

*Brains and Beyond:
The Unfolding Vision of Health and Healing*

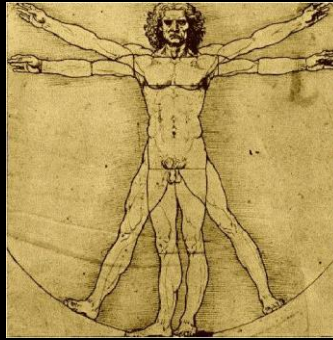
Larry Dossey, MD

Bial Symposium 2016
Porto, Portugal



After a considerable absence, interest in “the spiritual” has reappeared in modern medicine under many guises — healing intentions, therapeutic intent, prayer, compassionate caring, etc.





ERA I MEDICINE

*(Mechanical or
materialistic)*

Consciousness is confined to the brain.

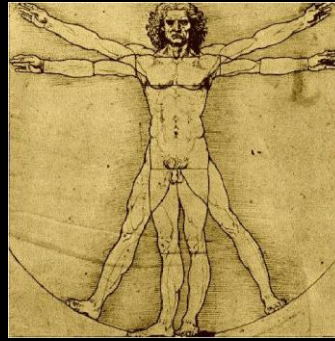
*It does not affect the body
and plays little or no role in health.*





© © Chris Crisman/Corbis

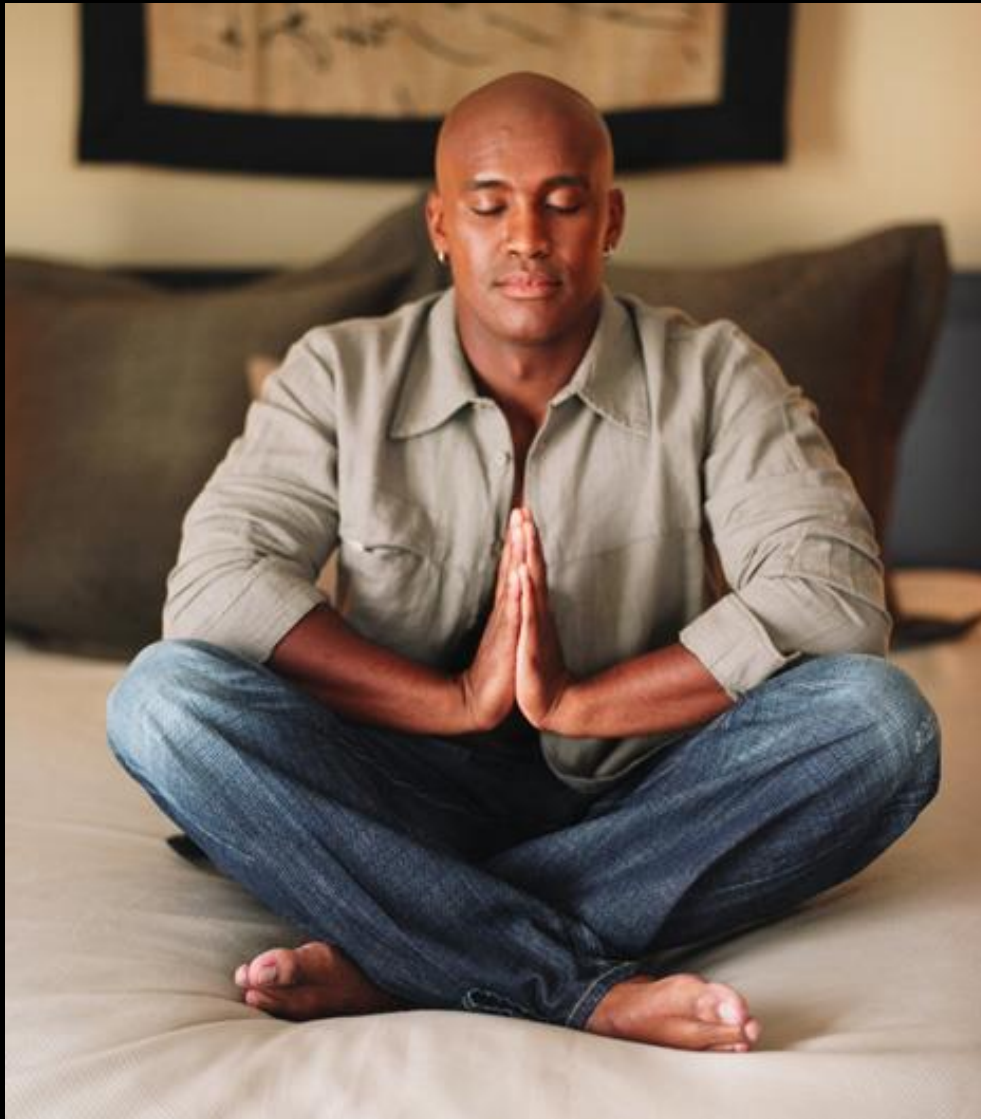




ERA II MEDICINE

(Mind-Body)

*Consciousness operates within
an individual and
significantly affects health.*



meditation



imagery and visualization



music



yoga



massage



biofeedback



hypnosis



placebo effects



stress management

ERA III Medicine

(Nonlocal)

Consciousness is not localized to specific points in space (brains, bodies) or time — i.e., it appears to be a nonlocal phenomenon. *It can affect not only one's own body, but also the bodies of others.*



LASSIE!
GET HELP!!





What is consciousness?

“Consciousness is a fundamental principle that underlies all knowing and being. In a fundamental sense, consciousness is the source of awareness... [It] is what makes awareness possible.”

~ K. Ramakrishna Rao, PhD

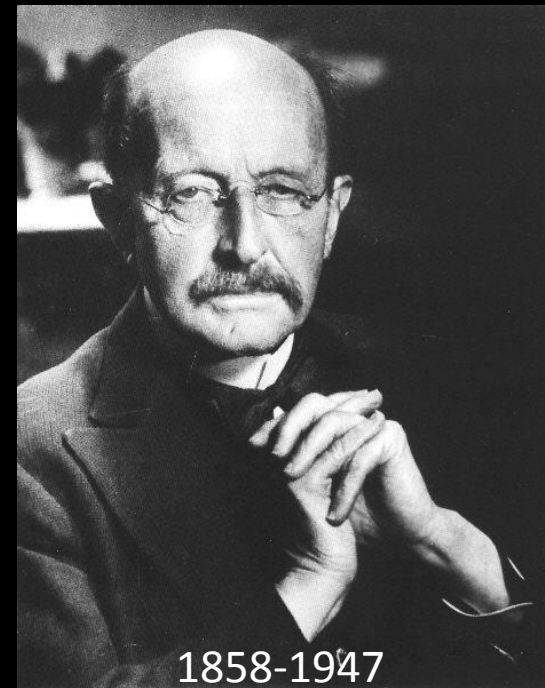
Consciousness as fundamental

“I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness.”

~ Max Planck

the founder of
quantum mechanics

Max Planck. *The Observer*. London, UK; January 29, 1931

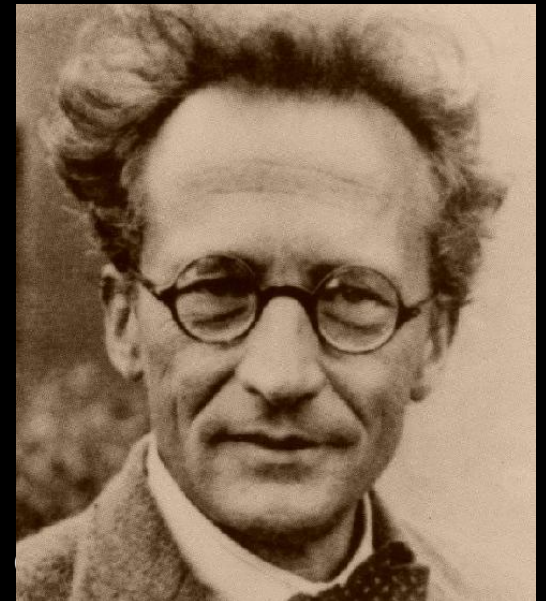


Consciousness as fundamental

“Although I think that life may be the result of an accident, I do not think that of consciousness. Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else....”

