



DELTA LIFE SKILLSsm



EMOTIONAL FREEDOM IS IN YOUR HANDS with REBsm

Integral Energy Psychology

Phillip W. Warren, B.A., Ph.C., Zetetic Scholar, Professor Emeritus

4459 52A St., Delta, B.C., V4K 2Y3 Canada

Phone and voice mail: (604) 946-4919

E-Mail: phillip_warren@telus.net

Website: www.rebprotocol.net

U.S. mailing address: P.O. Box 1595, Point Roberts, WA 98281-1595

Δ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞X

PART ONE: THE RADIANT ENERGIES BALANCE (REB)sm PROTOCOL: PHILOSOPHY/RESEARCH/THEORY BACKGROUND©

Section:

13. Quantum theory interpretations of the functioning of the nervous system and implications for energy/information therapies

13.1. Introductory thoughts

13.2. Some history and epistemological clarity ala Wilber

13.2.1. The four phases of Wilbers thinking

13.2.2. Phase four critique

13.2.3. Three major domains of knowledge with their aspects of proof and types of interpretative "category error"

13. QUANTUM THEORY INTERPRETATIONS OF THE FUNCTIONING OF THE NERVOUS SYSTEM AND IMPLICATIONS FOR ENERGY/INFORMATION THERAPIES

13.1. INTRODUCTORY THOUGHTS

This "Quantum" concept has been one of the buzz words used by many, some with very dubious justification. There exists "quantum healing,"(Chopra, 1989) "quantum psychiatry,"(Powell, 2002), the "quantum brain" (Satmover), "quantum nutrition," the "quantum self," (Zohar, 1990) the "quantum society," (Zohar and Marshal, 1994) and "quantum nail care!" (Dossey, 1999) Notwithstanding, the quantum concept is a major construct used by various attempts to explain consciousness. Some of the major researchers and theorists in the field are Hameroff and Penrose, Mercer, Ho, Mitchell, Pribram, and the brilliant researchers, theorists and practitioners of the Belgrade school: Jovanovic-Ignjatic, Rakovic, Rakic, Kostopoulos, and Koruga. The Balkan states and Russia are far ahead of North America in this area of research and practice. A related field of active research is that of "Neurotheology." (see the work of d'Aquili, Herzog et al, C.P. Johnson, Joseph, Newberg and Persinger, Rmachandran and Blakeslee, Zohar and Marshall among others). See also the Center for the Study of Religion and the Brain.

"[Philosopher David] Chalmers points out that even if we knew the activities of each and every neuron, synapse, ion channel, receptor, molecule, etc, in our brain at a given instant correlated with a given mental state, it still wouldn't tell us anything about experience, or about why we have an inner life.... Chalmers's 'hard problem' [concerned]...the nature of experience. What is our inner life, our experience, or 'qualia'? Chalmers concluded that experience is fundamental--an irreducible

feature of reality like, for example, charge, mass or quantum spin. This is in line with a long history of panpsychist/panexperiential philosophy. People like Leibniz in the 18th century and Russell, Whitehead, and Wheeler in this century saw the universe as being composed of fundamental units or events, each having a primitive psychological being. Whitehead's panexperiential view seems most consistent with modern physics. He said that consciousness is a process of events occurring in a wider, basic field of raw proto-conscious experience. Whitehead's events, which he called 'occasions of experience,' are quite comparable to quantum state reductions, as pointed out by the philosopher Abner Shimony. This suggests that consciousness may involve a self-organizing process of objective reductions occurring at the Planck scale." (Hameroff, 1997, p. 73, 76)

At any rate, using my simple minded (digital) computer analogy, the above researchers and theorists are working on the hard ware (wet ware!) that allows the observed/experienced mental and spiritual consciousness phenomena of the Upper Left (the soft ware?) to operate efficiently. Since the field of energy/information (both concepts are necessary. See Rubik, 1995a and b)) deals with these more subtle phenomena and since quantum theory deals with more subtle (compared to 19th century models of the universe) phenomena, the relationships between quantum theory and energy/information medicine/psychology theory and practice seems very fruitful. Thus, I dive into a field WAY out of my sphere of competence (psychology, social, educational, developmental etc.) to give some general background for future thought about the theoretical processes involved in energy/information practice.

13.2. SOME HISTORY AND EPISTEMOLOGICAL CLARITY ALA WILBER

13.2.1. THE FOUR PHASES OF WILBERS THINKING

(see <http://www.integralworld.net/>)

"Ken Wilber's oeuvre can be divided into four phases (see his book *The Eye of Spirit*, 1997b and the extensive overview provided by Reynolds, 2004).

"Phase 1 (1977-1979), which he himself characterizes as his "romantic-Jungian" phase. Like many romantic philosophers and Jungian psychologists, he sees spiritual growth as a (complete or partial) return to a condition which existed in the past, but which has been lost during the process of growing up, c.q. cultural history."

"Phase 2 (1980-1982), in which he shifts to developmental psychology as larger context to integrate Eastern and Western psychology. Spiritual growth he now sees as something that comes after growing up. In other words, we have not lost God, we grow into Him, by a gradual process of development."

"Phase 3 (1983-1987), in which he refines his model of development over the years. Development is no longer understood as a homogenous process, in which the self passes through a number of stages respectively, but as a complex process, consisting of several lines of development (cognitive, emotional, social, spiritual, etcetera) and the self somehow has to maintain a delicate balance between these lines."

"In the years 1987-1995 he does not publish much, due to personal circumstances, primarily because his wife gets ill and dies in 1989. This period is chronicled in the book *Grace and Grit* in 1991."

"Phase 4 (1995-present), in which he adds a socio-cultural dimension to his model of individual

development, and gives more attention to neurological processes that are involved in consciousness. With his image of the four quadrants (intentional, neurological, cultural and socio-economic) he demonstrates the interdependency of these dimensions, and the one-sidedness of views that base themselves on only one quadrant, and doubt the validity of the other quadrants."

13.2.2. PHASE FOUR CRITIQUE

I just want to again point out that, in terms of Ken Wilber's (2000) four Quadrant Integral Model, the ideas in this section mainly deal with the more subtle aspects of the Upper Right quadrant. Whether or not they will eventually provide a bridge to the Upper Left quadrant domain remains to be seen. Certainly, the above mentioned researchers think so. In the early 1980s, when two physics concepts became popular (quantum theory and the holographic paradigm), (Wilber, 1982b and 1984). Wilber pointed out the problems in hitching spirituality and consciousness on to physics, no matter how advanced. Friedman's book (1990) titled Bridging Science and Spirit: Common Elements in David Bohm's Physics, the Perennial Philosophy [as laid out by Ken Wilber up to 1983] and Seth seeks to "integrate it ALL." Wilber's Marriage of Sense and Soul: Integrating Science and Religion (1998) argues for a more generic concept of science other than its current identification with specific subjects and methods of study. For example, the discipline of meditation is just as rigorous as any scientific method and it discovers domains of reality that empirical (sense data) science can not. There is considerable debate about where "subtle energies" fits into this model since the UR quadrant is getting mighty full!

