulation function" model. Expanding on Paul MacLean's triune brain model (1. Reptilian brain's ritual, habit, defensive reflexes and the roots of lying. 2. Old mammalian, limbic, or emotional-cognitive brain. 3. Neocortex, new mammalian, or verbal-intellectual brain), he adds that the pre frontal lobes could be considered brain 4 and adds brain 5, "The triune heart: Electromagnetic, neural, hormonal." (see chap 3 and HeartMath theory and research) <http://www.ahpweb.org/pub/perspective/may03/may03review.html> and interview transcript "The Holographic Heart," <http://www.cyberspaceorbit.com/frontpage/holhrt.htm>)

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3. The Role Of The Nose In Regulating And Balancing The Autonomic Nervous System (ANS)

"We are reviving an ancient technology of the mind [using specific patterns of breathing]... The implication of this technology is that we are not helpless victims of a given emotional state... The nose is an instrument for altering cortical activity... [A]lternating cycles of sympathetic and parasympathetic activity are tightly coupled with the nasal cycle... The nasal mucosa is one of the most abundant tissues...innervated by both the sympathetic and parasympathetic branches of the autonomic nervous system." [Shannahoff-Khalsa, D. S. (1983) "Breathing cycle linked to hemispheric dominance," Brain/Mind Bulletin,]

"Zajonc, of the University of Michigan, has found... that breathing through the nose cools the hypothalamus, which affects brain chemicals that influence mood. Changing the temperature of the hypothalamus may affect the release and synthesis of a variety of neurotransmitters... [T]emperature changes are known to affect all biochemical processes... The hypothalamus is involved in regulating the temperature of the brain and in controlling aggression, eating and sex, all of which have large emotional components... 'Anything that allows you to change hypothalamic temperature will have subjective effects... [Breathing] 'cold air puts people in a much better mood than warm air.'" (Alder, 1990) (see also Ingber, 1981)

There are two tiny clusters of neurons in the front part of the hypothalamus (the suprachiasmatic nuclei) which are connected by a neural hotline (straight with out any synaptic connections) from the eyes. Apparently "...there are two pathways from the eyes to the brain: one for conscious vision and the other for circadian entrainment." (Strogatz, p. 100) This area of the hypothalamus is the master clock/circadian pacemaker for alertness and body temperature cycles. The body temperature cycle is a reliable marker of its actions. Alertness, sleep duration and the presence of REM (Rapid Eye Movement sleep) is regulated by this nerve center. "The propensity for REM is synchronized to the body temperature cycle, not to sleep itself... [O]ur rhythms of short-term memory, the secretion of the brain hormone melatonin, and several other cognitive and physiological functions also run at the same period and maintain constant phase relationships to the temperature cycle and to one another." (Strogatz, p. 87)

This provides a possible mechanism for the calming effect of breathing through the nose to cool the hypothalamus: when the master circadian and body temperature control center is

cooled down it might send a message to the other body temperature regulators to warm up, thereby producing in turn less alertness and sleepiness. Alertness goes hand in hand with body temperature: low body temperature goes with low alertness (sleepiness) and high body temperature goes with high alertness.

See also the philosophy/theory/etc. background resource papers on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/activeing52006.doc> , <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

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4. The role of glia and schwann cells in information processing and healing

The Krebs, Hüttmann and Steinhauser article, quoted below, comments on the neglected functions of glial cells. It's interesting that mainstream bio-science typically underestimates the sophistication of organisms (see the work of M-W. Ho, C.W. Smith,

R.O. Becker, J.L. Oschman, K. Korotkov and R. Gerber for examples of bio-scientists who are researching this incredible sophistication.) The work of R.O. Becker has been, and still is, unacknowledged. The article makes absolutely no mention or acknowledgement of Becker's pioneering work begun in the 1950s!! The fact that, after a gap of over 30 years, mainstream bio-science is "discovering" these various functions of the glial cells illustrates how the politics of science (scientism and the plague of the CSICOPian mentality) inhibits the progress of science.

"After disregarding them for decades, neuroscientists now say glial cells may be nearly as important to thinking as neurons are. The brain consists mainly of neurons, right: Wrong. there are nine times as many glial cells in our gray matter as there are neurons. For 50 years, neuroscientists have maintained that glia merely provide support services to neurons: warding off pathogens, maintaining a healthy ion balance around the neurons and insulating them from electrical interference. But recent work indicates that glia are intimately involved in all aspects of our brain's information processing. Not only do glia talk with neurons, they communicate among themselves, aiding and abetting how our brains react, learn and remember. Understanding more about how glia function may greatly alter our model of how the brain and mind work." (Krebs, Hüttmann and Steinhauser, p.41)

Sources

See also the philosophy/theory/etc. background resource papers on my web site

www.rebprotocol.net (see specifically <http://www.rebprotocol.net/activeing52006.doc> , <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

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5. The New Biology Of The Cell And Genetics

The work of Bruce Lipton The Biology of Belief: Unleashing the Power of Consciousness, Matter and Miracles, helps explain, in a very understandable way, how the interplay between body and mind operates. (for papers by Lipton see www.bruce-lipton.com)

See also the philosophy/theory/etc. background resource papers on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/activeing52006.doc> , <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

Doug Parks' introduction to How your thoughts rewrite your Genes! Bruce Lipton and his "Biology of Beliefs"

“From the cutting edge of science comes the most encouraging news of the last 50 years. I hope you can hear me. Your Beliefs and Perceptions control your Genes. This is not conjecture. This is not a metaphor. This is the truth uncovered in the science laboratories of the University of Wisconsin School of Medicine, later expanded upon at Stanford University, and today validated regularly by the newest gene research around the world.”

“What are the implications? Read on! First of all, contrary to the current medical model, genes cannot control your health. Genes cannot turn themselves on and off. They are activated by a signal from the environment and most of those signals are controlled or influenced by your beliefs and perceptions. What you believe about sickness and healing is much more important than we ever realized. Next, understand that your genes are constantly being rewritten to adapt to your changing environment. The major contributor to those changes is your perception of your world, whether that perception is right or wrong. We create stress through misperception, we age early because of misbeliefs, and we interfere with healing trying to apply our misunderstanding. Our health crisis is simply due to lack of understanding. Did you know that the state of fear turns off the immune system and leaves you vulnerable to disease, and the world is telling you every day, Be Afraid! Chronic fear is disastrous to your health, and adding drugs can actually make the problem worse.”

“The world is waking up to a new understanding, an empowering understanding that will change your beliefs about your health and quality of life ... Read today to understand the science behind the greatest health understanding of our time. If you are involved in the global shift to a mind - body - spirit approach to health, you must empower yourself with the facts. The power to change lies in accurate understanding.” Spirit Crossing, April 2003 v. 3, # 8

Plant And Cellular Consciousness

1. I was soundly whacked on the Psychotherapy NetWorker discussion group by an Energy Psych apostate (who, by the way, fulfilled both the denotative - dictionary - and connotative - emotional - definitions of this label) when I referred people to one of the topics on cellular level consciousness which the apostate considered nonsense; the apostate provided this response: "Cleve Backster and plants? He's (that's me, Phil Warren) got to be kidding. This is on a par with L. Ron Hubbard hooking plants up to his e-meter." Well here is some fascinating information on the new field of Plant neuropsychology/biology which was first discovered by Backster (and ignored by mainstream scientists):
2. Cleve Backster's pioneering work Primary Perception: Biocommunication with Plants, Living foods and Human Cells, available at: <http://www.primaryperception.com/>; UK site as of 2005 Nov. Was but doesn't open now: <http://www.primaryperception.co.uk/> Briefly, he discovered that plants (and other living material) are sensitive and respond to spontaneous traumatic events from other plants (and living material). This discovery was and still is, of course, ridiculed by the mainstream, but when they couldn't fault his very sophisticated research, they just ignored it. These experiments and discoveries began in 1966.
3. Symposia on Plant Neurobiology 2005 <http://ds9.botanik.uni-bonn.de/zellbio/AG-Baluska-Volkmann/plantneuro/index.php> 2006 <http://plantneurobiology.ibcas.ac.cn/>
4. Society for Plant neurobiology <http://www.plantneurobiology.org/>

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www.rebprotocol.net (see specifically "Papers on the fascinating facts of water for health: section 2" at <http://www.rebprotocol.net/papersonwater.pdf>)
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6. The "Neuro Theology" Approach

The field of "neuro-spirituality" is really taking off. This approach studies how Ken Wilber's (see below in part C) upper left and right quadrants are related. There is still debate between two philosophical camps: one says the biology creates the psychology/spiritual experience (i.e. they are epiphenomena of the physical) vs. the other which says biology serves as a squish/wetware basis for us to tap into the mental/spiritual realms and the more sophisticated our squish/wetware the more we can tap into and be aware of (analogy of a TV set and how many channels it can access, color or black and white, whether it's mono, stereo or surround sound, 3D, High Definition etc).

1. James Newman (1997a) "Putting the Puzzle Together: Part I: Towards a General Theory of the Neural Correlates of Consciousness," JCS (Journal of Consciousness Studies), v. 4 # 1, pp. 47-66 Abstract available at http://www.imprint.co.uk/jcs_4_1.html#Putting%20the%20Puzzle

Abstract: "Despite the whirl of controversy surrounding consciousness studies, there is real progress being made in cognitive science towards establishing an empirically rigorous theory of mind, in both its conscious and non-conscious manifestations. In this two-part article, beginning with a broad overview of clinical and experimental findings bearing on the neural correlates of conscious processes, the author traces the development of several related models that appear to converge upon a central 'conscious system'. This extended reticular-thalamic activating system (ERTAS) has been increasingly implicated in a variety of functions associated with consciousness, including: orienting to salient events in the outer world; dream (REM) sleep; the polymodal integration of sensory processes in the cortex (binding); selective attention and volition. It is argued that the increasing convergence of models from clinical and experimental neuroscience is leading towards a general theory of consciousness which is both non-dualist and non-reductionist."

2. James Newman (1997b) "Putting the puzzle together, part II: Towards a general theory of the neural correlates of consciousness," JCS (Journal of Consciousness Studies), v. 4 #2, pp. 99-120. Abstract available at http://www.imprint.co.uk/jcs_4_2.html#Putting%20the%20puzzle

Abstract: "In Part I of this two-part paper (Newman, 1997) provided a broad overview of clinical and experimental findings bearing on the neural correlates of conscious processes. It was argued that several neurocognitive models related to: orienting to the outer world, dream (REM) sleep, and the integration of sensory-motor representations, converge upon a core 'conscious system', dubbed the *extended reticular-thalamic activating system* (ERTAS). The functions of the ERTAS, which shares extensive projections with the cerebral cortex, are mostly 'implicit', in contrast to the explicit representation of conscious content within the neocortex. Part II expands this ERTAS model to encompass: the generation of coherent patterns of EEG activation, the integration of distributed cortical processes into a stream of unified percepts (binding), and selective attention, as well as links between the ERTAS and systems providing the neural substrates for episodic memory and volition."