~ Erwin Schrödinger

Nobel Prize, 1933



Erwin Schrödinger. Quoted in: Walter Moore. *A Life of Erwin Schrödinger*. Cambridge, UK: Cambridge University Press. 1994: 181.

1887-1961

Consciousness as fundamental

“I propose that conscious experience be considered a fundamental feature, irreducible to anything more basic....”

~ David J. Chalmers

Mathematician, philosopher



Chalmers DJ. 1995. The puzzle of conscious experience. *Scientific American*. 273(6): 80-6. <http://consc.net/papers/puzzle.pdf>

Era III or nonlocal healing involves
“healing intention” or “therapeutic intent” —
willing, wanting, wishing, or praying for the
best outcome for a patient,
whatever that may be.



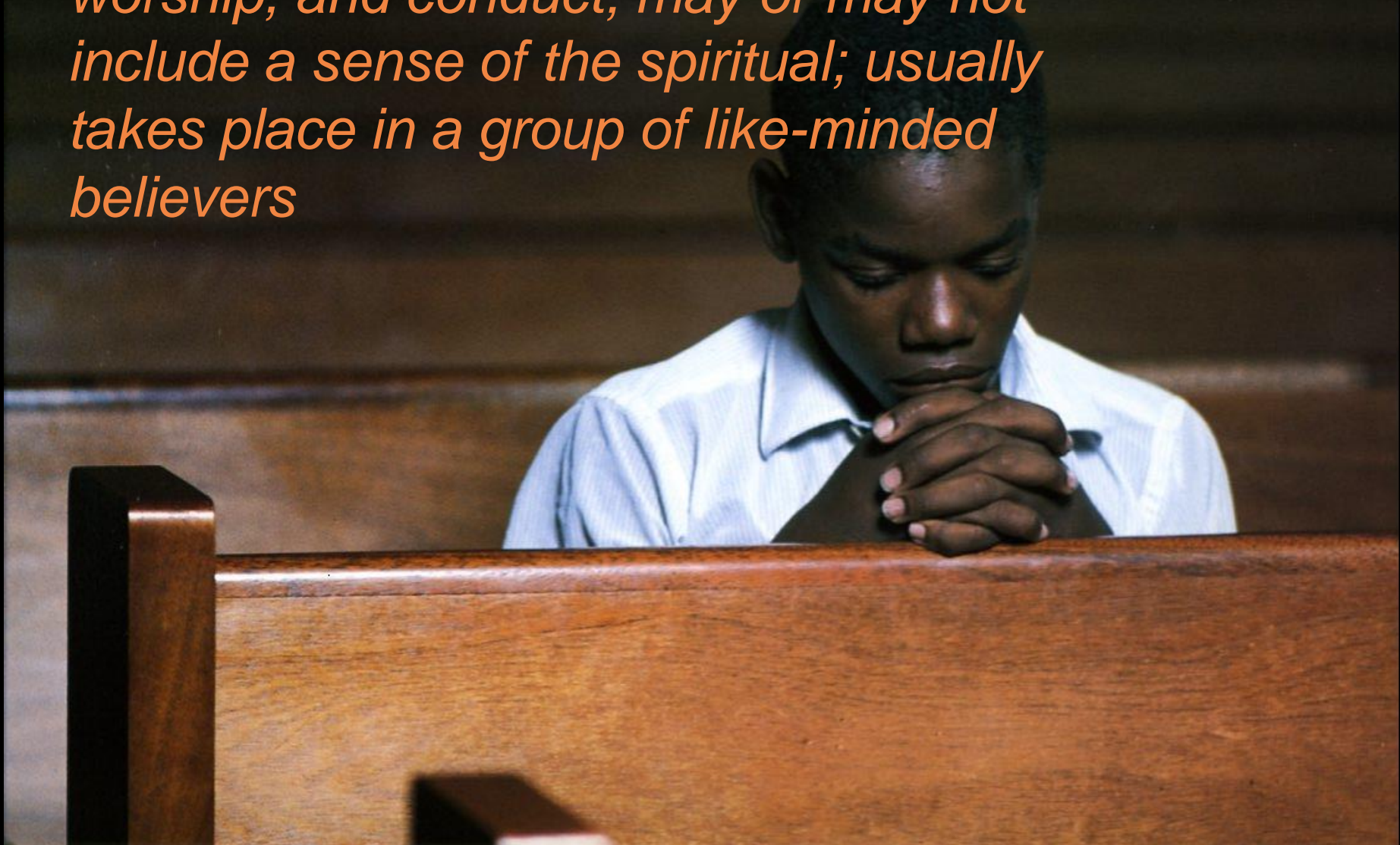
Era III or nonlocal healing
involves spirituality.





Spirituality: the sense of connectedness with “something higher” than the self or ego — an absolute, immanent, or transcendent power, however named — and the conviction that meaning, value, direction, and purpose are valid aspects of the universe

Religion: a codified system of belief, worship, and conduct; may or may not include a sense of the spiritual; usually takes place in a group of like-minded believers



Those who follow a spiritual/religious path — it does not seem to matter greatly which one they choose — live on average 7 to 13 years longer than those who do not, and they have a lower incidence of all major diseases.



Hummer R, Rogers R, Nam C, Ellison CG. Religious involvement and U. S. adult mortality. *Demography*. 1999;36:273-285.

Levin J. *God, Faith, and Health*. New York, NY. John Wiley & Sons; 2001

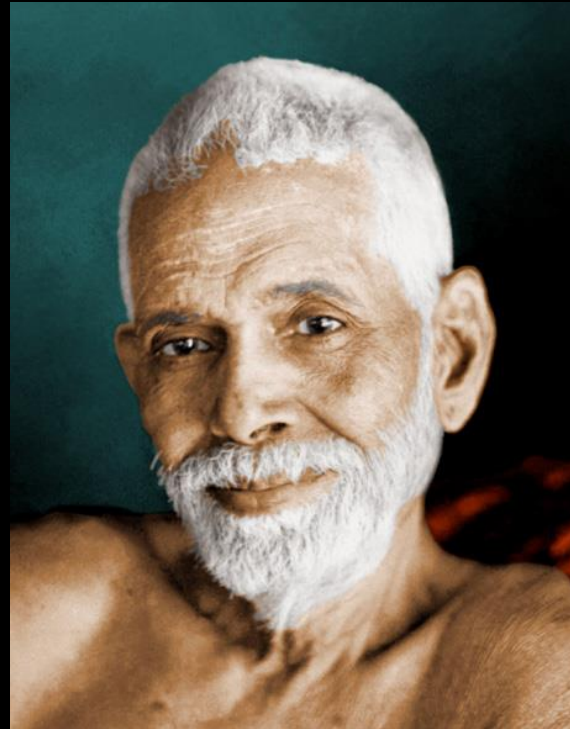
McCullough ME, Hoyt WT, Larson DB, Koenig H, Thoresen C. Religious involvement and mortality: A meta-analytic review. *Health Psychology*. 2000;19(3):211-222.

Spirituality does not always
mean good health

Sickly saints



St. Bernadette



Ramana Maharshi



The Buddha

Healthy reprobates



Healthy reprobates



Religion & health: Naturalistic influences

- better health habits
- less smoking and drinking
- dietary precautions; vegetarianism
- social support and networks
- sense of meaning and purpose



Levin JS, Schiller PL. Is there a religious factor in health? *J. Religion and Health*.

1987;26:9-36.

Era III or nonlocal healing

human studies

spontaneous
healings

non-human
experiments



Nonlocal healing

human studies

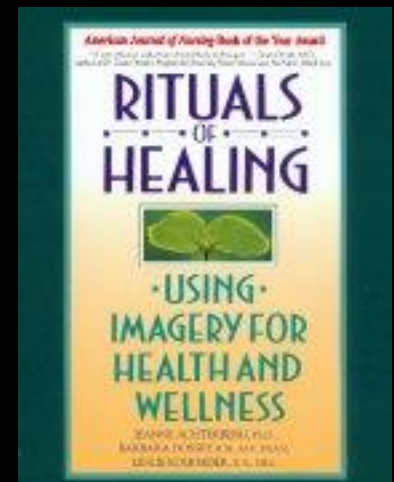
A 3D puzzle with several pieces in white, yellow, and orange on a blue background. The text "human studies" is centered on the yellow piece.