Ken Wilber's (2000) four Quadrant Integral Model (see figure below reproduced from section 6), looks at the Kosmos in terms of the Upper Left quadrant ("I"-Interior-Subjective-Individual-Intentional) and the Upper Right quadrant ("It"-Exterior-Objective-Individual-Behavioural) approaches to human functioning. The other two lower quadrants refer to collective approaches to human functioning (LL: "We"-Interior-Subjective-Collective-Cultural and LR: "Its"-Exterior-Objective-Collective-Social)

Interior	Exterior	
I UL Interior-Subjective-Individual Intentional	IT UR Exterior-Objective-Individual Behavioural	Individual
WE LL Interior-Subjective-Collective Cultural (worldspace)	ITS LR Exterior-Objective-Collective Social (system)	Communal or Collective
Left Hand	Right Hand	

Figure 13.1. The Four Quadrants of Knowledge about the "Kosmos" (the totality of reality)

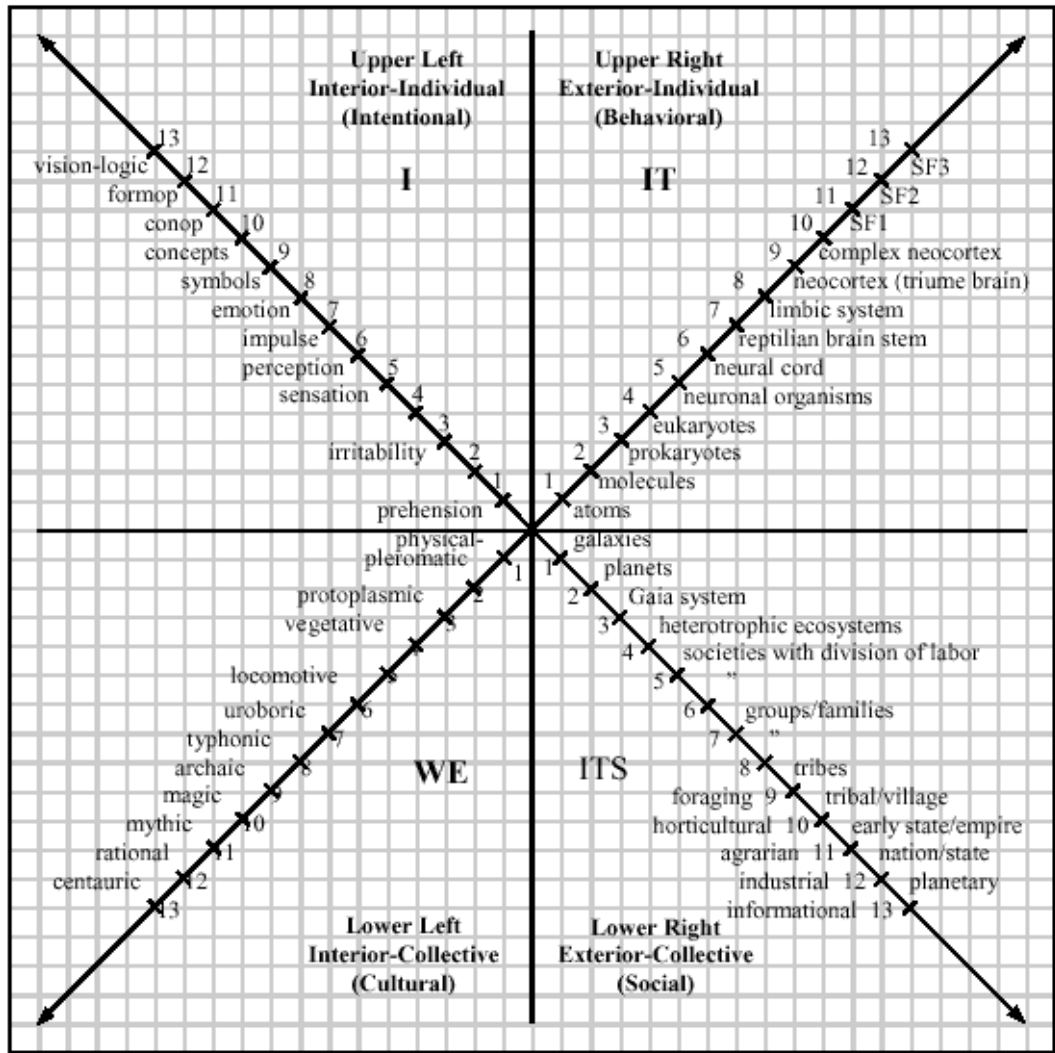


Figure 2. The Four Quadrants

Figure 13.2. Some Detail in the 4 quadrants. Figure 2 from Collected Works of Ken Wilber vol. 8