3. A well researched source written for the lay person is contained in Newberg, A, E. D'Aquili, and V. Rause (2001) Why God Won't Go Away: Brain Science and the Biology of Belief, Ballantine Books. See. James Miller They especially focus on four association brain centers:

Visual Association Area which allows meaningful interpretation of perception, placing them in context of all other relevant input (other senses, memory, emotional loading etc.)

OAA = the Orientation Association Area (defining the self), located at the posterior section of the parietal lobe, creates a three-dimensional sense of "body" and orients that body in space.

"The left orientation area is responsible for creating the mental sensation of a limited, physically defined body, while the right orientation area is associated with generating the sense of spatial coordinates that provides the matrix in which the body can be oriented...[T]he left orientation area creates the brain's spatial sense of self, while the right side creates the physical space in which that self can exist." (p. 28)

AAA = the Attention Association Area (the seat of the will), the prefrontal cortex heavily involved in intentional behaviour. "[T]he frontal lobes are involved in the processing and control of emotion in association with the limbic system, with which it has multiple interconnections." (p. 30)

Verbal Conceptual Association Area (naming and cataloguing the world), "...located at the junction of the temporal, parietal, and occipital lobes, is primarily responsible for generating abstract concepts and for relating those concepts to words." (p. 21)

The book takes a "double language, epiphenomenal" approach to the "Mind-brain problem" (a typical Western philosophical pseudo problem in my view; certainly not part of Eastern thought.) "...mind needs brain, brain creates mind, and ...the two are essentially the same entity, seen from different points of view. The inexplicable unity of the biological brain and its ethereal phenomenon of mind is the first aspect of ...the mind's mystical potential. The second characteristics ...is the ability of the mind to interpret spiritual experience as real. This ability, based on the mind's capacity to enter altered states of consciousness, and to adjust its assessment of reality neurologically, is a fundamental link between biology and religion." (p. 34)

4. A fascinating field related to Neuro Theology is contained in Zohar, and Marshall (1991) Quantum Self: Human Nature and Consciousness Defined by the New Physics, Zohar, and Marshall (1999) SQ: Spiritual Intelligence , the Ultimate Intelligence; and Zohar, and Marshall (2000) SQ : Connecting With Our Spiritual Intelligence

They emphasize the 40 Hz whole brain wave as the integrative brain mechanism that allows us to see the big picture etc. (what Wilber calls "Vision Logic:") (see book review by Ian Bullock at <http://www.refresh.com!/spiritualintelligence.html> and Suzanne Davidson (2002) "Cultivating spiritual intelligence to heal diseases of meaning: A conference report," Contemporary Nurse, v. 12, #2, April available at: <http://www.contemporarynurse.com/12-2p103.htm> . For a test of your SQ (Spiritual Intelligence) see Cynthia Davis' Spiritual Intelligence Coaching www.mindwise.com.au/spiritual_intelligence.shtml

5. For technical papers on the 40 Hz and brain electromagnetic field theory as it relates to consciousness (Cemi field = Conscious EM Information Field) see the McFadden papers.

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7. The Body As A Quantum System

On a technical level, there is the very sophisticated work of Mae-Wan Ho (1998) The Rainbow and the Worm: The Physics of Organisms,. (<http://www.ratical.org/globalize/MaeWanHo/index.html>) and the Institute of Science in Society (<http://www.isis.org.uk/index.php>) See also the philosophy/theory/etc. background resource paper on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

More understandable is the work of Oschman, J.L., (2000) Energy Medicine: The Scientific Basis, and (2003) Energy Medicine in Therapeutics and Human Performance, and (2005)

"The intelligent body," Bridges Quarterly Magazine of the International Society for the Study of Subtle Energies and Energy Medicine. See Excerpts and articles on James Oschman's model of the intelligent body which uses modern (21st century) science rather than 19th century "body is a machine" model with a historic paper by Albert Szent Gyoergyi: <http://www.rebprotocol.net/oschmanintelbody.pdf>

Zhang (2003) provides a holonomic model of the structure and operation of the acupuncture system. He "...found an electromagnetic field composed of interference patterns of standing waves in the resonance cavity of the human body, supported by the energy flow of the organism. The field of interference patterns appears to be holographic, in that changes in the conductivity of the measurement current (which is proportional to the field inside the body) appear simultaneously not only on all acu-points but, to a lesser extent, on every point of the skin. Electrical resistance changes occur as soon as the organism undergoes a pathological, physiological, or even psychological change...[A]n invisible electromagnetic field within the body offers not only a new understanding of the background of acupuncture and other forms of holistic medicine, but also quantitative evaluation of the degree of coherence of the body-mind system." (Laszlo, 2003, p46)

Coherence in Biology, Biocommunication, Biophotonics

<http://www.lifescientists.de/index.htm>

International Institute of Biophysics, Station Hombroich. Kapellener Strasse, D-41472 Neuss, Germany

Biophotons internet publications available at International Institute of Biophysics website
http://www.lifescientists.de/ib_003e_.htm

What are biophotons? William F, Hamilton

"Biophotons, or ultra weak photon emissions of biological systems, are weak electromagnetic waves in the optical range of the spectrum - in other words: light. All living cells of plants, animals and human beings emit biophotons which cannot be seen by the naked eye but can be measured by special equipment developed by German researchers.

"This light emission is an expression of the functional state of the living organism and its measurement therefore can be used to assess this state. Cancer cells and healthy cells of the same type, for instance, can be discriminated by typical differences in biophoton emission. After an initial decade and a half of basic research on this discovery, biophysicists of various European and Asian countries are now exploring the many interesting applications which range across such diverse fields as cancer research, non-invasive early medical diagnosis, food and water quality testing, chemical and electromagnetic contamination testing, cell communication, and various applications in biotechnology.

“According to the biophoton theory developed on the base of these discoveries the biophoton light is stored in the cells of the organism - more precisely, in the DNA molecules of their nuclei - and a dynamic web of light constantly released and absorbed by the DNA may connect cell organelles, cells, tissues, and organs within the body and serve as the organism's main communication network and as the principal regulating instance for all life processes. The processes of morphogenesis, growth, differentiation and regeneration are also explained by the structuring and regulating activity of the coherent biophoton field. The holographic biophoton field of the brain and the nervous system, and maybe even that of the whole organism, may also be basis of memory and other phenomena of consciousness, as postulated by neurophysiologist Karl Pribram and others. The consciousness-like coherence properties of the biophoton field are closely related to its base in the properties of the physical vacuum and indicate its possible role as an interface to the non-physical realms of mind, psyche and consciousness.”

New Approach of the International Institute of Biophysics: “Despite... the remarkable progress that has been made on the biochemical and biophysical description of living systems at [a] microscopic level, the innumerable paradoxes that seem connected to living systems are very far from being understood. We will try to describe [these] systems from a physical point of view, privileging the search of holistic quantities connected to the intrinsic coherence and the stability of such systems. We want to focus our attention on the role that the electromagnetic fields play within the living systems and on the communication through a biophysical way between various systems. Our challenge is to promote [these] extraordinary ventures to understand the mystery of life and ... excel in developing and completing inspiring, high-return, affordable research in this field. We must also be able to respond effectively to the applied research needs from society and contribute to education and scientific literature.”

Cohen, S and F A Popp (2003) “Biophoton emission of human body” Indian Journal of Experimental Biology, Symposium on Biophotons v.1 #5, May. Abstract available at <http://www.lifescientists.de/publication/ijeb2003.htm#8> Abstract “For the first time systematic measurements of the "ultraweak" photon emission of the human body (biophotons) have been performed by means of a photon detector device set up in darkness. About 200 persons have been investigated. In a particular case one person has been examined daily over several months. It turned out that this biophoton emission reflects, (i) the left-right symmetry of the human body; (ii) biological rhythms such as 14 days, 1 month, 3 months and 9 months; (iii) disease in terms of broken symmetry between left and right side; and (iv) light channels in the body, which regulate energy and information transfer between different parts. The results show that besides a deeper understanding of health, disease and body field, this method provides a new powerful tool of non-invasive medical diagnosis in terms of basic regulatory functions of the body.”

See also the philosophy/theory/etc. background resource papers on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/activeing52006.doc> , <http://www.rebprotocol.net/part1rebphil.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

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B. QUANTUM RESEARCH AND EXPLANATIONS OF MIND-MATTER RELATIONS

1. R. G. Jahn and B. J. Dunne have one of the most robust programs of research on the mind influencing the physical world on a quantum level with the PEAR (Princeton Engineering Anomalies Research) center studies. Their classic (1988) Margins of Reality : The Role of Consciousness in the Physical World, provides a good overview. Many other articles are available at: <http://www.princeton.edu/~pear/> specifically <http://www.princeton.edu/~pear/publications.html>

“...[W]hile there have been many attempts to interpret consciousness-related anomalous phenomena in terms of some physical form of information transmission, virtually all of these have explicitly or implicitly presumed a space/time reference matrix. The demonstration of negligible attenuation of the empirical effects with distance, along with their precognitive and retrocognitive capacities, should seem to call this presumption into question, and specifically to preclude their attribution to any known form of field radiation, be it electromagnetic, geophysical, or even subtler physical vectors. Rather, *some more radical proposition seems unavoidable.*” (Dunne and Jahn 1992, p 331. *italics added*)

“The literature ... abounds with attempts to transpose various physical formalisms [to account for these effects]: electromagnetic models, thermodynamic models, mechanical models, statistical mechanical models, hyperspace models, quantum mechanical models, and others ... Although these comprise an interesting body of effort, none of them seems fully competent. ... Indeed, it appears that no simple application of existing physical theory is likely to prevail. In order to encompass the observed effects, a substantially more fundamental level of theoretical model will need to be deployed, *one which more explicitly acknowledges the role of consciousness in the definition of physical reality.*” (Jahn, Dunne and Nelson, 1987, p.47. *italics added*)-