A study of therapeutic intent:

Jeanne Achterberg, et al.

“Evidence for Correlations between Distant Intentionality and Brain Function in Recipients: A Functional Magnetic Resonance Imaging Analysis”

Journal of Alternative and Complementary Medicine.
2005; 11(6):965971.



The Hawaiian study



North Hawaii Community Hospital
Waimea, Hawaii



Funded by Earl Bakken,
inventor of the implantable
cardiac pacemaker and founder
of Medtronic



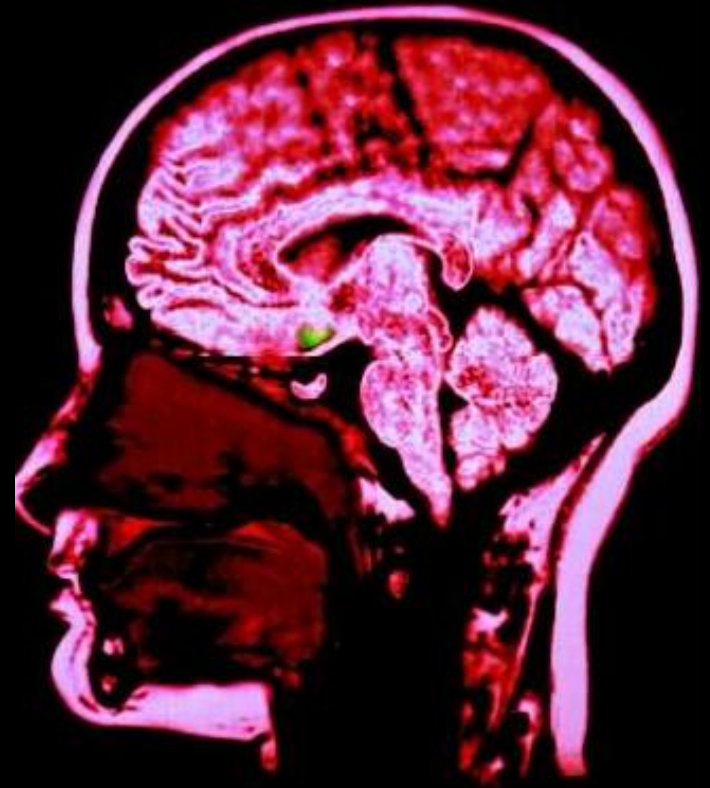
The Hawaiian study

Dr. Achterberg spent two years immersing herself in the culture of the island, meeting healers, and gaining their confidence and respect before beginning a prayer study.



The Hawaiian study: Results

- Significant differences were found in the fMRI brain scans of 10 of the 11 recipients during the “send” vs. the “no send” conditions.
- The brain areas affected were the frontal, precuneus, and anterior and middle cingulate regions.
- There was only about 1 chance in 10,000 that the results were due to chance ($p = 0.000127$).



“Two Meta-Analyses of Noncontact Healing Studies”

Chris Roe et al, University of Northampton.
Explore; 2015; 11(1): 11-23.

57 studies involving **whole humans**
49 studies involving **non-humans**
(bacteria, cells, animals, plants, etc.)



Chris Roe, PhD

- **Healing methods included intercessory prayer, therapeutic touch, Reiki, Johrei, and unspecified/other**

Conclusions: “Results in the active condition exhibit a significant improvement in wellbeing relative to control subjects....[Results] do not seem to be susceptible to placebo and expectancy effects.” The effect size is small ($r = 0.203$), but statistically significant.

How do healing methods compare in humans?

“For whole human studies, the largest effects were associated with **Reiki** and **Johrei** interventions followed by **therapeutic touch**, then unspecified healing. The outcome for **prayer** studies was somewhat (though not significantly) lower.”

~ Chris Roe, et al

University of Northampton



Chris Roe, PhD

Chris Roe, et al. “Two Meta-Analyses of Noncontact Healing Studies.” *Explore*; 2015; 11(1): 11-23.

“[Results with whole humans are] not dependent upon the previous inclusion of suspect studies and is robust enough to accommodate some high profile failures to replicate...”

Healing studies in humans as of March 2016:

- Eight additional systematic or meta-analyses of the human clinical studies have been published in peer-reviewed literature; most have reached positive conclusions.

Roe CA, Sonnex C, Roxburgh EC. Two meta-analyses of noncontact healing studies. *Explore*. 2015; 11(1): 11-23.



What do scientists believe about the possibility that prayer might work?

Thirty-nine percent of biologists, physicists, and mathematicians believe in a god who answers prayers.

~ E. J. LARSON & L. WITHAM



Scientists are still keeping the faith.

Nature. Vol. 386, 3 April, 1997: 435-6.

Nonlocal healing

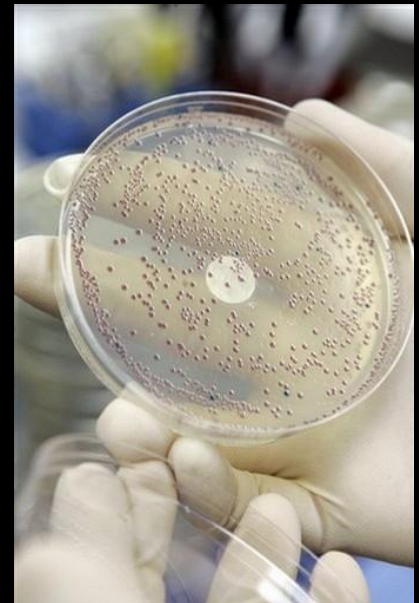


non-human
experiments

Healing studies in non-humans: Why important?

These studies overcome the main objections of human studies: lack of pure controls, suggestion, expectation, and positive thinking (placebo responses).

Non-human studies strongly suggest that a healing effect is real.



Cell to Cell

Nonlocal connections between distant, shielded human neurons



Human neurons



Human neurons

When one group of human neurons is stimulated with laser light, a distant group of neurons registers the same changes, although both are shielded, bypassing any known form of physical communication.

~ Rita Pizzi and colleagues

DiBit Laboratories, Milan, Italy

“[O]ur experimental data seem to strongly suggest that biological systems present non-local properties not explainable by classical models.”



Rita Pizzi, PhD
University of Milan

The Smithsonian/NASA Astrophysics Data System

<http://adsabs.harvard.edu/abs/2004SPIE.5436..107P>

Cell-to-Cell Connections

Connections between isolated, distant cells

When an “inducer” group of human epithelial cells were poisoned with hydrogen peroxide, a distant batch of “detector” cells were damaged in a similar way, although there was no way they could communicate by any known physical means.

~ **Ashkan Farhadi** and colleagues
Rush University Medical Center, Chicago

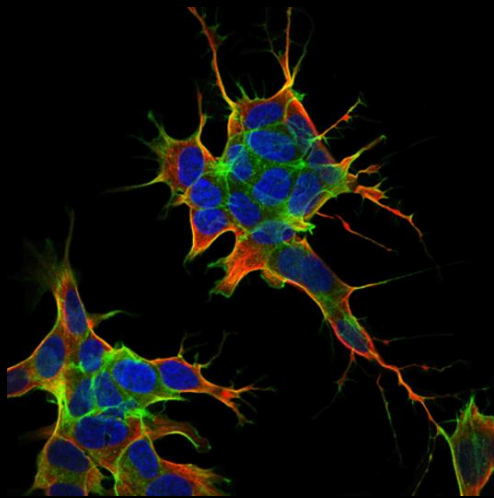


Ashkan Farhadi, MD

Farhadi A, Forsyth C, Banan A, Shaikh M, Engen P, Fields JZ, Keshavarzian A. Evidence for non-chemical, non-electrical intercellular signaling in intestinal epithelial cells. *Bioelectrochemistry* 2007;71(2):142-148.

Neuroblastoma cancer cells have been shown to communicate with normal neurons, when both are shielded, preventing any known means of communication.