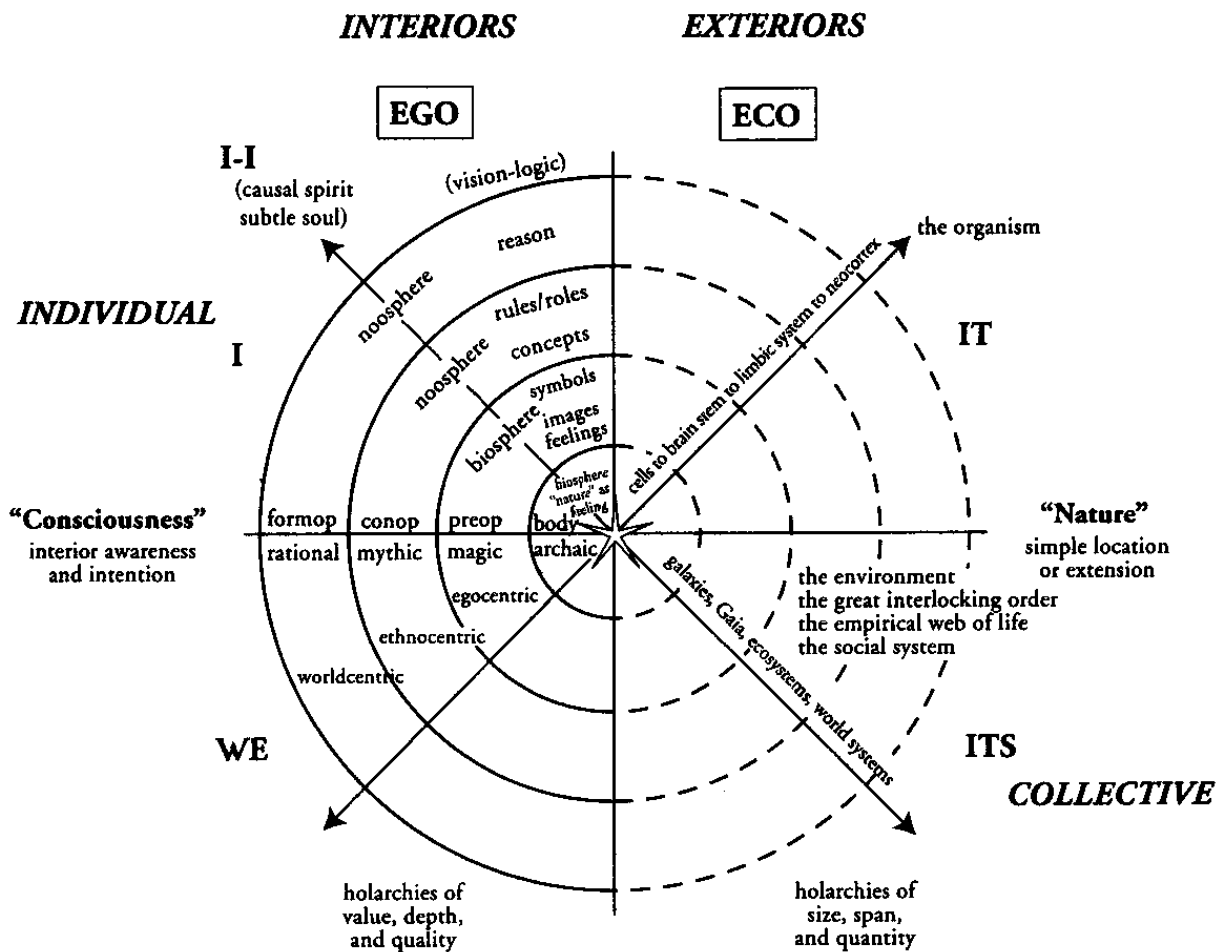


Figure 13.3. The Great Nest of Being and the 4 quadrants before modernisms collapse into right hand “flat land” by scientism.

"The perennial philosophy maintains that reality is a Great Hierarchy of being and consciousness, reaching from matter to life to mind to Spirit. Each dimension [level] transcends and includes in junior dimension [level] in a nested holarchy, often represented by concentric circles or spheres." (Wilber, 1996, p.36) "Spirit transcends all, so it includes all. It is utterly beyond this world, but utterly embraces every single holon in this world. It permeates all of manifestation but is not merely manifestation." (Wilber, 1996, p. 38) "Human identity can indeed expand to include the All...The *ultimate depth* is an ultimate oneness with the All, with the Kosmos. But this *realization* is *not* given *equally* to all beings, even though all beings are equally manifestations of Spirit. This *realization* is the result of a developmental and evolutionary process of growth and transcendence." (Wilber, 1996, p. 39) "Spirit is *unfolding* itself in each new transcendence, which it also *enfolds* into its own being at the new stage. Transcends and includes, brings forth and embraces...unfolds and enfolds...[In summary] because evolution goes *beyond* what went before, but because it must *embrace* what went before, then its very nature is to transcend and include, and thus it has an inherent directionality, a secret impulse, toward increasing depth, increasing intrinsic value, increasing consciousness. In order for evolution to move at all, it must move in those directions -- there's no place else for it to go!" (Wilber, 1996, p. 41)

One of Wilber's main criticisms of modern thought and science (especially psychology) involves the misapplication of the truths and advantages of "The Age of Reason" (The Enlightenment). This revolution freed thought from mythic dominator hierarchies and recognized a much broader view of reality and the beginnings of the scientific method; an "all-Quadrant" worldview. However, we became limited to only using the empirical-scientific world view and outlook. He refers to this as "Flat Land" in that all the Great Hierarchy of being and consciousness ends up reduced to only one level and method. All thought became reduced to the right hand half of the 4 quadrants (Wilber, 2000, pp. 70-71)

Thus, during "The Age of Reason" (The Enlightenment), the fields of knowledge expanded, and all four quadrants were acknowledged, but the many levels within each quadrant were eventually collapsed and not recognized; they were flattened.

One of the confusions which became our modern science occurred when the philosophies (and later psychology's) of modernity recognized that the UL quadrant inner states had correlates and correspondences to the UR empirical observables. The unfortunate result was to say that these observable empirical correlates can be treated as the same as the inner experiential states. Then modern psychology went one step further and, in the psychology of the empty organism, denied the inner even existed; certainly if they did exist they were of no importance and wasted valuable time and talent when researched (the most extreme was that of B.F. Skinner and his radical behaviorist followers). For instance, since the observable events of Rapid Eye Movements (REMs) and certain patterns of brain waves occur during dreaming, the error was to say that we can learn all we need to know about dreams by studying the observables. The study of the inner world of dreams became, for a while, not worthy of scientific study.

Who first used the word *Psychology* is still debated but the New Princeton Review of 1888 defined it as "the science of the psyche or soul." Most historians of psychology see the progress of psychology as a rescue from contamination by concepts of soul or spirit. Gustav Fechner developed what now is called "psychophysics" which involves the precise measurement of the relation between a physical stimulus and the individual's response to it. This was a milestone in the evolution of a truly SCIENTIFIC psychology. However, Fechner's real interest was captured in his 1835 book titled Life After Death with the opening lines: "Man lives on earth not once, but three times: the first stage of his life is continual sleep; the second, sleeping and waking by turns; the third, waking forever...his life interwoven with...universal spirit...a higher life." (Wilber, 2000, p. viii-ix). Thus, the originator of the ultimate in psychological precision measurement with his Elements of Psychophysics, had a firm ground in mysticism, a fact that has been suppressed in modern psychology as an unfortunate lapse of reason by an otherwise sane man. Ken Wilber says "the roots of modern psychology lie in spiritual traditions, precisely because the psyche itself is plugged into spiritual sources...and the study of psychology ought ideally to be the study of *all* of...body to mind to soul..."(Wilber 2000, pp. ix) "Fechner's approach to psychology was thus a type of *integral approach*: he wished to use empirical and scientific measurement, not to deny soul and spirit, but to help elucidate them." (Wilber 2000, p. xi) (I refer to this as "spiritual behaviorism" by which I mean that the philosophy has concrete behavioural results, not "mere" ideas.)

The history of psychology has been described as: First it lost it's soul, then it's mind, then consciousness. Gradually it regained consciousness, then found its mind and now seeks to recover its soul. The last recovery started in earnest in the 70's with the foundation of the *Association for Transpersonal Psychology*, an outgrowth of Maslow's and others *Association for Humanistic Psychology*. The Association for Transpersonal Psychology has yet to be acknowledged in the

overwhelming percentage of academic psychology texts. Indeed, I maintain that North American academic psychology remains rabidly phobic about the subject of soul/spirit and what have you. When I talk to introductory psychology classes, I ask them "Does psychology deal with or acknowledge the essence of the human animal?" They don't even know what I'm referring to. So I then go into my favorite rant and introduce them to energy psychology and related approaches which are my current passions since they have both important philosophical, theoretical and applied contributions to make.