“Neither ... environment nor ... consciousness can productively be presented in isolation; only in interaction – in the exchange of information between the two – are palpable effects constituted ... It is essential ... that the common concepts of established physical theories, such as mass, momentum, and energy; electric charge and magnetic field; frequency and wavelength; the quantum and the wave function; and even distance and time, be regarded as no more than useful information-organizing categories that consciousness has developed for ordering the chaos of stimuli bombarding it from its environment, or passing from it to its environment. More precisely, they reflect the

characteristics of consciousness interacting with its environment.” (Jahn and Dunne, 1987, 204-205)

2. I'm VERY impressed how Beck and Colli [see abstracts below] clearly present some very technical materials from a number of different disciplines in an understandable fashion. Many papers dealing with this approach assume way too much technical knowledge (Tiller, Ho, Hamerhoff, Popp, Penrose, etc.) and so the "intelligent lay person" becomes lost. Beck, Thomas E. & Colli, Janet E. (2003, actual pub date 2005) "Unity Consciousness: A Quantum Bio-Mechanical Foundation" and (2003) "A Quantum Bio-Mechanical Basis for Near-Death Life Reviews" Abstracts available at: <http://becolli.home.mindspring.com/articles.html>

“Unity Consciousness: A Quantum Bio-Mechanical Foundation”

Abstract: Citing research in consciousness, quantum physics, biophysics and cosmology, we propose the collective amplification of quantum effects as the basis for scientifically describing Kundalini awakening, and the higher-order, emergent phenomenon of Unity consciousness. Such alterations of consciousness have their origin in quantum-scale processes, such as self-induced transparency, superradiance, superpositions, quantum tunneling, and Bose-Einstein condensation. Microtubules are considered to be key components in non-local, quantum processes critical to human consciousness. We postulate that bundles of fibers (neural cells), each containing numerous microtubule “lasers” acting in unison, collectively result in a massive surge of light energy to the brain. The sudden onset and radically altered nature of such states are consistent with a model based on the activation of a laser. The liquid crystalline nature of the human body likely provides a foundation for the non-local aspect of Unity consciousness. The unifying paradigm of the “quantum hologram” is introduced to apply quantum properties to macroscopic events.

“A Quantum Bio-Mechanical Basis for Near-Death Life Reviews”

Abstract: Near-death life reviews pose a challenge to current memory research in terms of the sheer amount of instantaneous and empathetic information recall. Advances in quantum physics, bio-mechanics, holographic information theory, and consciousness studies support for the first time a fully realizable quantum bio-mechanical basis for near-death life reviews. We introduce the unifying paradigm of the quantum hologram as a non-local carrier of information. We further investigate the interrelated phenomena of non-local communications, and the electromagnetic zero-point field (ZPF). Recent confirmation of the ZPF lends credibility to vast memory storage capabilities outside the physical body. Microtubules are considered to be key components in non-local, quantum processes critical to human consciousness. Discovery of the liquid crystalline nature of the human body provides further support for our model. Microtubules, DNA and the entire brain are described as communicating non-locally with virtually unlimited memory storage capacity.

The physicist Goswami (2001) seeks to integrate the information in The Tibetan Book of Living and Dying with quantum physics concepts.

In a section titled “The soul and the quantum” Goswami states the main aspects of the model as follows (pp.12-16):

1. “...[M]atter is wave-like and thereby it can be at more than one place at once... [W]ave functions ... are at two (or more) places at once only in possibility, only as the superposition of the two (or more) possibilities.” [see section C.2 below]
2. “Quantum objects exist as a superposition of possibilities until our observation brings about actuality from potentiality, one actual, localized event from the many potential events. If a particular possibility has a great probability to actualize, upon observation, the possibility wave is correspondingly strong.”
3. “Quantum mechanics is a probability calculus that enables us to calculate the probability of each possibility that is allowed in every dynamical situation. Probability begets uncertainty.”
4. “Before quantum physics was properly understood, a materialist metaphysics prevailed in science ... [whose] theory of causation is ... the theory of upward causation: cause moves up from the micro ... to the macro ... [U]pward causation is only capable of producing material waves of possibility for (nonmaterial) consciousness to choose from, and consciousness has the ultimate power, called downward causation, to create manifest reality by freely choosing among the possibilities offered.”
5. “Quantum objects can take a discontinuous leap ... called a quantum leap ... In the same vein, downward causation is discontinuous in every which way: *causally* (we cannot assign a precise cause for it), *mechanically* (we cannot make a mechanical model for it), *algorithmically* (there is no mathematics for it), and *logically* (its logic is circular: the observer is essential for collapse to occur, but the observer is only a possibility before collapse has taken place.)” [*italics added*]
6. “Quantum objects, when suitably correlated ... influence one another nonlocally, that is, without signals through space and without taking a finite time. Thus, correlated quantum objects must be interconnected in a domain that transcends space and time. Nonlocality implies transcendence. It follows that all quantum waves of possibility reside in a domain that transcends space and time; ... the domain of transcendent potentiality ... What is potential may be more real than what is manifest because potential exists in a timeless domain whereas any actuality is merely ephemeral: it exists in time.”

“Does the quantum ‘magic’ – being in two places at once, downward causation, quantum leaps, and nonlocal connections -- ...extend to the macroworld [of] our [brain?] ... [O]ur brain involves quantum processing in every case of observation which is a quantum measurement. The brain responds to a stimulus by presenting a pool of macroscopically distinguishable quantum possibilities (a possibility wave), one of which precipitates as the experienced event when consciousness so chooses.”

His metaphor for the quantum physics of the soul and its survival: “While the physical body, when alive, represents possibilities which always must manifest as a localized structure that has a finite beginning and an finite end, the soul represents possibilities, potential without localized structures in manifestation. As transcendent potential without the fixation of local manifestation in time and space, it transmigrates (that is, is nonlocally experienced) from one incarnation in one locality and time to another in a different point of space and time.” (pp. 12-16)

In a section titled “Physics of the Soul and the Meaning of Life” (pp. 142-144) he writes: “The dualism problem is solved in quantum physics by realizing that both the nonmaterial soul and the material body are mere possibilities within consciousness and consciousness mediates their interaction and maintains their parallel functioning ... Our soul sets the contexts in which meaning enters our lives. This contextualizing aspect of the soul is the supramental intellect or the theme body. Meaning is processed by the mind and expresses itself through a body whose plan is unfolded via the making of the representations of the morphogenetic fields of our vital body. Quantum physics, by making the concept of the nonmaterial soul a viable scientific concept, also revives meaning as a scientific pursuit of our lives. But I call the soul a quantum monad, an individualized unit. How does the soul become individualized? The answer is: through the individualization of the mind and the vital body ... [I]ndividualization takes place through what I call quantum memory. ... Memory that you are familiar with [*classical memory*] takes place because of the modification of the structure of something physical. Large macrobodies take a long time to regenerate from any such modifications of structure; hence the modifications are retained as ... *classical memory* ... In contrast, *quantum memory* takes place via the modification of probabilities of accessing the various quantum possibilities that we collapse as actualities in our experience.” [*italics added*]

“The complete model of reincarnation, the one that agrees with all the reincarnational data, can now be stated: Our various incarnations in many different paces and times are correlated beings, correlated by our intentions; information can transfer between these incarnations by virtue of the quantum nonlocal correlation. Behind the discreteness of the physical body and lived history of these incarnations, there exists a continuum ... of the unfolding of meaning. Formally, the continuum is represented by the quantum monad, a conglomerate of unchanging themes and changeable and evolving vital and mental propensities, or karmas.” (pp. 142-144)

Summary of the results of William Tiller's Science Adventures with Real Magic research program

Other papers are available at: <http://tillerfoundation.com>

See also the philosophy/theory/etc. background resource papers on my web site

www.rebprotocol.net (see specifically <http://www.rebprotocol.net/activeing52006.doc> ,
<http://www.rebprotocol.net/part1rebphil.pdf> and
<http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

The main conclusions from Tiller's program in layman's language:

1. Researchers in the realms of mind-matter interactions will have to be very aware of the impact of their consciousness on research and ideally be at least at a post rational (Wilber's "Vision Logic") level of consciousness development in order to do valid studies in this area of mind-matter interactions.
2. Certain individuals who have mastered meditation and other "inner self management" disciplines, at least to a psychic level (Wilber), can imprint into machines (IIED = Intention Imprinted Electrical Devices) selected performance commands that the machine will subsequently carry out on the experimental targets.
3. These conditioned machines (IIEDs), when left to "run" in neutral spaces (laboratories) will eventually raise that space to a higher level of physical reality [from U(1) to U(2) gage symmetry] where the original observed anomalies continued to be observed.

The following is mainly taken from Tiller, William A, Walter E. Dibble Jr., and J. Gregory Fandel (2005) Some Science Adventures with Real Magic

Glossary of technical terms and abbreviations

Deltrons = a postulated coupling substance from the domain of emotion (outside of physical reality) which has the quality of being able to travel at velocities both above and below the speed of light and to interact with substances from both levels of physical reality [D + R space]. The means by which human intention can influence physical (D) space.

Deltron coupling coefficient, γ = the measure of magnitude of deltron activation which determines the degree of D-space object/substance interaction with R-space object/substance. With an increase in the coefficient, the degree of connectivity between any two D-space objects increases regardless of distance.

D space = Direct (D) physical space with 4 dimensions, space-time. This is the typical universe as postulated by mainstream science],

R space = the magnetic monopole substance layer, conjugate Reciprocal (R) physical inverse space-time, 4 dimensions.

Biconformal/duplex Reference Frame (D+R space) = a proposed new view to allow a more internally self-consistent description of nature that includes all conventional science phenomena plus the main aspects of all psychoenergetic phenomena.

EM = ElectroMagnetic

EM gage symmetry state = the inner symmetry condition of a space relative to its electromagnetic nature.

Gage Theory = the synthesis of quantum mechanics and symmetry where gauge invariance is the physical principle governing the fundamental forces between all elementary particles. Invariance indicates something that does not change under a set of transformations.

IIED = Intention Imprinted Electrical Device. The effective host for a specific intention. It can be transported from its original imprinting location and, when turned on in that distant space, lifts the EM gage symmetry state of that space and tunes the space so as to experimentally manifest the specific intention.

Ψ_{H^+} = the new discovery of the magneto-electro-chemical potential energy for a proton, the energy change associated with increasing the EM gauge symmetry (inner symmetry) state of a space above the usual U(1) gage symmetry level.

U(1) gage symmetry space = our usual EM gauge symmetry space-time universe. Magnetic monopoles are not detectable. Typically, in our usual universe, magnets are dipole.