~ Victor V. Chaban et al
Geffen School of Medicine, UCLA



Victor Chaban, PhD

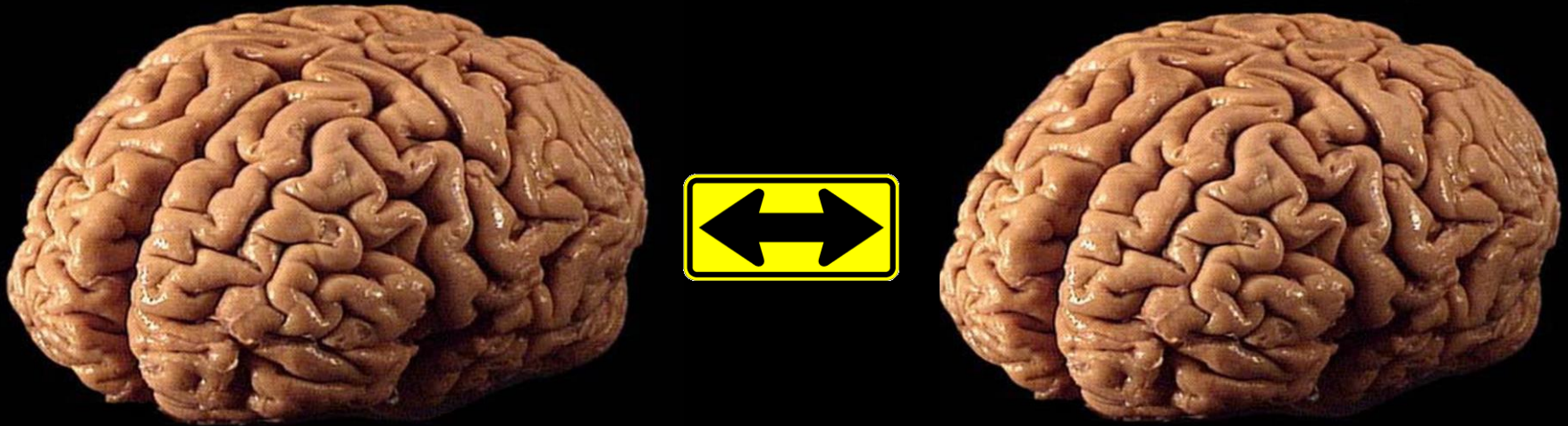
Chaban VV, Cho T, Reid CB, Norris KC. Physically disconnected non-diffusable cell-to-cell communication between neuroblastoma SH-SY5Y and DRG sensory neurons. *Am. J. Translational Research*. 2013; 5(1): 69-79.

If a few human neurons or cells can communicate remotely with one another in the lab, without any obvious physical mechanism, might large groups of human neurons, such as brains, do the same?



Brain to brain

Using fMRI and EEG methodology, a dozen experiments demonstrate that distant brains can simultaneously register a stimulus, when only one is stimulated.



Radin D. Psi in the central nervous system. In: *Entangled Minds*.
New York, NY: Paraview; 2006: 136-141.

<http://deanradin.blogspot.com/2010/03/brain-correlation-experiments.html>



*Non-human studies: **DMILS**
(distant mental interactions
with living systems)*

There are scores of “healing analog”
studies in bacteria...

...fungi



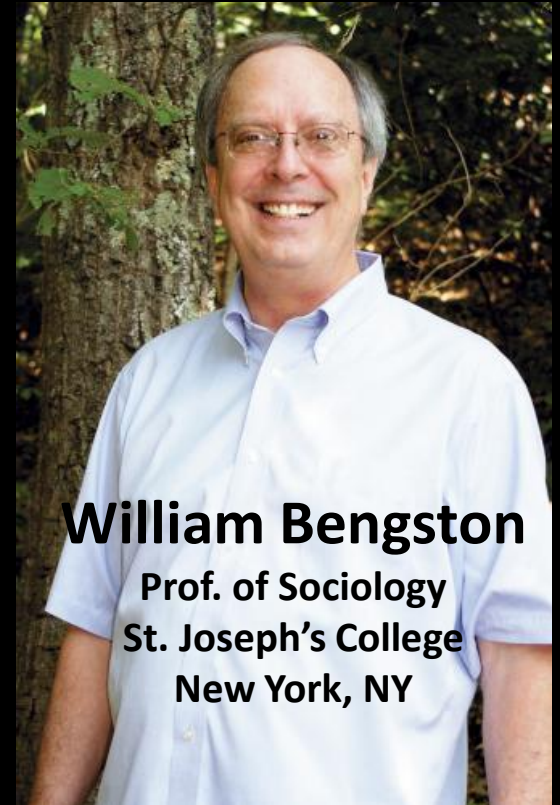
...seeds and
seedlings



...and animals



In studies in three academic centers, Bengston and Krinsley have found that inexperienced skeptical volunteers acting as healers can produce full cures in mice following transplantation of a normally fatal dosage of mammary adenocarcinoma.



William Bengston
Prof. of Sociology
St. Joseph's College
New York, NY

Bengston, William, & Moga, Margaret. 2007. Resonance, Placebo Effects, and Type II Errors: Some Implications from Healing Research for Patients. Experimental Methods. *Journal of Alternative and Complementary Medicine*, 13, 317-327.

Untreated mice: 100 percent fatality in 30 days

Treated mice: ~ 90 percent cure rate



Bengston, William, & Moga, Margaret. 2007. Resonance, Placebo Effects, and Type II Errors: Some Implications from Healing Research for Patients. Experimental Methods. *Journal of Alternative and Complementary Medicine*, 13, 317-327.

After healing, the mice are resistant to mammary cancer transplants.



Bengston, William, & Moga, Margaret. 2007. Resonance, Placebo Effects, and Type II Errors: Some Implications from Healing Research for Patients. Experimental Methods. *Journal of Alternative and Complementary Medicine*, 13, 317-327.

Nonlocal healing

spontaneous
healings

A 3D puzzle with several pieces. The background is a blue puzzle piece. In the foreground, there are four prominent pieces: a white piece on the left, a yellow piece in the center, and an orange piece on the right. The pieces are rendered with a metallic, reflective surface and a slight shadow, giving them a three-dimensional appearance. The text 'Nonlocal healing' is written in a white, italicized font in the upper left corner. The text 'spontaneous healings' is written in a black, sans-serif font on the orange piece.

Ann O'Neill

- 4-year-old female; acute lymphocytic leukemia; University of Maryland Hospital, Baltimore, 1952.
- Her disease was 100 percent fatal at the time.
- She was dying and was given last rites.
- Her feisty mother bundled her up, left the hospital, took her to a cemetery, and laid her at the tomb of Mother Elizabeth Seton, a revered Catholic nun. The mother and several nuns prayed for a healing.



Tomb of Elizabeth Seton

Ann O'Neill

- Back in the hospital, blood tests a few days later were normal.
- Nine years later she remained healthy.
A bone marrow biopsy was normal
- Declared a miracle cure by the Catholic Church



Tomb of Elizabeth Seton

Ann O'Neill

- Dr. Milton Sacks, one of the foremost hematologists in the US, who was caring for her, said her illness was “uniformly fatal.”
- “The only reason this case has not been written up is that I have been afraid to.”

—Milton Sacks, MD



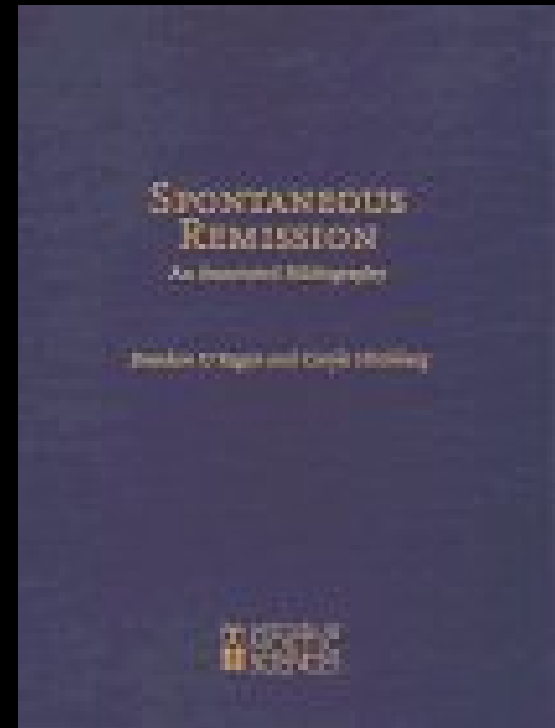
FEAR

C. Hirshberg & B. O'Regan

Spontaneous Remission: An Annotated Bibliography

- 3,500 cases
- 800 journals
- 20 languages

Institute of Noetic Sciences; 1993



If these distant healing effects are real,
how might they work?