Today, a discipline is respectable and listened to the extent it can precisely measure what it is talking about (assign a number system). But numbers do not have inherent characteristics of value (one number is not more valuable than another; simply bigger or smaller). To reduce all reality to a quantitative issue collapses the value hierarchy (chain of being) to the sense data empirical level (lowest level). When higher dimensions or levels are represented on lower ones they necessarily lose something. For example, a three dimensional sphere reduced to two dimensions produces a series of circles. Worse still, when the sphere is cut at different angles through the center (basically the same operation in three dimensions), it will be represented by very different results in two dimensions: everything from a straight line through various ellipses to a circle and back. Thus, the operation in three dimensions appears different in two, while in really real reality (3D in this example) they are the same basic procedure but produce wildly different results in the lower (2D) reality. (see the funny and enlightening allegory Flatland: A Romance of Many Dimensions by E.A. Abbott for the original story of this dilemma; Alexander Dewdney has computer created a 2-D planet named Astra, Omni, May, 1983, p. 118).

Because empirical science remains the prestige term, we mistakenly say that if something can not be scientifically proven, then it is not true, real, valid, important etc. There still exists too much invidious comparison among the various disciplines which claim to be scientific as to who is the most scientific/empirical. Science is a very useful and necessary method of gaining empirically based knowledge. It is increasingly less relevant as one moves beyond sense data. You end up using a 3 dimensional framework for studying N dimensional phenomena (Wilber in his most recent work says it becomes a "flatland.") You never see these phenomena "in the flesh"; at best all you see are certain effects and manifestations of the trans-empirical. Beyond that, the sense data are silent. You can not map higher dimensions point for point to a lower dimension and thus no data in the lower can capture all the higher. You may, in your attempt to do so, merely end up confusing the map with the territory. Sense data may be an indicant of higher order phenomena (e.g., a verbal description of an experience indicates that something is going on inside but does not capture it, prove it, etc.). This is true also trying to use just words to describe a sense experience, i.e. describe the taste of a strange fruit using only words. Other methods must be used such as metaphor, analogy, or an "experiential display" ("Here. You taste it").

An earlier (phases 1 and 2) formulation from Wilber (1979, 1982a, 1983a) is outlined in the following tables. He uses the "3 eyes" metaphor to discuss the levels of epistemology and methodology. (see Edwards, 2000 for an analysis of this approach)

13.2.3.THREE MAJOR DOMAINS OF KNOWLEDGE WITH THEIR ASPECTS OF PROOF AND TYPES OF INTERPRETATIVE "CATEGORY ERROR"

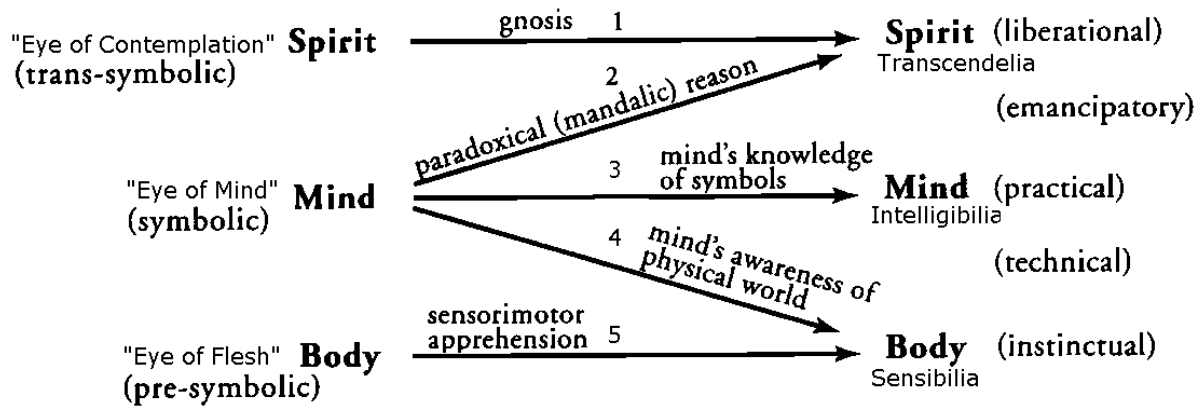


Figure 13.4. A diagram of the 5 general modes of cognition

Empiricism: "Eye of Flesh": we know by using our senses and can generalize from specifics using induction. Truth is given about our daily life or, using the more elaborate approach of science, about more subtle aspects of physical reality. The final court of appeal in determining truth is to sensory experience or its extensions.

1. Proof Involves:

- a. Training/education of the "eye of flesh": For everyday purposes the senses as given are usually sufficient but most specialties require special sense abilities. You learn the methods of research for a given discipline (observation techniques, measurement devices, use of equipment, experimental techniques etc.) and the general rules of evidence for science. This has been codified as "the scientific method."
- b. Ability/knowledge gained as a result of training: Ability to function in and gain knowledge about the physical world (from common sense to advanced scientific and technical knowledge). Knowledge of how to design, conduct, evaluate, refine and communicate research to answer specific questions; how to define, measure, and specify relevant variables (e.g., operational definitions); how to communicate research to other similarly trained researchers so that they can replicate studies.
- c. Social/consensual outcome: Acceptable level of agreement on everyday definitions of physical reality. Scientific/discipline consensus as to what is "real" and "appropriate" for research. Replication of research, exchange of results/methods/ideas between members of the discipline through organizations, meetings, conventions, schools, journals, newsletters and informal networks. Building on others' work.

2. Interpretative Category Errors: The authoritarian/dogmatic assertion that ONLY sense data provide a valid basis for proof (Locke, Quine, the "positivists") and can ALONE generate all knowledge (scientism). Anything not amenable to this criterion is not true or valid. It is interesting that in our culture the word "non-sense" has such negative connotations-it reflects our empirical prejudice.

- a. Applied to the mental domain: Since you can not sense others' thoughts, reasons, beliefs, images, etc. they are not real and do not exist (radical behaviorism). The truth of a logical or mathematical statement or the meaning of a play do not lie in the mere sensing of them. Their truth lies beyond sense data although the senses are used to relate to them (e.g., computing the percentage of use of various colors in a painting to determine its meaning/worth or counting the number of symbols in a math equation to determine its usefulness are "senseless" acts.)
- b. Applied to the transcendent-intuitive domain: Since you can not sense others' experiences/intuitions of God, Brahman, the ultimate, angels and other archetypal symbols etc. (i.e., any of the claims of mystics) they are not true, real or valid. It is true that they are "non-sense" (not discoverable by the physical sense organs) but they are "experience-able" (possibly using higher "senses", "third eye").