U(2) gage symmetry space = higher EM gauge symmetry (inner symmetry) with a higher thermodynamic free energy per unit volume. Magnetic monopoles (Direct Current magnetic field polarity) are detectable. Both electric charges (+ and -) and single magnetic monopoles (N and S) naturally coexist.

$p < 0.001$ = the probability of an observation occurring by chance is less than 1 in 1000.

Δ = the difference (Δ) in measurement of some quantity.

Summary of general theoretical assumptions and conclusions (p. 137)

1. [William A. Tiller's] working hypothesis is that we are all spirits having a physical experience as we ride "the river of life" together. Our spiritual parents dressed us in our *biobodysuits* and put us in this playpen, which we call a universe, in order to grow in coherence, in order to develop our gifts of intentionality and in order to ultimately become what we were meant to become -- effective co-creators with our spiritual parents. Each biobodysuit has four main layers:
 - a. the outer layer is the electric monopole substance layer [physical direct, D space, 4 dimensions, space plus time. This is the typical universe as postulated by mainstream science],
 - b. the first inner layer is the magnetic monopole substance layer [conjugate reciprocal physical, R space, 4 dimensions. These two D + R add up to 8 dimensions of Tiller's model of the total physical universe],
 - c. the second inner layer is the emotion domain [9th dimension] substance layer and
 - d. the third inner layer is the mind [mental] domain [10th dimension] substance layer -- and inside that is a portion of our spirit self [11th dimension] that drives the vehicle. So think of this multilayered suit as a kind of "diving bell" or apparatus that our spirit self uses to sense and experience this peculiar earth environment.
[taken from William A. Tiller "A White Paper on The Law of Cause and Effect"]
2. There are two important levels of physical reality, (1) the conventional atom, molecule and EM (Electro Magnetic) photon level where everything travels at velocities (v) at or less than the speed of EM light (c) ($v \leq c$) in the physical vacuum [characteristic of physical direct, D space with 4 dimensions, space plus time] and (2) the information wave level in the physical vacuum where everything travels at more than the speed of light ($v > c$). [conjugate reciprocal physical, R space with 4 dimensions].

3. A postulated coupling substance, called **deltrons** from the domain of emotion (outside of physical reality), exists and has the quality of being able to travel at velocities both above and below the speed of light and to interact with substances from both levels of physical reality. [D + R space]
4. Deltrons also embody intelligence so that all aspects of human consciousness can interact with deltrons and thus modulate the **coupling coefficient**, γ , between the two categories of physical substance. [D + R space]
5. A reciprocal mirror principle for various qualities operates between these two, deltron-coupled levels of physical reality so that a quality of one level times the quality of the other level form a unity in the proposed duplex [D + R space] Reference Frame used to describe nature's behavior in totality, thus including all known phenomena.
6. The human acupuncture meridian/chakra system is an intention modulated system in the human body with coupling greater than zero ($\gamma > 0$) so that (1) strong coupling can develop between the two body-levels of physical reality [D and R space], (2) such intention-directed coupling can enhance human performance and behavior by many orders of magnitude relative to current levels and (3) humans matter; they can dramatically and beneficially evolve themselves to significantly higher states of being.

Key findings for Conditioned Space experimental data (p. 93)

Tiller et. al. have been able to raise the thermodynamic free energy per unit volume of space so that they retain influences introduced by their IIED (Intention Imprinted Electrical Device). That is, once the intention is imprinted by humans into the device, the device, when left in a physical space, will in turn, imprint the space at a higher EM gauge symmetry level (thermodynamic free energy per unit volume) after the device is removed.

1. For humans, and perhaps all vertebrates, bioelectromagnetism is quite different than Maxwellian electromagnetism because the human acupuncture meridian system is observed to be at a higher EM gauge symmetry level where magnetic monopole charge is experimentally accessible.
2. A laboratory space and equipment, raised to a higher EM gauge symmetry state wherein magnetic monopole currents are experimentally accessible, is found to be a very sensitive detector of subtle energy emissions by humans (subtle energies are defined as all those beyond the energy aspects of the accepted four fundamental forces in D space).
3. Large bursts of subtle energy emissions during healing steps in humans located in a "conditioned" laboratory act analogously to earthquakes with reverberating aftershocks for a long time. Thus, the detailed character of the laboratory's energy signature is significantly altered for a long time (greater than three months).

Summary of Key Experimental Findings from Science and Human Transformation (p. 139)

1. A highly developed human biofield [spiritually advanced person] can alter the properties of materials and the functioning of devices so as to reveal deeper levels of nature not anticipated from our normal every-day observations. The radiations from such levels of

- nature pass through materials that are optically opaque to EM radiations in the visible range.
2. Non-EM emissions from the biofields of normal humans, when modulated by their attention and directed intention, can enhance or not enhance electron microavalanches in a simple gas discharge device depending upon the actual focus of the human's intention.
 3. Some humans emit bursts of subtle energy from various body chakras and, via a subtle energy/electrical energy conversion process involving the acupuncture meridian system, large voltage pulses appear both on the body and at sites remote to the body.
 4. When focusing on the heart with loving intent, the human EKG (Electro Cardio Gram) becomes harmonic at the baroreflex frequency of 0.14 hertz, where the heart entrains the brain and simultaneously all the other major electrophysiological systems of the body. (baroreflex is the system in the body that regulates blood pressure) [see section A.2] In this heart entrainment mode of functioning, body chemical production becomes healthier and focused intent can psychokinetically influence molecular structures both inside and outside of the body.
 5. Most young children perceive both EM and subtle energies. Lens and prism experiments indicate that the latter travel at velocities greater than the EM light velocity ($v > c$), and speed up on entering denser matter.
 6. Dowsing is a natural human body response mechanism, for those who give it meaning, wherein the unconscious communicates valuable information to the conscious via involuntary small muscle movements or the creation of localized heat patterns.

Summary of Key Experimental Findings from Conscious Acts of Creation (pp. 140-141)

1. Human consciousness in the form of a specific intention, can be imprinted into a simple, low tech, electronic device from a deep meditative state by highly inner self managed humans. Such a device, now called an IIED (Intention Imprinted Electrical Device), can act as an effective surrogate to robustly influence a unique target experiment in physical reality.
2. The four unique target experiments studied involved (a) an inorganic material (water) with property changes 100 times larger than measurement accuracy, (b) an organic, in vitro material [the liver enzyme ALP, alkaline phosphatase] with property changes of ~20% at $p < 0.001$ and (c) a living, in vivo material [ATP – adenosine triphosphate -- ADP -- adenosine diphosphate ratio in cells of developing fruit fly larvae] with property changes of ~20% at $p < 0.001$, both of the latter having a built in control.
3. A unique intelligence was present in an IIED after imprinting so that the measured material property changes where (a) always in the direction of the IIED's intention imprint and (b) always specific to the particular IIED utilized.
4. An unshielded IIED in the electrically "off" state and physically separated by ~100 meters from a UED [Un-imprinted Electronic Device] in the electrically "off" state still has a communication channel available to it for transferring the imprint statement to the UED within a week. Thus, the carrier for such information exchange is not conventional electromagnetism.
5. This new field, although not EM, can be dissipated through EM leakage pathways. Thus, wrapping an IIED in aluminium foil and storing it in an electrically grounded Faraday cage, prolongs its lifetime of effective use (~3 months before reimprinting is required).

6. Placing a specific IIED in a room and turning it on "conditions" the room to a state wherein the experimental targets of Item 2 above, naturally manifests. Without the presence of this "conditioned" state in the room housing the target experiment equipment, these material property changes do not occur.
7. One characteristic of a "conditioned" space is that a DC magnetic field polarity effect on the pH of water occurs. Such an effect is thought to require the accessing of magnetic monopoles, a property usually associated with a state of higher EM gauge symmetry (inner symmetry) than our normal, everyday reality. Such a state of higher EM gauge symmetry (inner symmetry) is also a higher thermodynamic free energy per unit volume.
8. Another characteristic of a "conditioned" space is the spontaneous appearance of material property oscillations of very large amplitude (air and water temperature, pH, electrical conductivity of water, etc.) that are (a) global throughout the room (b) all exhibit the same Fourier spectral components and (c) all are in the frequency range $\sim 1.0^{-2}$ to 10^{-3} hertz.
9. A third important characteristic of a "conditioned" space is that it is sensitive to the presence of an active IIED at separation distances of at least -150 feet. Oscillations generated in the locale of the IIED spontaneously appear (with a high correlation coefficient) in a "conditioned" space but not in an unconditioned space.
10. If the degree of "conditioning" in a space is low and the IIED is removed from the space, the "conditioning" decays slowly with a time constant of ~ 1 month. If the degree of "conditioning" in a space is sufficiently high, the IIED can be completely removed from the space and stored properly and the level of "conditioning" in the room does not appear to change (at least for 1-2 years).
11. The cause of the air temperature oscillations in a "conditioned" space near an apparent source is not dependent upon movements of the air molecules in the space but rather thought to depend on changes at the vacuum level of physical reality.
12. Removal of the apparent air temperature oscillation source revealed that this vacuum level "phantom" source had a very slow relaxation time (~ 1 -2 months) back to zero amplitude.
13. While in the phantom temperature oscillation source mode of reality, abrupt changes in the orientation of a large natural quartz crystal placed in the initial source region showed abrupt changes in overall oscillation wave shape, wave amplitude and wave frequency. Thus, a quartz appears to be a type of "tuner" for this vacuum source behavior.
14. In a "conditioned" space, spontaneous and abrupt shifts in computer monitoring behavior of a random number generator (RNG) occurred from time to time for no known reason
15. Experimenter effect, specific materials effects and specific device effects appeared, on the short term, to alter the "tuning" of the oscillations in a conditioned space.