What is the mechanism?



“Something unknown
is doing
we don't know what.”

~ SIR ARTHUR EDDINGTON



1882-1944



transmission theories



*An increasing number of consciousness researchers believe these distant healing phenomena may involve **nonlocal** connections between distant entities.*



What is nonlocality?

Nonlocal, distant, correlated events have three essential characteristics:

- ***Unmediated***
(by any known energetic signal)
- ***Unmitigated***
(by increasing spatial separation)
- ***Immediate***
(instantaneous)

“The new physics presents prima facie evidence that our human thoughts are linked to nature by nonlocal connections: what a person chooses to do in one region seems immediately to affect what is true elsewhere in the universe....[O]ur thoughts... *do something*” [emphasis in original].

~ Henry P. Stapp

Theoretical physicist

U. California, Berkeley



*Nonlocality and entanglement
in the human domain are
being endorsed by physicists.*

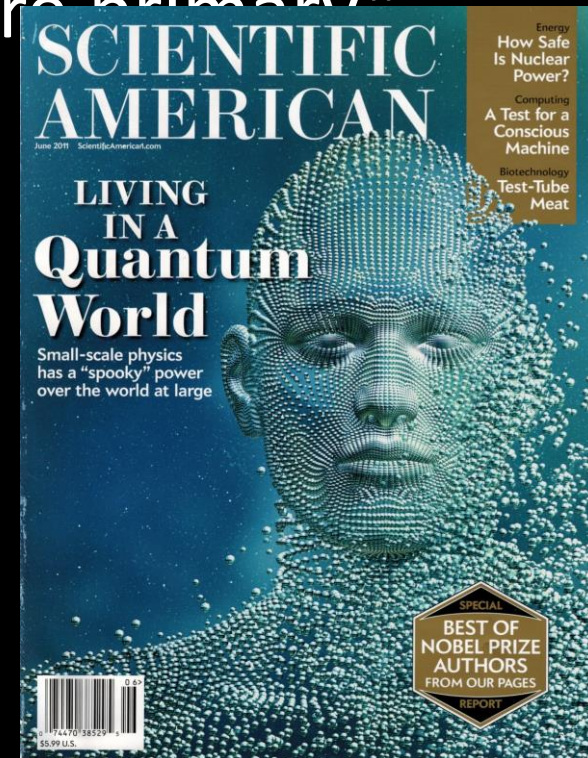


Vlatko Vedral, PhD
Oxford University

“The quintessential quantum effect, entanglement, can occur in large systems...including living organisms.... These effects are more pervasive than anyone ever suspected. They may operate in the cells of our body.... The entanglements are primary.”

~ Vlatko Vedral
physicist, Oxford University

Vedral V. Living in a quantum World.
Scientific American. 2011; 304 (6): 38-43.



“I propose that psi is the human experience of the [quantum-] entangled universe....[T]he ontological parallels implied by [quantum] entanglement psi are so compelling that I believe they’d be foolish to ignore.”

~ Dean Radin, PhD
Chief Scientist, IONS
Entangled Minds

Radin D. *Entangled Minds*. New York, NY: Paraview; 2006: 235.



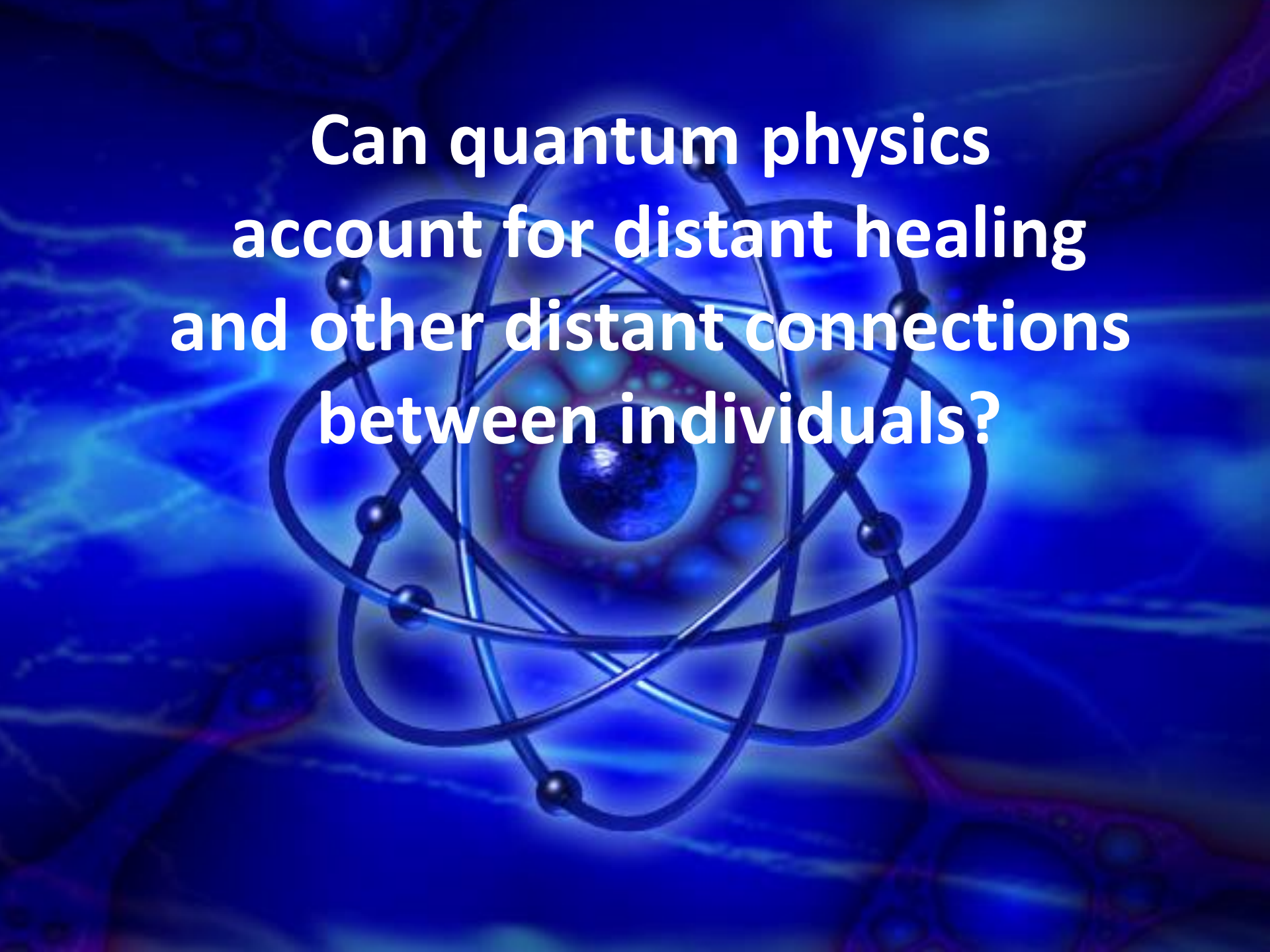
“[M]inds are entangled with the universe,
so in principle minds can nonlocally
influence anything, including a collection of
other minds or physical systems.”

~ Dean Radin, PhD
Chief Scientist, IONS
Entangled Minds

Dean Radin. *Entangled Minds*. New York, NY:
Paraview Pocket Books; 2006:270



**Can quantum physics
account for distant healing
and other distant connections
between individuals?**

The image features a central graphic of an atom with a blue nucleus and several dark blue electron orbits. The background is a vibrant blue with abstract, glowing patterns and a faint DNA double helix structure. The text is overlaid in the center in a bold, white, sans-serif font.