Rationalism-Idealism: "Eye of Reason": Rationalism says that if something is not logical/reasonable (follow the rules of some logical system) it is not true. Clear, precise logical deduction is the final court of appeal. For idealism the "self evident truths" of the mind are the true reality.

1. Proof Involves:

- a. Training/education of the "eye of reason": Learn the conventions of the symbol systems of language, math, logic, reasoning principles of proof/form/order/consistency/analysis/synthesis. Learn the conventions of aesthetics and criteria of quality.
- b. Ability/knowledge gained as a result of training: Able to communicate using the symbol system, able to generate psychological/social/philosophical/artistic systems and works, new systems of thought, demonstrate logical truths, new aesthetic domains.
- c. Social/consensual outcome: Agreement on what is real/true/valuable/beautiful; general quality/value agreements. Social values/norms/rules/conventions. Philosophical/psychological/aesthetic systems (schools of thought and practice) with their attendant social arrangements. General cultural/social belief systems.

2. Interpretative Category Errors: The authoritarian/dogmatic assertion that ONLY reason (rationalism-Descartes, Leibniz) or thought (idealism-Hegel, Berkeley, Schopenhauer, Kant, Bergson) are valid and can alone generate all knowledge.

- a. Applied to the sensory domain: the attempt to deduce scientific fact or sensory evidence without recourse to observation. Scholasticism--read an authority like Aristotle rather examine the object directly. Solipsism -- there is no way to prove that physical reality exists since it could be just my creative imagination/thought.
- b. Applied to transcendent-intuitive domain: Attempt to reduce intuitive thought to a strictly logical method (e.g., "artificial intelligence" research). Derive value statements from purely logical thought. Attempts to develop logical proofs of God and the ultimate.

Transcendentalism/Intuitionism/Mysticism/Gnosticism: "Eye of Contemplation": Truth can be known by immediate apprehension. The final court of appeal is revelation, direct intuition of the truth or the ultimate.

1. Proof Involves:

- a. Training/education of the "eye of contemplation": Taking up a valid spiritual discipline and practice; bypassing the other two eyes to allow the "still small voice" to be manifest. Various meditation practices, monasticism, religious disciplines, etc.
- b. Ability/knowledge gained as a result of training: Able to transcend the limitations of senses and thought (still the mind); illumination, revelation, experiencing archetypal forms, transcendence of limitations of lower levels, unity of all, "no boundary" state, inexpressible bliss, "the peace that passes all understanding".
- c. Social/consensual outcome: Intuitive and direct communication/communion/affinity with others and the universe; communal visions. Formation of religious communities, ashrams, religious organizations, belief systems, movements to convert others to join in the practice.

2. Interpretative Category Errors: The authoritarian/dogmatic assertion that ONLY revelation and intuition are valid and can alone generate all knowledge (similar to idealism, e.g. Berkely maintained that the physical universe was an idea in God's mind and thus did not disappear when one was not thinking of it). The "Guru trip"--everything the leader says or writes is absolute truth and not to be questioned.

- a. Applied to the sensory domain: Literal interpretation of sacred works regarding scientific and sensory domains, not acknowledging that all words about the ultimate contain paradox/contradiction and so must be treated as metaphoric and poetic attempts to express the inexpressible ("Creation Science" version of evolution/history/origins of the universe etc.; doctrine of the illusion of matter-"maya"; misinterpretation of the origins of disease such as in Christian Science; the cast system of India; saying that sex is evil when it is just a biological fact and thus on a lower level of the hierarchy).
- b. Applied to the mental domain: Much of esoteric religious writing, dogma and ritual read or performed without intuitive understanding of the underlying meaning ("mere ritual"); thought/belief which does not agree with the "authorities" is heresy; confusion of a social structure and ideology with the divine; using logical reasoning capacity as a proof of spirituality; words and thinking can lead to "heaven" or "hell".

As you will notice when you read through these tables, there is much disagreement within any domain let alone between domains. However, all valid systems agree that the three "strands" for the proof of an assertion are necessary (education, ability/knowledge, consensus) and all are involved in interpretation (model and theory building) which mediates between the knowledge gained and the social consensus aspects. (Edwards, 2000)

An understanding of the above distinctions and definitions can be of considerable value. The distinction of the three basic ways of gaining knowledge, methods of proof and "category errors", when properly applied and properly interpreted, help purify each domain to work best on the level of the ontology (Great Hierarchy of being and consciousness, dimension or level, "holarchy" of "holons," Great Chain of Being) most appropriate to it and stop making arrogant and invidious comparisons. We can stop the fighting and get on with the "search for truth."

Science can help philosophy and religion by separating out "eye of flesh" matters and eliminating the confusions with the matters of the eyes of reason and contemplation; it can liberate philosophy and religion from trying to be pseudo sciences (climb on the prestigious band wagon of "hard science"). Empirical science will never prove the truth of a logical statement or that God "exists".

Philosophers can stop trying to deduce both empirical facts and spiritual truths. Reason alone is not capable of grasping transcendent realities and so should quit trying to rationalize the ultimate.

In regard to valid religion, any issue that can be answered by science can be dispensed with in any significant discussion of philosophical meaning and religious inquiry. Even if all the scientific/empirical questions were answered, the fundamental issues would remain.

The "battle between science and religion" is, in this system, reformulated to a battle between the "bogus" and the "genuine", not between "lower" and "higher." "Genuine" science and religion means "experientially verifiable/refutable"; "bogus" means "dogmatic, non experiential, non verifiable/refutable". *"There is bogus or pseudo-science just as much as there is bogus or pseudo-religion*, and the only worthwhile battle is between genuine and bogus, not between science and religion. Accordingly, both genuine science and genuine religion are allied against pseudo, non-experientially grounded, dogmatic knowledge-claims (which infect all domains)...Here, 'science' refers not to any particular domain, high or low, but to a methodology based on experiential evidence and non dogmatic assertions, a methodology we want to apply to all genuine knowledge-claims on all levels." (Wilber, 1984c, pp. 21-22) See Wilber (1998) for an extended discussion of these concepts.