Summary of key experimental findings from the "Remote Sites Experiment" (pp. 141-142)

1. The original Minnesota water pH [acid-base level] results have been substantially replicated by others.
2. At all remote IIED-sites, the digitally recorded pH for purified water in equilibrium with air increased exponentially with time with the change in pH (ΔpH) increasing cycle by cycle of water- change until it reached 1.0 pH units.
3. At all control sites, non-IIED sites, the same type of pH-behavior was observed via an information entanglement process except that (1) for below-ground sites, ΔpH achieved ~ 1.7 pH units and (2) for well above-ground sites, the change in pH (ΔpH) achieved ~ 0.8 pH units.
4. This information entanglement process between IIED and non-IIED, control sites of the overall experimental system occurred over distances from ~ 2 miles to ~ 6000 miles. The carrier wave for this information transfer could not have been electromagnetic.
5. A litmus paper pH-detector only responded to the purely chemical level of the Hydrogen ion (H^+) content present in the water while digital pH-detectors responded to both this level plus an information level associated with the Hydrogen ion (H^+) content.
6. All sites, both IIED and non-IIED, exhibited substantial values of the magneto-electro-chemical potential energy for the proton, (Ψ_{H^+}) after a short time, indicating a raised thermodynamic free energy per unit volume for all sites.
7. The time required to reach the change in pH (ΔpH) ~ 1.0 pH units appears to be less for below-ground control sites than for above-ground control sites and also appears to be relatively independent of distance.
8. Strong experimenter and equipment potentization effects were noted.
9. The optimum reimprinting time for an IIED presently appears to be ~ 3 months.
10. Mu-metal screening does not shield water from this new information entanglement field. *Mu-metal is a nickel-iron-molybdenum alloy used for shielding to protect things from stray magnetic fields.*

“...[I]n the English-language scientific literature alone, there are approximately 100 published reports of experiments in which persons have been able to influence mentally and at a distance, a variety of biological target system including bacteria, yeast colonies, fungus colonies, motile algae, plants, protozoa, larvae, wood lice, ants, chicks, mice, rats, gerbils, cats, and dogs, as well as cellular ‘target persons,’ eye movements, gross motor movements, electrodermal activity, plethysmographic activity, respiration, and brain rhythms have been influenced.” (Braud and Schlitz, 1991, p. 35)

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C. NEW CONCEPTS OF REALITY AND THE UNIVERSE

1. The Evolution Of Consciousness And The Integral Approach Of Ken Wilber And Others

Since 1978 I've been inspired by the grand theorist: Ken Wilber (<http://wilber.shambhala.com/index.cfm/>) See also Frank Vissar's <http://www.integralworld.net/>

I include a fair bit of Wilber in the philosophy/theory/etc. background resource paper on my web site www.rebprotocol.net (see specifically <http://www.rebprotocol.net/part1rephilos2.pdf> and <http://www.rebprotocol.net/Bibliography%20REB%20papers.doc>)

The Main Concepts Of The Integral Approach Of Ken Wilber

Taken from Frank Vissar's Integral World Website: <http://www.integralworld.net/>

1. Holon

A Holon is a part of the universe which is complete and consistent in itself, but is also an necessary integral part of a greater system which encompasses it.

E.g. Atoms are a holon. Atoms are complete in themselves. They have a consistent form that can be relied to be the same no matter where they are found. Atoms however can join together to form molecules. Molecules are made of atoms. Molecules encompass atoms. Molecules are more complex than atoms. Molecules are holons because they are complete and consistent within

themselves and because they can be organised into a basic living cell. Cells are holons which can form a body organ. Body organs can form a complete being...etc

A core concept in Wilber's philosophy is the concept of the holon, which he borrowed from Arthur Koestler. The idea is that everything is not only a whole, but also part of a larger whole, so a "part/whole" or "hol-on".

That is true for atoms, molecules, organisms, human being, but also for letters in a word, words in a sentence, sentences on a page, pages in a book, etc. -- as the familiar holistic sequence goes.

As Wilber has demonstrated in Sex, Ecology, Spirituality, human consciousness can be seen as a holon, with four aspects or quadrants:

1. inner-individual: introspective consciousness
2. outer-individual: observable behavior
3. inner-collective: our cultural beliefs
4. outer-collective: the society we live in

But do all holons have four quadrants? Does a word in a book, for example, have a type of inner life? And can we reasonably speak of individual and social holons? Or does that lead us into an infinite regression (for what is the social aspect of the social holon?)

2. Four Quadrants

UPPER LEFT inner-individual	UPPER RIGHT outer-individual
LOWER LEFT inner-collective	LOWER RIGHT outer-collective

The **UPPER LEFT** quadrant covers the inner-individual aspects of human consciousness, as studied by developmental psychology, in both it's conventional and contemplative forms.

The **UPPER RIGHT** quadrant covers the outer-individual aspects of human consciousness, as studied by neurology and cognitive science.

The **LOWER LEFT** quadrant covers the inner-collective aspects of human consciousness, as studied by the sciences of culture: cultural psychology and anthropology.

The **LOWER RIGHT** quadrant covers the outer-collective aspects of human consciousness, as studied by sociology.

Western culture tends to over-emphasize the Right Hand quadrants (brain science, sociology), and neglect the Left Hand quadrants (introspection, human culture). The integral model of consciousness redresses that imbalance by pointing out the importance of the Left Hand quadrants.

One way to make sense of the Four Quadrants model is to see the UPPER LEFT quadrant as primary, and the other three quadrants as the various ways individual human consciousness is conditioned, by the material brain, cultural influences and social structures.

A more radical view is to see the Four Quadrants as the four ways in which Universal Spirit is expressed simultaneously.

All of the quadrants mutually interact with each other. A given stage of individual development (e.g. abstract mind) will be reflected in a stage of neurological development (e.g. the neocortex), a stage of cultural development (e.g. rationalisation) and a stage of societal development (e.g. industrialisation).

Each quadrant consists of ten levels/stages. Combining quadrants with levels gives the "all quadrants, all levels" [AQAL] approach of Integral Philosophy.

As we evolve and grow along the spectrum of consciousness, any distortion of the balance of the quadrants will affect the system in a way that is consistent with the level of growth at which the distortion occurred; e.g. in today's world we have denied the outer needs of our planet earth. We pollute our planet. The result of this imbalance is the destruction of the outer form of our planet.

3. Levels of Consciousness

Life proceeds through a series of stages. Each stage is a holon which includes the level before it and is included in the level after it. We must move from one level to the next. We cannot skip levels. For example: In terms of inner development there are four basic steps.

- Unity Consciousness: All that is seen as a whole. No boundary
- Total Organism (centauric): A boundary is drawn between our selves and the outside universe (self + outside = unity consciousness)
- Ego Level: A boundary is drawn in ourselves between the ego and the body (ego + body = self)
- Persona Level: A boundary is drawn in our ego between persona and shadow (persona + shadow = ego)

These four can be extended with subgroups to seven steps which align with our chakra system. Using Wilber's spectrum, extended even more, so many of the systems describing levels of consciousness can be included within a consistent whole.

3.1. The ten levels

LEVELS	DISORDERS	TREATMENTS
TRANSPERSONAL		
causal	causal pathology	formless mysticism
subtle	subtle pathology	deity mysticism
psychic	Psychic disorders	nature mysticism
PERSONAL		
centauric / vision logic	existential pathology	existential therapy
formal reflexive (formop)	identity neuroses	introspection
rule/role (conop)	script pathology	script analysis
PREPERSONAL		
rep-mind	psychoneuroses	uncovering techniques
phantasmic-emotional	narcissistic-borderline	structure-building techniques
sensoriphysical	psychoses	physiological/ pacification
undifferentiated or primary matrix	perinatal pathology	intense regressive therapies

4. The pre/trans fallacy

One of Wilber's most important theoretical contributions to our understanding of the psychology of spirituality is called the "pre/trans fallacy".

In most popular and scientific views of spirituality, **two** main categories are postulated:

	PERSONAL	"SPIRITUAL"
	rational	spiritual
	man	women
	science	religion
	ego	Self/Essence/Being
	culture	nature
	etc.	etc.

This view is common in the field of depth psychology. Human development is pictured as a **spiral** process, in which as a child we start in an unconscious oneness with the Self, we develop an ego structure by leaving the unity of the Self, and re-contact the Self in a more conscious fashion during our second half of life.

According to Wilber, we should at least postulate **three** broad categories:

PREPERSONAL	PERSONAL	TRANSPERSONAL
mythical religion	historical religion	mystical religion
body	ego	Self/Essence/Being
nature	culture	Kosmos
Instinct	intellect	intuition
body	mind	soul
etc.	etc.	etc.

This view is more in line with developmental psychology (when extended to mystical development) and the esoteric traditions. Now, human development is pictured as a **ladder** like process, in which we all start with the body, grow up as a rational adult, and (might) end up as an enlightened individual.

Now this is the pre/trans fallacy: in the first view, the first, pre-personal category is left out. As a result of this, it merges with the third category, giving us a pre-rational view of spirituality. Pre and trans are confused; more specifically, the pre-rational is elevated to spiritual status. In the second view, the pre-rational is acknowledged as a separate category, in sharp distinction to the trans-rational realm of mysticism.

In the first view, the process of rationalisation and secularisation is understood as anti-spiritual, as is done by the great majority of scientists of religion. Religion is on the decline because people have learned to think for themselves. In the second view, this only applies to mythical religion; mystical religion is still to be discovered by modern men and women, as a process that completes their developmental potentials.

5. Hegel's Dialectic

Aristotle first developed the idea of thesis, antithesis and synthesis. Hegel later rephrased this as a Dialectic. Whenever something new arises (thesis), such as when we arrive at a new level of being, a shadow will also develop that seems to contradict it (antithesis). These two opposing aspects must be understood from a more encompassing understanding that embraces the thesis and the antithesis (synthesis). Wilber emphasizes that healthy development and evolution involves the process of Transcend AND Include the prior levels.

This process describes how growth along the spectrum of consciousness happens. We begin on something new; we struggle to understand it. Wilber calls this stage pre-conventional. As we do come to understand it we become conventional. But, as we come to understand it, the antithesis appears and we realise the thesis was not fully correct and we must move on to the post-conventional when we go beyond the previous understanding - and the synthesis.

Eg: When slavery first appeared in the pre-conventional stage it appeared to be a wonderful new innovation. It enable structure like the pyramids to be built and was an integral part of the social fabric of societies for several more millennia when it was accepted - when it was conventional. Eventually we came to realise that slavery was not a good thing and it's use was abolished. We then reached the post-conventional stage.

6. Flatland

Wilber uses the term flatland to describe what happens when one or more of the quadrants is ignored or undervalued. Science describes our external world. Science is a world view that measures our 'reality'. Whatever can't be measured in some way is deemed to be unreal or valueless. Values, feelings and intuition have no part in the scientific world. Scientists have created a flat land where the whole left side of the four quadrants have been flattened into the right. the more science does this (thesis) the more there is a reaction from people not prepared to live in such a polluted flatland (antithesis).

We can also create a flat land when we cut ourselves off from higher levels of development. A tribal society generally makes a sharp distinction between those who are in the group and those who are outside the group. They create a flatland by denying equal status to outsiders. There are usually strict rules governing enforcing co-operation within the group such as a ban on violence to members but an encouragement of violence towards outsiders, especially if they may be a threat. They have created a flat land by ignoring the common humanity we share.