Caveat:

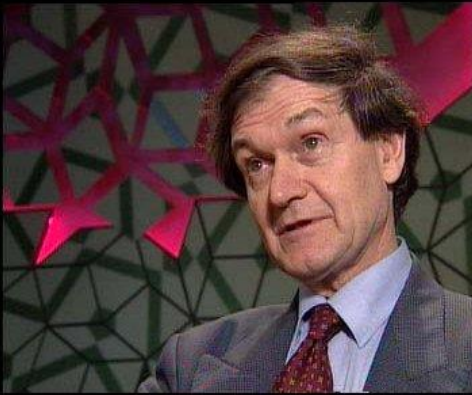
Quantum physics cannot fully explain healing in humans.



Vital factors in healing —
compassion, caring, empathy, love —
are completely missing in the equations
of physics.

Physics cannot explain consciousness:

“My position [on consciousness] demands a major revolution in physics.... [T]here is something very fundamental missing from current science. Our understanding at this time is not adequate and we’re going to have to move to new regions of science....”



~ SIR ROGER PENROSE

Mathematical physicist

Sir Roger Penrose. Quoted in: Karl Giberson. The man who fell to earth. Interview with Sir Roger Penrose. *Science & Spirit*. March/April; 2003: 34-41.

Roger Penrose. *Science & Spirit*. March/April; 2003: 34-41.

Caveat:

We must be careful not to equate quantum nonlocality with human nonlocality.

We may be dealing only with accidental correlations in terminology.

Further research will hopefully resolve this issue.



“The scientific study of consciousness is in the embarrassing position of having no scientific theory of consciousness.”

~ Donald Hoffman

cognitive scientist

U. California-Irvine



Donald Hoffman. Consciousness and the mind-body problem. *Mind & Matter*. 2008; 6(1): 87-121.

How could consciousness possibly arise from the physical brain?

“Beats the heck out of me. I have some prejudices, but no idea of how to begin to look for a defensible answer. And neither does anyone else.”

~ Steven Pinker

experimental psychologist
Harvard University



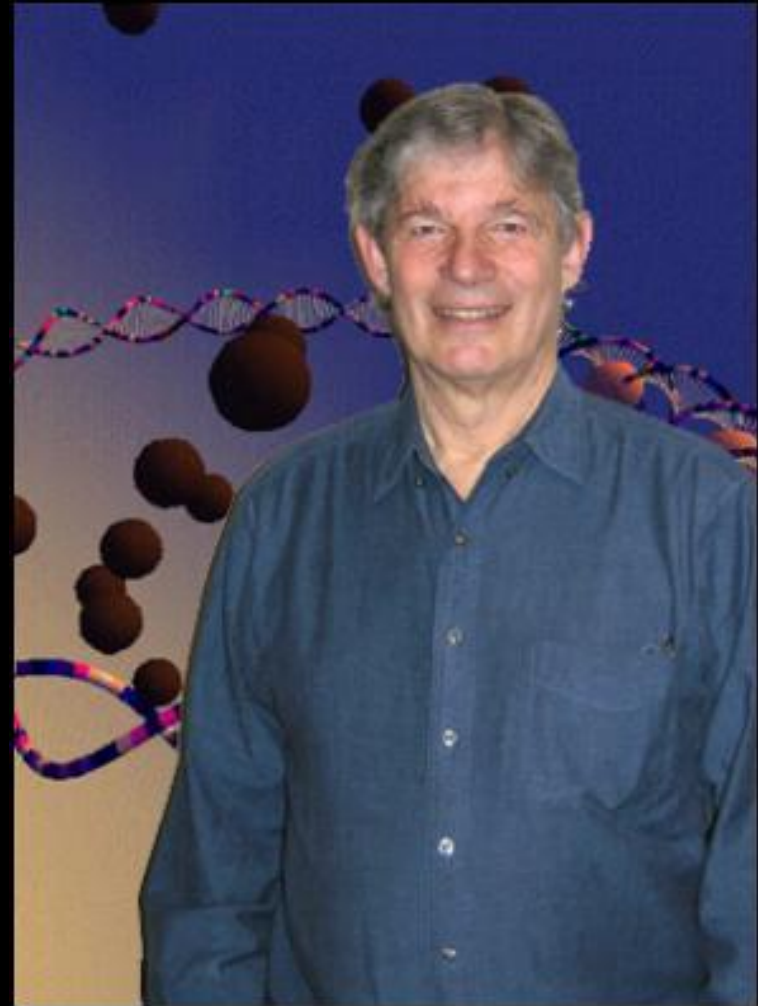
Steven Pinker. *How the Mind Works*. New York, NY: W. W. Norton; 1997: 146.

Photo: http://upload.wikimedia.org/wikipedia/commons/4/4c/Steven_Pinker_2011.jpg

“Nobody has the faintest idea what consciousness is.... I don’t have any idea. Nor does anybody else, including the philosophers of mind.”

~ Stuart Kauffman

theoretical biologist
& complex systems theorist

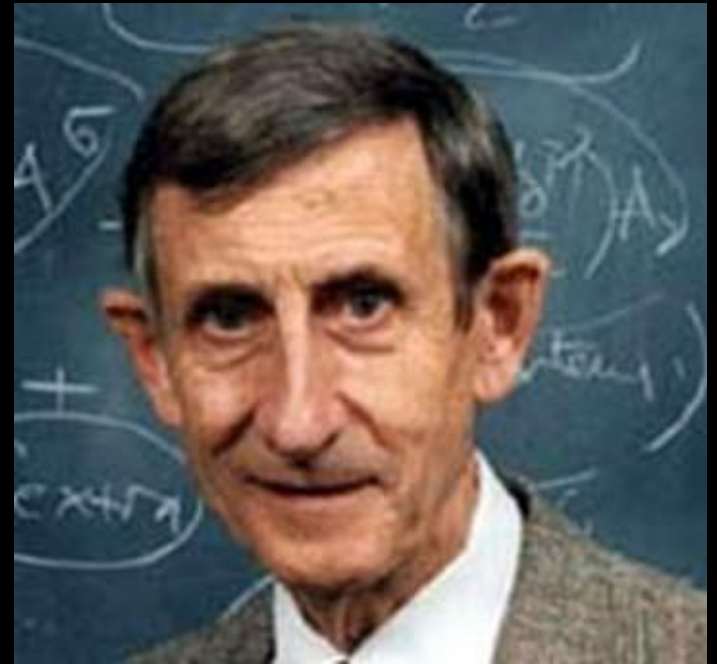


God enough. Interview of Stuart Kauffman by Steve Paulson.
www.salon.com/env/atoms_edden/w008/11/19/stuart_kauffman/index1.html

Photo: <http://www.ucalgary.ca/oncampus/weekly/april22-05/kauffman.jpg>

“The origin of life is a total mystery, and so is the existence of human consciousness. We have no clear idea how the electrical discharges occurring in nerve cells in our brains are connected with our feelings and desires and actions.”

~ Freeman Dyson
physicist



“Nobody has the slightest idea how anything material could be conscious. Nobody even knows what it would be like to have the slightest idea about how anything material could be conscious. So much for the philosophy of consciousness.”

~ Jerry Fodor

philosopher, Rutgers University



Jerry Fodor. The big idea: Can there be a science of mind?
Times Literary Supplement. July 3, 1992: 5-7.

“If the brain were so simple
that we could understand it,
we would be so simple that
we couldn’t.”

— Emerson Pugh

physicist



Emerson M. Pugh (as quoted by George E. Pugh, Emerson's son in G.E. Pugh, *The Biological Origin of Human Values*. NY: Basic Books; 1977: 154)

"Bragging about one's intelligence
is like an animal bragging about
the size of its cage."

~ Simone Weil

philosopher, author, social activist



1909-1943

Ethical Issues



In medicine and healing,
must we wait for perfect science
before employing healing
intentions clinically?