REFERENCES

- Chopra, D. (1989) Quantum Healing: Exploring the Frontiers of Mind/Body Medicine, Bantam Books
- d'Aquili, E.G. and A.B. Newberg (1993) "Liminality, trance, and unitary states in ritual and meditation," Studia Liturgica, v. 23, 2-34
- d'Aquili, E.G. and A.B. Newberg (1999) The Mystical Mind: Probing the Biology of Religious Experience, Fortress Press
- d'Aquili, E.G. and A.B. Newberg (2000) "The neuropsychology of aesthetic, spiritual, and mystical states," Zygon, v. 35, 39-52
- Dossey, L. (1999) "Healing and modern physics: Exploring consciousness and the small-is-beautiful assumption," Alternative Therapies in Health and Medicine, July, v. 5, #4, 12-15, 102-108
- Edwards, M. (2000) "The integral cycle of knowledge: Some thoughts on integrating Ken Wilber's developmental and epistemological models," Available at <http://www.integralworld.net/>
- Friedman, N. (1990) Bridging Science and Spirit: Common Elements in David Bohm's Physics, the Perennial Philosophy and Seth, Woodbridge Group
- Hameroff, S.R. publications <http://www.quantumconsciousness.org/publications.html>
- Hameroff, S.R. (1974) "Chi: A neural hologram?" American Journal of Chinese Medicine, v. 2, # 2, 163-170 Available at www.quantumconsciousness.org/documents/chi_hameroff_000.pdf
- Hameroff, S.R. (1982) "Information processing in microtubules," Journal of Theoretical Biology, v. 98, 549-561 Available at www.quantumconsciousness.org/documents/informationprocessing_hameroff_000.pdf
- Hameroff, S.R. (1987) Ultimate Computing: Biomolecular Consciousness and Nanotechnology, North Holland pubs
- Hameroff, S.R. (1994) "Quantum coherence in microtubules: A neural basis for emergent

- consciousness?," Journal of Consciousness Studies, v. , # 1, 91-118
- Hameroff, S.R. (1996) "Cytoplasmic Gel States and Ordered Water: Possible Roles in Biological Quantum Coherence," Proceedings of the Second Annual Advanced Water Sciences Symposium, Dallas, Texas, October 4-6. Available at www.quantumconsciousness.org/documents/chi_hameroff_000.pdf
- Hameroff, S.R. (interview by B. Horrigan) (1997) "Consciousness and microtubules in a quantum world," Alternative Therapies in Health and Medicine, v. 3, #3, 70-79. Available at www.quantumconsciousness.org/interviews/alternative.html
- Hameroff, S.R. (?date, accessed 2002 May) "Consciousness, the brain and space time geometry," from the Annals of the New York Academy of Sciences special issue Cajal and consciousness, 74-104
- Hameroff, S.R. (1998a) "Quantum computation in brain microtubules? The Penrose-Hameroff 'Orch OR' model of consciousness," Philosophical Transactions Royal Society London, (A) v. 356, 1869-1896 Available at www.quantumconsciousness.org/penrose-hameroff/quantumcomputation.html
- Hameroff, S.R. (1998b) "Anesthesia, Consciousness and Hydrophobic Pockets: A Unitary Quantum Hypothesis of Anesthetic Action," Toxicology Letters, v. 100/101, 31-39. Available at www.quantumconsciousness.org/penrose-hameroff/anesthesiahydrophobic.html
- Hameroff, S.R. (1998c) "Funda-Mentality: Is the conscious mind subtly linked to a basic level of the universe?" Trends in Cognitive Sciences, v. 2 #4, 119-127. Available at www.quantumconsciousness.org/penrose-hameroff/fundamentality.html
- Hameroff, S.R. (1998d) "Can quantum mechanics explain free will?" Available at www.quantumconsciousness.org/views/freewill.html
- Hameroff, S.R., (1998d) "More neural than thou (A reply to Patricia Churchland)," in Hameroff, S.R., Kaszniak, A.W. and Scott, A.C., (eds) Toward a Science of Consciousness II: The 1996 Tucson Discussions and Debates, Cambridge, MA: MIT Press, 197-213. Available at www.quantumconsciousness.org/penrose-hameroff/moreneutral.html
- Hameroff, S.R. (1996?) "Consciousness, The Brain And Spacetime Geometry," From The Annals of the New York Academy of Sciences special issue Cajal and consciousness 73-104 Available from www.quantumconsciousness.org/penrose-hameroff/cajal.pdf
- Hameroff, S.R. (?date, accessed 2002 May) "Quantum coherence has been demonstrated in the brain," ??? www.consciousness.arizona.edu/hameroff/New/Quantum_coherence/Quantum%20coherence.htm
- Hameroff, S.R. (2001, May 14) "Consciousness connects our brains to the fundamental level of the universe," available at www.kurzweilai.net/articles/art0183.html?printable=1, 30 pages
- Hameroff, S.R. (2003a) "Time, Consciousness and Quantum Events in Fundamental Spacetime Geometry" In: The nature of time: Physics, geometry and perception - Proceedings of a NATO Advanced Research Workshop, ed R Buccheri and M Saniga
- Hameroff, S.R. (2003b) "Whitehead and Quantum Computation in the Brain: Panprotopsychism Meets the Physics of Fundamental Spacetime Geometry," in Whitehead Process Network Compendium, ed M Weber Available at www.quantumconsciousness.org/Whitehead.htm
- Hameroff, S.R. (2004 in press) "A new theory of the origin of cancer: Quantum coherent entanglement, centrioles, mitosis and differentiation," Biosystems Available at www.quantumconsciousness.org/documents/cancerbiosys428.doc
- Hameroff, S.R., Alex Nip, Mitchell Porter and Jack Tuszynski (2002) "Conduction Pathways In Microtubules, biological quantum computation and consciousness" Biosystems, v. 64 (1-3):149-168 Available at www.quantumconsciousness.org/pdfs/conduction%20pathways_hamerof.pdf
- Hameroff, S.R. and R. Penrose (1995) "What gaps? Reply to Grush and Churchland," Journal of