7. Where we went wrong in the West

Our scientific view of life has created a severe flatland. In science there is no 'I'. A scientist doesn't say, "I ran an experiment" but rather, " an experiment was run". The scientist has disappeared. There is no room for thoughts and feelings only measurements of what is out there. The left hand interior side of the quadrants has been denied and flatlanded into the right. The material side of life is all important not the internal and spiritual. The inner world has been left and we have lost the link to our unity in the world. Gaia has been lost and she is beginning to complain.

8. Descending/Ascending

Life is the ebb and flow of two currents. Ascending energy is male dominated and seeks to reach the heavens by denying the physical. Christianity is fundamentally an ascending religion. Ascending energy avoids emotions. Descending energy is female dominated and seeks to bring heaven down to earth. Goddess religions are descending religions. descending energy expresses itself through emotions.

In life we need a balance of ascending and descending energy. We need to soar to new heights, but keep our feet firmly on the earth. We can also flatland by denying one of the two currents of energy.

9. Involution and evolution

Wilber's writings are evolutionary from beginning to end. The metaphor that best fits his ideas is the ladder model (although he has refined his views in recent years so much that he prefers the metaphor of the river now).

According to Wilber, *evolution has an inner component*, that is not easily discovered by conventional science. Science studies the outer forms of life, and concludes evolution basically is a matter of material complexity. Esoteric philosophy adds an inner dimension: evolution is as much a matter of increasing depth or quality. This can be illustrated graphically in the following diagram:

intuition					
mind					
emotions					
Vitality					
Matter					
	minerals	plants	animals	humans	mystics

Essentially all developmental principles Wilber writes about can be illustrated by this diagram of the kingdoms of nature. Plants transcend minerals, as animals transcend plants, humans transcend animals and mystics transcend humans. But plants also include minerals (they have a physical body), as animals include plants ("vitality"), as humans include animals (have feelings), and mystics include humans (are able to think).

There is nothing about this diagram that suggests the idea of oppression or devaluation, as those opposed to the idea of hierarchical development often think, it is just the way Nature operates. In fact, it is an inspiring view of unfolding life and mind. However, as mind CAN repress the emotions, so humans can abuse animals and nature at large. This is an unfortunate complication, that should be avoided at all costs, but no reason to abandon this overall picture of how things are.

A less well known doctrine in Wilber's philosophy is the idea of involution. In his view, higher stages may occur AFTER the lower stages, but that does not mean they are fully CAUSED by them. That would in effect be nothing other than materialism. The esoteric philosophy holds that evolution is preceded by involution, the inverse movement from Spirit to matter. Without involution, evolution is a baffling process of ever new "emergent" realities; with involution, it is a comprehensible process of the grand movement of Life.

In the esoteric view, Spirit "involves" itself in matter, and takes on layer after layer of "material" bodies -- this has been beautifully elaborated in Neoplatonism -- until it reaches the Nadir of existence in the material plane. From that moment on, Spirit moves upwards again, transcending layer after layer, until it returns to it's point of departure in the Divine. This grand view

effectively counters the popular view that we lose Spirit somewhere in the early years of our life, when we become rational adults. This romanticism is an example of the pre/trans fallacy.

10 Kosmos

Wilber's concept of "Kosmos" (with a capital "K") differs from the scientific view of the cosmos. Where cosmos is by definition a physical reality (which pronounces physics as the perfect and only real science), Kosmos refers to the traditional and pre-scientific worldview which acknowledges not only matter, but also life, mind, soul and spirit.

In a real sense, the Kosmic worldview offers us a map of our own inner world -- the world that can never be seen with the physical senses.

Huston Smith has argued all religions teach at least four levels of being, worlds or spheres:

1. INFINITE WORLD
2. HEAVEN WORLD
3. INTERMEDIATE WORLD
4. PHYSICAL WORLD

Science only takes the lowest world to be real, but a wider view of science can handle all four of them. The fact that science has found no proof for heaven should not worry us in the least. It is exactly what we should expect! Science, basing itself on the physical senses, can only reveal a physical world. But our inner senses reveal an inner world, or more to the point, worlds within worlds, which are as real, or even more so, as the world that can be touched and seen outwardly.

Wilber's Kosmos-trilogy, of which only the first volume has been published until now (Sex, Ecology, Spirituality, 1995) explores the implications of that ancient view of the Kosmos for our modern understanding of science and reality.

11. Three types of science

Science is today's religion. If science has established something, it must be true. If science has not established something, it cannot be true. That's how modern day philosophy has it.

But does science cover all of reality? Since science is based on what the physical senses (often with the help of instruments) tell us, is it wise to rely totally on that source of knowledge? Who has ever seen emotions or thoughts with the physical eye? Is that reason enough to deny them existence? Or are we missing something?

"Absence of proof is not proof of absence", we might say. To believe that science covers ALL of reality is not really scientific, because we have to deny other forms of human experience, even our own deepest feelings of identify, any reality. This is properly called "scientism". Not science proper has rejected the belief in the soul, in higher spheres, in transcendental realities, as many

well educated people believe, but scientism. It is time to correct that extremely lopsided state of affairs.

Basically, reality covers at least three domains: that which we can see with our senses (“eye of flesh”), that which we can see with our "inner eye" (“eye of reason”), and that which does the seeing, both outer and inner: the Self (“eye of contemplation”). All three can be approached in a scientific manner! Then what is the meaning of "scientific". Wilber contends science in no way should automatically imply materialism. Science (as well as all valid knowledge systems) involves the following elements:

1. We follow an instruction, an injunction or a paradigm: Training/education
2. We perceive a certain state of affairs: Ability/knowledge gained as a result of training
3. We compare our findings to those of others: Social/consensual outcome
4. We seek to make sense of our findings: Interpretation and possible Logical Category Errors. Hypothesis and theory building

All valid systems agree that these "strands" for the proof of an assertion are necessary (education, ability/knowledge, consensus) and all are involved in interpretation (forming hypotheses and theories) which mediates between the knowledge gained and the social consensus aspects.

These "strands" operate in science, as should be obvious: an astronomer (1) looks through a telescope, (2) observes a certain part of the universe (3) discusses his findings with fellow astronomers (and NOT with us mortals, a very important point) and (4). interprets or speculates on their meaning.

Wilber argues for the existence of two other types of science, which follow the same formal procedure:

Mental or social science (what Europeans call *Geisteswissenschaft*) does not observe physical objects, but mental meanings, as can be found in documents, stories, myths, reports and books. The meaning of a text cannot be seen with the physical eye, but only with the "eye of reason". Following the strands of science, mental science is perfectly scientific. (Of course, mental objects are not as concrete as physical ones, so the conclusions of mental science can never match those of physics. But so what?).

And there is a third type of science ("spiritual science"), according to Wilber. For does reality comprise only of things and thoughts? What about the principle in us that sees and thinks? The self which sees and thinks, cannot be seen and is not a thought. But it can be approached experimentally in meditation/contemplation. Thus "spiritual science" is born. Meditation and yoga count as "science" because they too follow the strands: (1) instruction -- we sit on a cushion for hours, (2) observation -- we notice a state of mind, (3) confirmation -- we discuss our findings with fellow meditators, and (4) interpretation -- we seek to interpret what the findings might mean.

To sum up: Wilber has argued for three types of science, since reality is composed of at least three domains, and all three domains can be approached in an experimental, experiential and therefore scientific way.

The research approach of NeruoTheology (see section A6 above) represents the correlation of transcendent/internal experiences (Wilber's Upper Left quadrant) with brain/body functioning (his Upper Right quadrant) of his four quadrant model of total reality (his "Kosmos"). Check out his paper "An integral theory of consciousness" (see abstract below). See also his (2000) Integral Psychology: Consciousness, Spirit, Psychology, Therapy, Shambhala Publications <http://www.shambhala.com>

Wilber, K. (1997) "An Integral Theory of Consciousness," JCS (Journal of Consciousness Studies), v. 4 # 1, pp. 71-92 <http://www.imprint.co.uk/Wilber.htm>

Abstract: "An extensive data search among various types of developmental and evolutionary sequences yielded a 'four quadrant' model of consciousness and its development (the four quadrants being intentional, behavioural, cultural, and social). Each of these dimensions was found to unfold in a sequence of at least a dozen major stages or levels. Combining the four quadrants with the dozen or so major levels in each quadrant yields an integral theory of consciousness that is quite comprehensive in its nature and scope. This model is used to indicate how a general synthesis and integration of twelve of the most influential schools of consciousness studies can be effected, and to highlight some of the most significant areas of future research. The conclusion is that an 'all-quadrant, all-level' approach is the minimum degree of sophistication that we need into order to secure anything resembling a genuinely integral theory of consciousness."

see also Wilber's: "Waves, Streams, States, and Self -- A Summary of My Psychological Model (or, an Outline of an Integral Psychology)" available at http://wilber.shambhala.com/html/books/psych_model/psych_model1.cfm/xid,5071294/yid,77570841 . See also "Wilber on line" at <http://wilber.shambhala.com/> and <http://wilber.shambhala.com/html/archive/archive.cfm>
Wilber's website is at: <http://www.kenwilber.com/home/landing/index.html> and the
Integral Institute he founded is at:
<http://www.integralinstitute.org/public/static/default.html>

Integral Visioning on the net is a place for all integrally aligned people to gather and collaborate and a place for integral activists, artists, communicators and visionaries to present their views and works. It includes a broader range of thinkers than just those involved in the Ken Wilber approach. <http://integralvisioning.org/index.php>

In Up From Eden, Ken Wilber made the distinction of the select few on the growing tip of consciousness evolution (such as shamans, sages and saints) and the rest of the population. The phenomena of “Indigo Children” might be this growing tip of current evolution of consciousness similar to the children in Arthur C. Clarke’s science fiction novel Childhood’s End.

What is an indigo Child? From <http://www.indigochild.com/index.html>

“As a summary, here are the ten attributes that best describe this new kind of child, the Indigo Child (named by those who predicted it).

1. They come into the world with a feeling of royalty (and often act like it)
2. They have a feeling of "deserving to be here," and are surprised when others don't share that.
3. Self-worth is not a big issue. They often tell the parents "who they are."
4. They have difficulty with absolute authority (authority without explanation or choice).
5. They simply will not do certain things; for example, waiting in line is difficult for them.
6. They get frustrated with systems that are ritually oriented and don't require creative thought.
7. They often see better ways of doing things, both at home and in school, which makes them seem like "system busters" (nonconforming to any system).
8. They seem antisocial unless they are with their own kind. If there are no others of like consciousness around them, they often turn inward, feeling like no other human understands them. School is often extremely difficult for them socially.
9. They will not respond to "guilt" discipline ("Wait till your father gets home and finds out what you did").
10. They are not shy in letting you know what they need.”