“We must act on facts and on the most accurate interpretation of them, using the best scientific information. That does not mean that we must sit back until we have 100 percent evidence about everything. When the...health of the individual... is at stake...we should be prepared to take action to diminish those risks even when the scientific knowledge is not conclusive....”

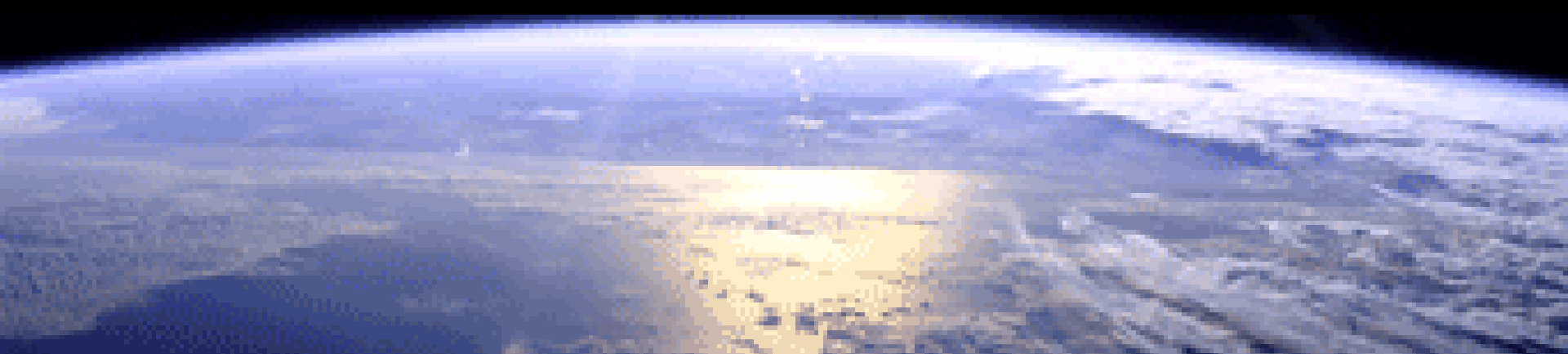
— Richard Horton

Editor, *Lancet*

“The Precautionary Principle”

Richard Horton. *Lancet*. July 25, 1998; 352(9124):251-2.

There is compelling evidence that some aspect of consciousness is *nonlocal* — unconfined to specific points in space (brains, bodies) and unconfined to points in time (the present) — therefore *infinite* in space and time.



“I strongly believe that consciousness cannot be located in a particular time and place. This is known as nonlocality. Complete and endless consciousness is everywhere... Near-death experience prompted the concept of nonlocal and endless consciousness....

Ultimately, we cannot avoid the conclusion that consciousness has always been and always will be, independent of the body.”

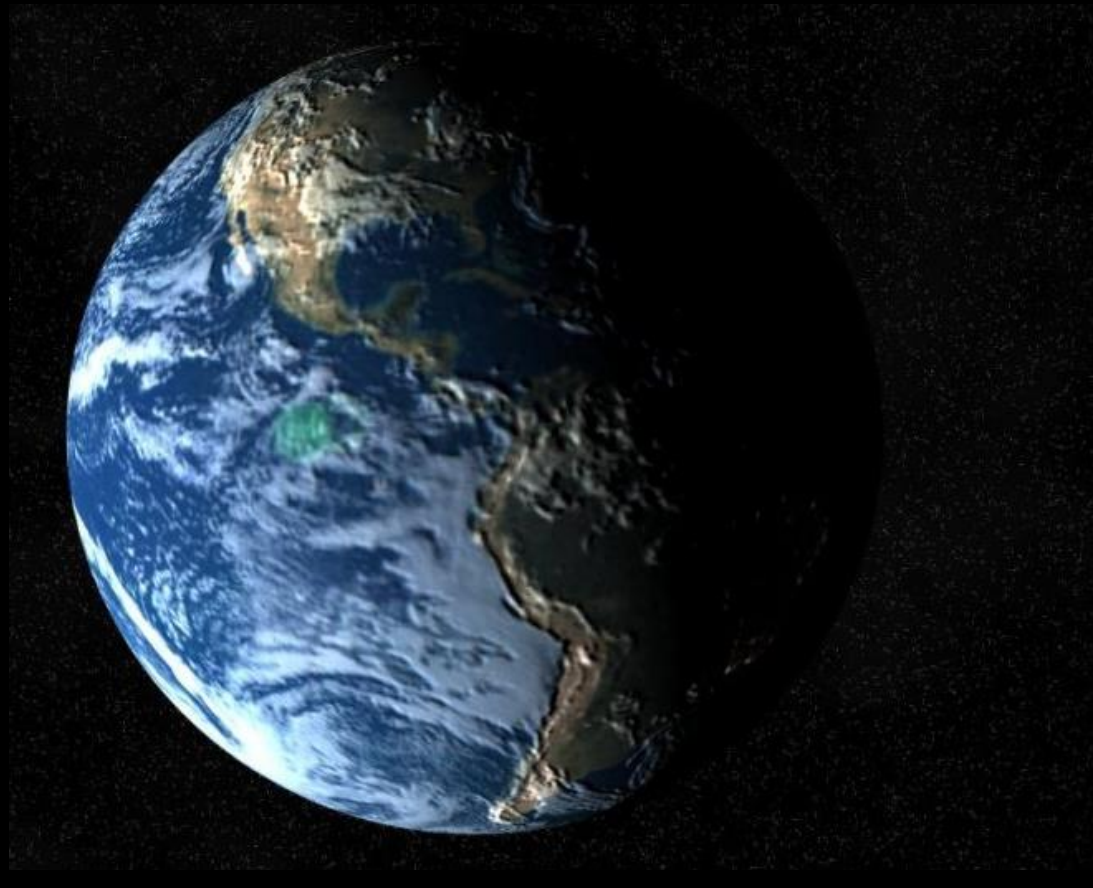
~ Pim van Lommel, MD

Dutch cardiologist, NDE researcher



Pim van Lommel. *Consciousness Beyond Life*.
NY: HarperOne; 2010: xvii-xviii.

If consciousness is nonlocal or infinite in time,
then in some sense it is eternal and immortal.



“I venture to call it [the mind] indestructible since it has a peculiar time-table, namely mind is always *now*. There is really no before and after for the mind.”



Erwin Schrödinger
Nobel physicist, 1933
1887-1961

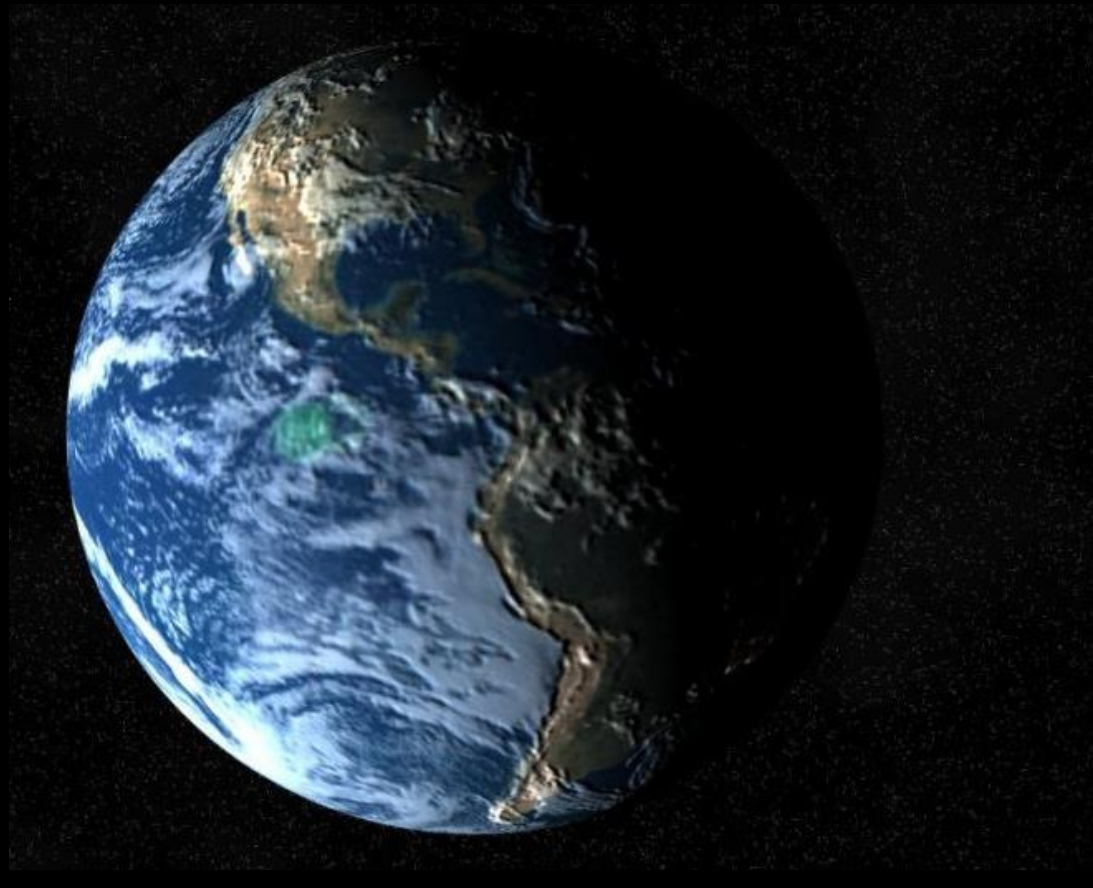
“To be conscious is
not to be in time.”