- Consciousness Studies, v. 2, #2, 99-112. Available at www.quantumconsciousness.org/penrose-hameroff/whatgaps.html
- Hameroff, S.R. and R. Penrose (1996a) "Conscious Events as Orchestrated Space-Time Selections," Journal of Consciousness Studies, v. 3 #1, 36-53. Available at www.quantumconsciousness.org/penrose-hameroff/consciousness.html
- Hameroff, S.R. and R. Penrose (1996b) "Orchestrated Reduction of Quantum Coherence in Brain Microtubules: The 'Orch OR' Model for Consciousness," In: Hameroff, S.R., Kaszniak, A.W. and Scott, A.C., (eds) Toward a Science of Consciousness - The First Tucson Discussions and Debates, Cambridge, MA: MIT Press, 507-540. Available at www.quantumconsciousness.org/penrose-hameroff/orchOR.html
- Hameroff, S.R. and R. Penrose (1998) "Quantum computation in brain microtubules? The Penrose-Hameroff 'Orch OR' model of consciousness," Philosophical Transactions Royal Society London (A) v. 356:1869-1896 Available at www.quantumconsciousness.org/penrose-hameroff/quantumcomputation.html
- Hameroff, S.R., and Scott, A.C., (1998) "A Sonoran Afternoon," in Hameroff, S.R., Kaszniak, A.W. and Scott, A.C., (eds) Toward a Science of Consciousness II: The 1996 Tucson Discussions and Debates, Cambridge, MA: MIT Press, 635-643. Available at www.quantumconsciousness.org/penrose-hameroff/sonoran.html
- Hameroff, S.R., and Jack Tuszynski, (2003) "Search for Quantum and Classical Modes of Information Processing in Microtubules: Implications for 'The Living State'" In: Bioenergetic organization in living systems, Eds. Franco Musumeci, Mae-Wan Ho, World Scientific, Singapore Available at www.quantumconsciousness.org/Sicily.htm
- Hameroff, S.R., and Richard C. Watt (1982) "Information processing in microtubules," Journal of Theoretical Biology 98:549-561 (1982) Available at www.quantumconsciousness.org/documents/informationprocessing_hameroff_000.pdf
- Herzog, H., V.R. Lele, T. Kuwert, K.J. Langen, E.R. Kops and L.E. Feinendegen (1990-1991) "Changed pattern of regional glucose metabolism during Yoga meditative relaxation," Neuropsychobiology, v. 23, 182-187
- Ho, M.W. (1995) "Bioenergetics and the coherence of organisms," Neuronetwork World, v. 5, 733-750. available at www.ratical.org/co-globalize/MaeWanHo/prague.html
- Ho, M.W. (1996a) "The biology of free will," Journal of Consciousness Studies, v. 3, 231-244. available at www.ratical.org/co-globalize/MaeWanHo/freewill.html
- Ho, M.W. (1996b) "Bioenergetics and biocommunication," in R. Cuthbertson, M. Holcombe and R. Paton, eds., Computation in Cellular and Molecular Biological Systems 251-264, World Scientific, Singapore. available at www.ratical.org/co-globalize/MaeWanHo/biocom95.html
- Ho, M.W. (1997) "Quantum coherence and conscious experience," Kybernetes, v. 26, 265-276. available at www.ratical.org/co-globalize/MaeWanHo/brainde.html
- Ho, M.W. (1998a) The Rainbow and the Worm: The Physics of Organisms, 2nd ed., World Scientific Publishing Co., Inc.
- Ho, M.W. (1998b) "Evolution," in G. Greenberg and M. M. Haraway, eds. Comparative Psychology, a Handbook, 107-119, Garland Publishing. available at www.ratical.org/co-globalize/MaeWanHo/encyclo.html
- Ho, M.W. (1999) "Coherent energy, liquid crystallinity and acupuncture: Talk presented to British Acupuncture Society, October 2," available at www.ratical.org/co-globalize/MaeWanHo/acupunc.html
- Ho, M.W. (2000) "The organic revolution in science and implications for science and spirituality: 'Future Visions' State of the World Forum September 4-10 2000, New York," available at www.ratical.org/co-globalize/MaeWanHo/future.html
- Ho, M.W. (2001) "Thinking again of life's miracle: Lecture at Schumacher College 10th Anniversary Celebration," The Prince's Trust, Charlotte Road, London, April 7.

- www.ratical.org/co-globalize/MaeWanHo/lifesMiracle.html
- Ho, M.W., Julian Haffeege, Richard Newton, Yu-ming Zhou, John S. Bolton and Stephen Ross (1996) "Organisms as Polyphasic Liquid Crystals," Bioelectrochemistry and Bioenergetics, v. 41, 81-91, 1996. available at www.i-sis.org.uk/polypha.php
- Joseph, R. (1996) Neuropsychiatry, Neuropsychology, and Clinical Neuroscience, Williams and Wilkins
- Joseph, R. (2002) The Transmitter to God: The Limbic System, the Soul, and Spirituality, University Press California
- Jovanovic-Ignjatich, Z. and D. Rakovic (1999) "A review of current research in Microwave Resonance Therapy: Novel opportunities in medical treatment," Acupuncture & Electro-Therapeutics Research, v. 24, #2, 105-125. Available at www.iasc-bg.org.yu/Papers/REF%2035.pdf
- Marshall, I.N. (1989) "Consciousness and Bose-Einstein condensates," New Ideas in Psychology, v. 7, #1 (May), 73-83
- Marshall, I.N. (1995) "Some phenomenological implications of a quantum model of consciousness," Mind and Machines, v. 5, 609-620
- Marshall, I.N. (1996) "Three kinds of thinking," in S.R. Hameroff, A.W. Kaszniak and A.C. Scott (eds) Towards a Scientific Basis for Consciousness, MIT Press
- Persinger, M.A. Creator of the "God Helmet" www.laurentian.ca/neurosci/_people/Persinger.htm
Publications available at <http://www.shaktitechnology.com/index.htm>
- Persinger, M.A. (1993) "Vectorial cerebral hemisphericity as differential sources for the sensed presence, mystical experiences and religious conversions," Perceptual and Motor Skills, v.76, 915-930
- Persinger, M.A. (1997) "I would kill in God's name: Role of sex, weekly church attendance, report of a religious experience, and limbic lability," Perceptual and Motor Skills, v.85, 128-130
- Persinger, M.A. (1999) "Near-death experiences and ecstasy: A product of the organization of the human brain," In Sergio Della Sala, ed., Mind Myths: Exploring Popular Assumptions About the Mind and Brain. Wiley
- Powell, A. (2002) "Quantum psychiatry: Where science meets spirit," Nexus New Times, v. 9, #3, (May/June) 49-52, 73
- Pribram, K.H. (1971) Languages of the Brain: Experimental Paradoxes and Principles in Neuropsychology, New York, Brandon House
- Pribram, K.H. (1991) Brain and Perception: Holonomy and Structure in Figural Processing, Lawrence Erlbaum Associates
- Pribram, K.H. (1993) "Neural networks: quantum fields and biological data," Proceedings of the First Appalachian Conference on Behavioral Neurodynamics, Lawrence Erlbaum Associates
- Pribram, K.H. (1994) Origins: Brain and Self Organization, Lawrence Erlbaum Associates
- Pribram, K.H. (?1996, accessed 2002 Apr) "Status report: Quantum holography and the brain,"
- Pribram, K.H. (1996) "Quantum information processing in brain systems and the spiritual nature of mankind," Frontier Perspectives, v.6, #1, Fall/Winter, 7-16
- Pribram, K.H. (ed) (1993) Rethinking Neural Networks: Quantum Fields and Biological Data, Lawrence Erlbaum,
- International Anti-Stress Center, Belgrade, Yugoslavia. <http://www.iasc-bg.org.yu/e-sajt.html>
Conducts cutting edge research of Rakic, Rakovic and many others
- Rakic, L., G. Kostopoulos, D. Rakovic, and D. Koruga (eds) (1997) Proceedings of the First Annual ECPD International Symposium on Scientific Bases of Consciousness, Sep 24-26, Belgrade, Yugoslavia, Pub. European Center for Peace and Development (ECPD) of the United Nations University for Peace, Belgrade, Terazjic 41, Yugoslavia
- Rakovic, D. (1997) "Towards a new/old humanism: Transitional states of consciousness as a clue?," in Rakic, L., G. Kostopoulos, D. Rakovic, and D. Koruga (eds) (1997) Proceedings of the