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2. New Concepts Of Matter: Wave Structure Of Matter

“...[A]n electron is a continuous wave structure in space, not a material particle..[O]ur observation of point particles and electromagnetic waves are merely appearances... [Within this framework] the classic paradoxes, ‘renormalization,’ wave-particle duality, and Copenhagen uncertainty, no longer exist. **Unity of the Universe:** The wave medium – the space around us – is the ONE source of matter and the natural laws. Since the waves of each particle are intermingled with the waves of other matter and all contribute to the density of the medium, it follows that every charged particle is part of the universe and the universe is part of each charged particle ... [T]he dark side to the development of science ...helps understand why the science community has not sought the Wave Structure of Matter [framework].” p.14 in Wolff, Milo and Geoff Haselhurst “Einstein and the electron”

Sources

Wolff, Milo and Geoff Haselhurst (2004) “Einstein and the electron,” Frontier Perspectives, v.13, #2, 6-15

3.The Holographic, Undivided, Interconnected, Conscious, Spiritual, Reflexive, Self-Aware, Informed, Creative, Intelligent Kosmos [Universe] Pan-Psychism and Pan-Experientialism: “All The Way Up and All The Way Down”)

“There is neither spirit nor matter in the world; the stuff of the universe is *spirit-matter*. No other substance but this could produce the human molecule. I know very well that this idea of spirit-matter is regarded as a hybrid monster, a verbal exorcism of a duality which remains unresolved in its terms. But I remain convinced that the objections made to it arise from the mere fact that few people can make up their minds to abandon an old point of view and take the risk of a new idea... Biologists or philosophers cannot conceive a biosphere or noosphere because they are unwilling to abandon a certain narrow conception of individuality. Nevertheless, the step must be taken. For in fact, pure spirituality is as unconceivable as pure materiality. Just as, in a sense, there is no geometrical point, but as many structurally different points as there are methods of deriving them from different figures, so every spirit derives its reality and nature from a particular type of universal synthesis." Pierre Teilhard de Chardin “A Sketch of a Personalistic Universe” <http://www.gnosis.org/chardin.html>

De Quincey (2002) states (p. 264-5) “The underlying premise of radical naturalism (and therefore of panpsychism and panexperientialism) is the ...*assertion* – that mind cannot emerge from wholly insentient matter... [I]t is *inconceivable* that subjectivity could emerge from pure objectivity. If the world began as wholly objective matter-energy, without even a

minimal trace of subjectivity, then there is no conceivable way that first-person experience could ever emerge in the cosmos. The universe would always and forever be unexperienced and unknown. It would never contain a point of view... There would be no point of view, period. You simply can't get 'here' from 'there.'... [Thus] I am compelled to conclude that the universe could not ever have been *purely* objective. There must have been, *always*, something of the nature of subjectivity inherent in the universe... [T]he raw 'stuff' of the universe, its primordial 'matter' must have always possessed an 'interiority' (Wilber), a 'within' (de Chardin), an 'occasion of experience' (Whitehead), a quantum of consciousness (Young),... Matter... is and was always, intrinsically intentional, significant, and meaningful.”

In addition, I found Laszlo's books (2004) Science and the Akashic Field: An Integral Theory of Everything, and (2003) Connectivity Hypothesis, The Foundations of an Integral Science of Quantum, Cosmos, Life, and Consciousness, and most recently with 12 leading edge thinkers, (2006) Science and the Reenchantment of the Cosmos: The Rise of the Integral Vision of Reality really excellent for the big picture of how it all fits together. His “New Concepts of Matter, Life and Mind” is available at http://www.physlink.com/Education/essay_laszlo.cfm

Laszlo (2004) says “The factor required to create a genuine TOE [Theory Of Everything] is ... information -- ...as a real and effective feature of the universe ... [I]nformation extends far beyond the mind of an individual person or even all people put together ... [I]t is an inherent aspect of nature .. David Bohm called it ‘in-formation,’ meaning a message that actually ‘forms’ the recipient [also called ‘active information’] .. [I]n-formation is produced by the real world and is conveyed by a fundamental field that is present throughout nature. When we recognize that ... ‘in-formation’ is real and effective factor in the universe, we discover a time honoured concept – the concept of a universe that is ... constituted in the embrace of continuous fields and forces that carry information as well as energy. This concept – which is thousands of years old and has cropped up again and again in the history of thought – merits being known. First, because the energy – and information-imbued ‘informed universe’ -- is a meaningful universe ... Second, because understanding the essential contours of the informed universe does not call for having a background in sciences; they are readily comprehensible by everyone. And last but not least, because the informed universe is probably the most comprehensive concept of the world ever to come from science; ... a truly unified concept of cosmos, life and mind ... [T]he theory’s crucial feature [is that] at the roots of reality there is an interconnecting, information-conserving and information-conveying cosmic field ... [I]n the East they called it the Akashic Field ... [T]his field is being rediscovered. The effects ... are not limited to the physical world; the A-field ... informs all living things – the entire web of life. It also informs our consciousness.” (pp.2-3) “*The primary reality is the quantum vacuum, the energy- and information-filled plenum that underlies our universe, and all universes in the Metaverse.*” (p. 140, italics in original) “*To some extent and in some ways, all matter is conscious, and no consciousness is categorically immaterial.* And if so, there is no categorical divide between matter and mind.” (p. 146, italics in original)

Edgar Mitchell (transformed astronaut and founder of IONS – Institute Of Noetic Sciences) says
“In a higher state of consciousness ... we can enter into deep communication with the universe. In these states the awareness of every cell of the body coherently resonates with ... ‘the holographically embedded information in the quantum zero-point energy field.’”
(p. 149)

“The Indian Vedic tradition ... regards consciousness not as an emergent property that comes into existence through material structures, ... but as a vast field that constitutes the primary reality of the universe. In itself, this field is unbounded and undivided by objects and individual experiences, but it can be experienced in meditation when the gross layers of the mind are stripped away ... According to traditional cosmologies, the universe’s undifferentiated, all-encompassing consciousness separates off from its primordial unity and becomes localized in particular structures of matter [referred to as involution] ... [T]he proto-consciousness of the quantum vacuum becomes localized and articulated as particles emerge from it and evolve into atoms and molecules. On life-bearing planets they evolve further ...” (pp. 155-156)

“[T]he ideas, images, and impressions entering our consciousness have their source in the vacuum. The information carried in the vacuum’s A-field [plenum] is active and effective. Its range is vast; it embraces other humans as well as other forms of life, and all things in the universe. In integrating with it, it is not our individual body and our individual soul, but our individual *experience* that achieves immortality. We do not disappear from the world without a trace; all that we experience becomes part of the collective memory bank of humankind, to be read out again and again.” (p. 163, italics in original)

The popular book by the reporter Lynne McTaggart (2002) The Field: The Quest For The Secret Force Of The Universe, introduces cutting edge research and thought that “canonical science” has yet to grasp but which is important for understanding the field of Energy/Information psychology/psychotherapy. Information available at:
<http://www.wddty.co.uk/thefield/news.asp?showform=true>

Also, the Integral (AQAL = All Quadrant, All Lines) approach of Ken Wilber provides a very sophisticated model of involution and evolution (see section C.1. above).

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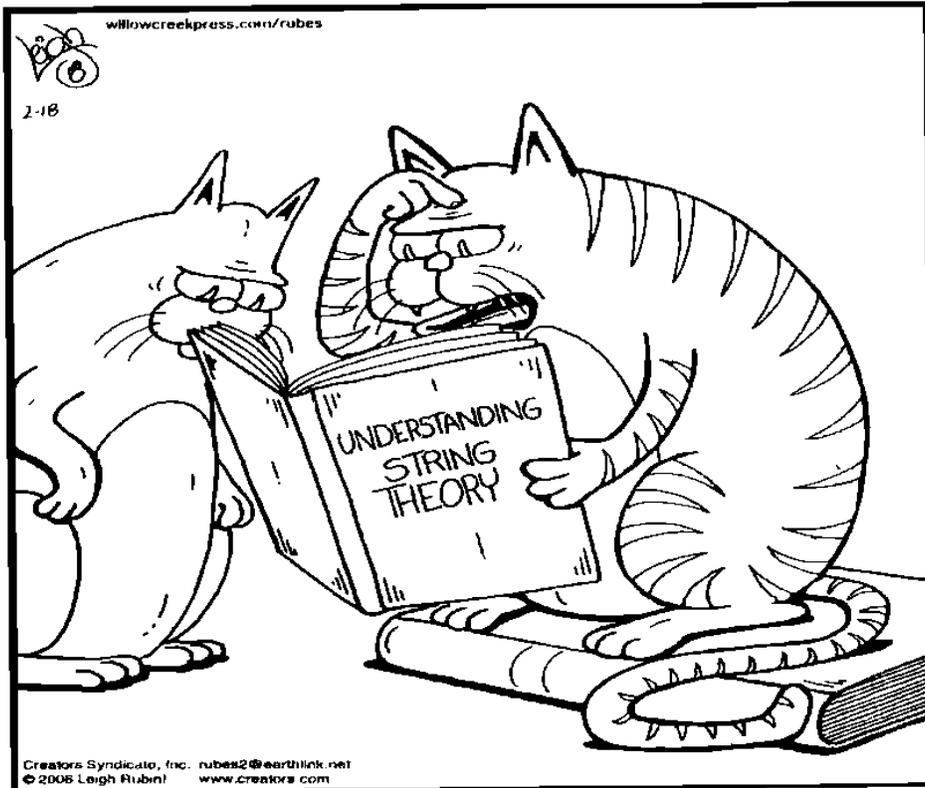
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RUBES



Cripes! All this stuff about quantum physics and grand unified theories is making my head spin! All I really wanted to find out is what makes playing with the stuff so fun.