- First Annual ECOPD International Symposium on Scientific Bases of Consciousness, Sep 24-26, Belgrade, Yugoslavia, Pub. European Center for Peace and Development (ECPD) of the United Nations University for Peace, Belgrade, Terazjic 41, Yugoslavia, pp 145-149. Available ? at www.iasc-bg.org.yu/Papers/zbo50.pdf
- Rakovic, D. (1997) "Hierarchical neural networks and brainwaves: Towards a theory of consciousness," in Rakic, L., G. Kostopoulos, D. Rakovic, and D. Koruga (eds) (1997) Proceedings of the First Annual ECOPD International Workshop on Scientific Bases of Consciousness, Sep 24-26, Belgrade, Yugoslavia, Pub. European Center for Peace and Development (ECPD) of the United Nations University for Peace, Belgrade, Terazjic 41, Yugoslavia, 189-204. Abstract available at <http://66.102.7.104/search?q=cache:p2dKIOMydZAJ:www.iasc-bg.org.yu/Papers%255Czbo81.pdf+%22Hierarchical+neural+networks+and+brainwaves:+Towards+a+theory+of+consciousness%22&hl=en&client=firefox-a>
- Rakovic, D. (2000) Transitional states of consciousness as a biophysical basis of transpersonal transcendental phenomena," International Journal of Applied Science and Computations, v.7, #3, 174-187. also presented at International Conference on Consciousness in Science and Philosophy., 1998. Available at www.iasc-bg.org.yu/Papers/REF%2038.pdf
- Rakovic, D. (2001) "On brain's neural networks and brainwaves modeling: Contextual learning and psychotherapeutic implications," Proceedings of the 2nd Conference of IEEE/EMDS (Vic) Biomedical Research, Melbourne, AU, Feb. Available at <http://66.102.7.104/search?q=cache:p2dKIOMydZAJ:www.iasc-bg.org.yu/Papers%255Czbo81.pdf+%22On+brain%27s+neural+networks+and+brainwaves+modeling:+Contextual+learning+and+psychotherapeutic+implications%22&hl=en&client=firefox-a>
- Rakovic, D. (2001) "Consciousness-based biophysical frontiers of complementary medicine," Proc. 2nd Conf. IEEE/EMDS (Vic) Biomedical Research, Melbourne, AU, Feb. Available ? at www.iasc-bg.org.yu/Papers/zbo82.pdf
- Rakovic, D. and Z. Jovanovic-Ignjatich (1998) "Microwave resonance therapy and acupuncture: New prospects for traditional medicine," Acupuncture & Electro-Therapeutics Research, v. 23, # 3/4, p. 271. Available at <http://66.102.7.104/search?q=cache:H8ZjF7AOq4sJ:www.iasc-bg.org.yu/Papers%255Czbo69.pdf+%22Microwave+resonance+therapy+and+acupuncture%22&hl=en&client=firefox-a>
- Rakovic, D. and M. Dugic (2000) "A critical note on the role of the quantum mechanical 'collapse' in quantum modeling of consciousness," Informatica, in press, Available at www.iasc-bg.org.yu/Papers/REF%2040.pdf
- Ramachandran, V.S. and S. Blakeslee (1998) Phantoms in the Brain: Probing the Mysteries of the Human Mind, Fourth Estate, London William Morrow
- Ramachandran, V.S., W.S. Hirstein, K.C. Armel, E. Tecoma, and V. Irgui (1997) "The neural basis of religious experience," Paper presented at the Annual Conference of the Society of Neuroscience. Abstract #519.1, v. 23, Society of Neuroscience
- Reynolds, B. (2004) Embracing Relativity: The Integral Vision of Ken Wilber: A Historical Survey and Chapter-by-Chapter Guide to Wilber's Major Works, Jeremy P. Tarcher/Penguin
- Rubik, B. (1995a) "Energy medicine and the unifying concept of information," Alternative Therapies in Health and Medicine, v. 1, #1, 34-39
- Rubik, B. (1995b) "Can Western science provide a foundation for acupuncture?," Alternative Therapies in Health and Medicine, v. 1, #4, 41-47
- Satinover, J. (2001) The Quantum Brain: The Search for Freedom and the Next Generation of Man, Wiley
- Wilber, K. (1979) "Eye to eye: The relationship between science, reason, and religion and its effect on transpersonal psychology," ReVision, v. 2, # 1, 3-25.

- Wilber, K. (1982a) "The problem of proof," ReVision, v. 5, # 1, 80-100.
- Wilber, K. (ed) (1982b) The Holographic Paradigm and Other Paradoxes: Exploring the Leading Edge of Science, Shambhala
- Wilber, K. (1983a/1990/1996) Eye to Eye: The Quest for the New Paradigm. New York: Doubleday/Anchor.
- Wilber, K. (ed) (1984c) Quantum Questions: Mystical Writings of the World's Great Physicists, Shambhala
- Wilber, K. (1996) A Brief History of Everything, Shambhala
- Wilber, K. (1997b) The Eye of Spirit: An Integral Vision for a World Gone Slightly Mad, Shambhala
- Wilber, K. (1998) The Marriage of Sense and Soul: Integrating Science and Religion, Broadway Books
- Wilber, K. (2000) Integral Psychology: Consciousness, Spirit, Psychology, Therapy, Shambhala
- Wilber, K. (ed) (1984c) Quantum Questions: Mystical Writings of the World's Great Physicists, Shambhala
- Zohar, D (1990) The Quantum Self, Bloomsbury and William Morrow
- Zohar, D and I.N. Marshall (1994) The Quantum Society: Mind, Physics, and a New Social Vision, Quill-William Morrow
- Davis, C. (2003) "Spiritual Intelligence," Available at http://www.mindwise.com.au/spiritual_intelligence.shtm
Spiritual Intelligence Coaching
- Davidson, S. (2002) "Cultivating spiritual intelligence to heal diseases of meaning: A conference report," Contemporary Nurse, v. 12, # 2, p. 103-, Available at www.contemporarynurse.com/12-2p103.htm
- Finley, M. (1999) "SQ: The ultimate intelligence: Danah Zohar on rewiring the biological and organizational brain," http://www.mastersforum.com/sessions_pastspeakers.asp
- Zohar, D and I.N. Marshall (2000) SQ: Spiritual Intelligence: The Ultimate Intelligence, Bloomsbury