D. PALEO-SCIENCE AND TECHNOLOGY

I (P.W.Warren) first learned of the work of Max Freedom Long regarding Huna in the late 1950's reading The Secret Science Behind Miracles and was completely "blown away." I used it (in the mid 1960's) as part of a course on Para-psychology at a Catholic University and, as a result, was "rejected" by both branches of fundamentalism (Scientific materialism of the psychology department head and Religion by the dean of education). As a result, I was "de-hired" and forced to seek employment elsewhere. I offer it as an example of "paleo science and technology." The movement is very much alive now at Huna Research, Inc. For current information see Huna Research, Inc; 1760 Anna Street, Cape Girardeau, MO 63701-4504 USA. 1-573-334-3478. web site : <http://www.angelfire.com/mo/huna/> See also the paper: "A brief summary of Max Freedom Long's approach to Huna, the traditional Polynesian psycho-religious system"

available on my website at: <http://www.rebprotocol.net/HUNA%20-A%20Polynesian%20Psycho--Religious%20System.pdf>

In my searches and readings I find that Eastern Europe and Baltic countries and their scientists and scientific organizations are much ahead of North America and Western Europe in exploring the interface of the paleo-sciences' technology and world view and modern (20th and 21st century) science and technology.

More and more evidence is accumulating to validate the paleo-sciences. And the meridian/chakra system is a paleo-science. For example from Russia: Konstantin G. Korotkov's Gas Discharge Visualization (GDV) technique is a measurement technology for accessing the body's energy system. GDV gives a very complete assessment of the status of the energy system and monitors changes as a result of interventions.

This approach of using the GDV for a dependent variable gives a detailed assessment of the state of the body's energy system but the equipment is expensive. The GDV measure is a valuable objective dependent variable that could greatly advance the field. Of course the GDV is not yet recognized much in North America but it will be eventually.

Sources for GDV

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For pictures <http://www.sacredoilsofkrishna.com/gdv.html> and <http://www.gdvusa.org/>

For a view of equipment <http://www.kirlianresearch.com>

Published literature on GDV http://kirlianresearch.com/gdv_literature.html

Some publications of Dr. Korotkov and co-workers

http://www.kirlian.org/gdvresearch/korotkov/papers_by_Korotkov.html

Tom J. Chalko resources <http://www.thiaouba.com/kirc.htm> and

<http://www.kirlian.org/kirlian/korotov/thaiouba/meditat.htm> and

<http://www.kirlian.org/kirlian/korotov/thaiouba/nontraduse.htm> and

<http://nujournal.net/choice.html>

Finally, my recent discoveries of the Russian researchers' paleo-science and paleo-technology from ancient Egypt has further validated my belief that these are fruitful areas for modern

(21st century) research which leap over the limitations and rigidity of canonical orthodox North America and Western European science. I strongly recommend you check out the information on the Wands of Horus published by Dr. Valery Uvarov, Head of the Russian National Security Academy, Department of UFO Research, Paleosciences and Paleotechnology. It was available (2005 Nov) at http://www.neilos.org/wands_info.htm It will provide you with an very rigorous and open minded view of frontier science compared with North American and Western European science. As I wrote above, I find that Eastern Europe and Baltic countries and their scientists and scientific organizations are much ahead of North America and Western Europe. The fear and closed mindedness apparently has not infected them.

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E. APPLICATIONS OF THIS PERSEPCITVE TO MENTAL AND PHYSICAL HEALING AND FUNCTIIONING.

1, General Energy/Information Medicine

An overview of measurement and treatment equipment approaches in energy medicine is provided by Karl Maret (2000) "Explorations at the Frontier of Energy Medicine" Bridges Quarterly Magazine of the International Society for the Study of Subtle Energies and Energy Medicine, v.11, #4, Winter, pp. 14-18 (contents available at <http://www.issseem.org/bridges.html>) Article available at http://www.iaam.nl/_fundamental/00010000.htm

The Three Eras in the Evolution of Medicine (Dossey, 2000, p. 19)

Each era transcends and includes the previous one.

- Era one:** Mechanical, material or physical medicine. Description: Causal, deterministic, describable by classical concepts of space-time and matter-energy. Mind is not a factor; Mind is a result of brain functioning. Examples: Any form of therapy focusing solely on effects of things in the body; techniques such as acupuncture and homeopathy, the use of herbs, etc. Almost all forms of “modern” medicine – drugs, surgery, irradiation, CPR, etc.
- Era Two:** Psychosomatic, Mind (brain functioning)-body medicine. Description: Mind is a major factor in healing *within* the single person; mind has causal powers. Medicine is thus not fully explainable by classical concepts in physics. It includes but goes beyond Era one. Examples: any therapy emphasizing the effects of consciousness solely within the individual body; psychoneuroimmunology, counselling, hypnosis, biofeedback, relaxation therapies, and most of imagery-based “alternative” therapies.
- Era Three:** Nonlocal or Eternity Medicine. Description: Mind is a factor in healing both *within* and *between* persons. Mind is not completely localized to points in space (brains or bodies) or time (present moment or single lifetimes). Mind is unbounded in space and time and thus is ultimately unitary or Divine. Healing at a distance is possible. Not describable by classical concepts of space-time or matter-energy. Examples: Any therapy in which effects of consciousness bridge between different persons; all forms of distant healing, intercessory prayer, and transpersonal imagery.

The sophisticated and practical approach to subtle (psychic) healing by Russian physicist/healer Nicolai Levashev is outlined in Koopman, and Blasband. The Term “anisotropic” refers to the non-uniform or non-homogeneous aspects of a system (both the universe and the biological system).

Editorial: T. M. Srinivasan, “Non-Linearity, Anisotropy and Healing” Subtle Energies & Energy Medicine .(2003, actual published in 2005) v.14 #2, pp. i-iv

”...The characteristic of space in the cardinal directions is given the name anisotropy. In other words, if we consider the three spatial directions, the properties (for example, the velocity of electromagnetic energy propagation) are not the same in the three directions. This may seem trivial and of the theoretical interest only, especially if the difference in the velocities is minute. However, it could imply that efficacy of the ‘healing wave’ to travel to certain locations may be compensated! The efficacy of distance healing may depend on factors such a magnetic lines of forces of the earth, longitude, latitude, lay lines (acupuncture channels of the earth?), rivers (both below and above ground) and other physical and environmental juxtapositions. Space is anisotropic; so also are the earth and the sea. The human body is anisotropic too since we know that acupuncture signals, for example, course through certain preferred paths only. The body tissues, bones, muscles, nerves and major blood vessels all seem to obey an unwritten law of anisotropy. Perhaps the subtle body is also anisotropic. Then, is the spirit also anisotropic? Does it have

preferences in expression and activity? Perhaps not. It is said ... that at $t = 0$, when evolution was about to start, all (without defining this 'all') was isotropic; the tension between gunas (characteristics of intelligence, activity and inertia or, in our terms, information, energy and matter) were all in equilibrium. The evolution starts when the gunas get to be anisotropic. Thus both in philosophic and scientific outlook, we say anisotropy is a characteristic of evolution – whether at the gross or the subtle level.”

“As seen above, nature is anisotropic and to understand her better, we need non-linear modeling. The more we try to understand nature, the more we are drawn into complex mathematics and move closer to a better prediction of clinical outcomes. In healing, even time seems to be non-linear. It is difficult to predict at what time after a healing session the effects could be observed. After a ‘gestation’ period, as it were, for cleansing and realigning of the body, an effect could be seen. This is not helpful to a researcher if she or he wants to study the changes during or just after a healing session. Perhaps, each type of healing could have its own response time, making this time non-linearity unique, further confounding the measurements.”

“We may say then, anisotropy is the characteristic of the universe that we need to deal with in holism as much as in physical sciences. How profound this I effect could be in healing is difficult to detect at this time. In the ... paper, ‘Psychic Healing and the Anisotropic Universe,’ Drs. Barbara G. Koopman and Richard A. Blasband examine the.. theory and healing practice of Nicolai Levashov and report ... cases of healing by that physicist-healer. In Levashov’s theory, the spatial anisotropy is applied to understand the evolution of the universe as well as to conceptualize the underpinnings of non-local healing. Based on his theory, Levashov conducts healing and teaches his method to others. The authors say: ‘Healers . . . must do what nature does: choreograph -- at the healing site -- the necessary materials and parameters for supporting their work.’ The actual work of healing consists of mimicking nature in dissolution and creation; dissolve the sick cells and re-create healthy ones. How this is actually done is not discussed in this paper; however, Levashov trains others to be effective healers based on his model....”

Psychic Healing and the Anisotropic Universe

Abstract: available at: <http://www.issseem.org/V14N2Abs.html> “Drawing on his training in advanced physics and quantum theory, together with an in-depth questioning of the latters' known inconsistencies, physicist/psychic healer Nicolai Levashov has concluded that the universe is anisotropic, i.e., non-uniform in spatial structure. This concept while backed by serious support in the field of astrophysics, runs directly counter to the classic view that the structure of space is uniform (isotropic) -- which holds that space has the same qualities and properties in all directions and that matter, therefore, must manifest similarly all directions of space.”

“However, Levashov, from his dual perspective of healer and physicist, believes that spatial anisotropy plays a pivotal role in all creation, both macro- and microcosmic. This process unfolds through the eternal interplay of subtle and physical matter in quantized space, which, he concludes, is the cradle of all creation, and is *governed by specific and quantifiable parameters* resulting from spatial anisotropy. Levashov has laid out the mathematical formulation of this process.”

“A healer, trained by Levashov to access an advanced state of consciousness and elevated energy potential, must draw on this understanding of the universe, in order to orchestrate the creation or dissolution of matter for healing purposes, in accordance with natural law.”

“Levashov basic training of a healer is described, along with the attendant pitfalls and challenges. The steps of the healing process itself, e.g., scanning, detoxification, cellular ablation and regeneration, etc., are detailed in the light of Levashov's cosmological position; and two fully documented cases are presented of children with classically incurable problems, successfully treated by Levashov.”

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2. Energy/Information Psychology And Psychotherapy

Energy/Information psychology/psychotherapy works on a very subtle (quantum?) biological level. Thus, the research paradigms and accompanying theory need to be focused on this level, and from there tie it to the more gross level of neurology, chemistry etc. with the eventual behavioural outcome of healing, stress release, and even transformation.

See my web site www.rebprotocol.net for much more information on this and other topics.

Definition of Energy Psychology provided by ACEP (Association of Comprehensive Energy Psychology) ACEP Website: <http://www.energypsych.org> "Energy psychology is a family of mind/body techniques that are clinically observed to consistently help with a wide range of psychological conditions. These interventions address the human vibrational matrix, which consists of three major interacting systems:

- Energy pathways (meridians and related acupoints)
- Energy centers (chakras)
- Human biofield (systems of energy that envelop the body)

Research summaries and overviews available at:

- http://www.innersource.net/energy_psych/epi_research.htm and
<http://www.rebprotocol.net/overviewfeinstein.pdf>
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