~ T. S. Eliot
Four Quartets



1888-1965

If consciousness is nonlocal or infinite
in space, it is omnipresent.



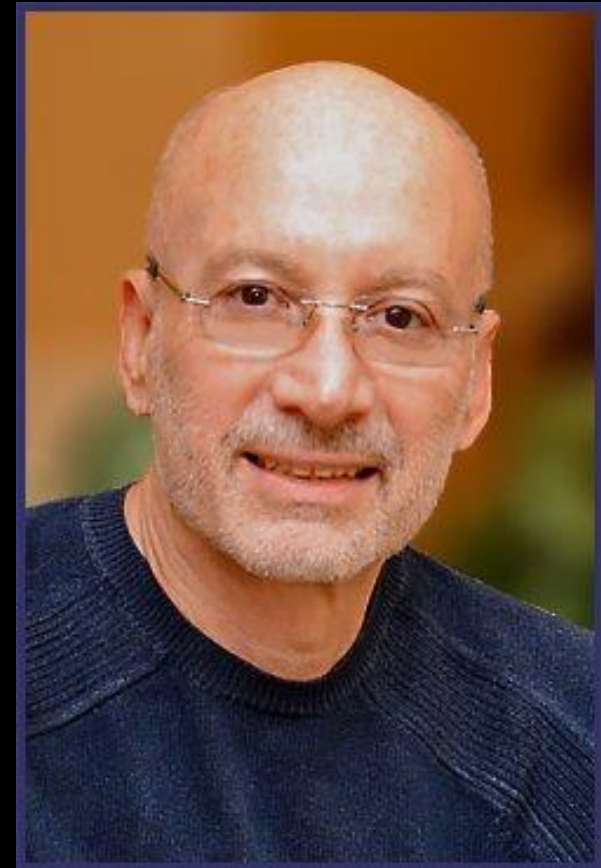
If consciousness is omnipresent,
in some sense all minds come
together to form a
single, unitary mind.



“The evidence from parapsychology...suggests ways in which our psychic interactions may intimately link all conscious beings and all objects (no matter how physically distant) into a kind of global community.”

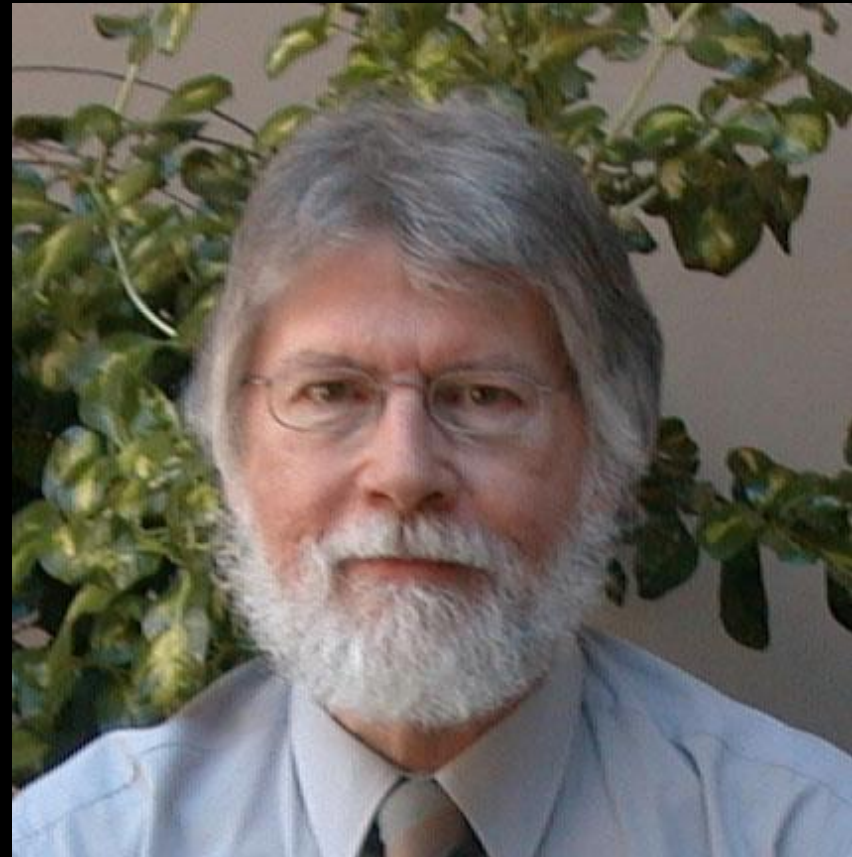
~ Stephen E. Braude
philosopher ; editor, *JSE*

Stephen E. Braude. *Crimes of Reason*. NY, NY:
Rowman & Littlefield; 2014: 182



“It may be that our deep interconnectedness with each other and with all of Nature is *the* major conclusion that issues forth from the many findings of [consciousness research].”

~ William G. Braud, PhD
consciousness researcher



1942-2012

“To divide or multiply
consciousness is something
meaningless.”



Erwin Schrödinger
Nobel physicist, 1933
1887-1961

Erwin Schrödinger, *My View of the World*. Woodbridge, CT:
Ox Bow Press; 1983:31-34. Original English publication:
Cambridge: Cambridge University Press; 1964.

“There is obviously only one alternative, namely the unification of minds or consciousness....
[I]n truth there is only one mind.”



Erwin Schrödinger
Nobel physicist, 1933
1887-1961

“Deep down the consciousness of mankind is one. This is a virtual certainty ... and if we don't see this it's because we are blinding ourselves to it.”



David Bohm

physicist

1917-1992

David Bohm, in Renée Weber, *Dialogues with Scientists and Sages*.
New York: Routledge and Kegan Paul;1986:41.

If we are all connected, there is *always* a collective, global aspect to personal health.



Photo: <http://drbutts.com>

Personal health is never merely personal.
If consciousness is unitary, the health of one
affects the health of all.



← This
is never
distinct
from
this →



This suggests that the **Golden Rule** can be expanded from
“Do unto others as you would have them do unto you,” to
“Be kind to others because in some sense
they are you.”





The unitary One Mind,
by fostering cooperation between people,
and love for all sentient life
and the Earth itself,
may assist our own survival.



Indeed, without this awareness
it is not clear that we will survive
as a species.

“Hate is not the opposite
of love, the opposite of
love is individuality.”

~ D. H. Lawrence

novelist

... not *healthy* individuality,
but *pathological* individuality,
the unwillingness to acknowledge
our oneness and unity, leading to
greed and selfishness.



1885-1930

So, in the end,
perhaps it's all about love —
the overcoming of boundaries,
which is the essential expression
of nonlocality



“Anything we love
can be saved.”

~ Alice Walker
novelist



“We must love one
another or die.”

~ W. H. Auden
poet



1907-1973

“People often ask me what is the most effective technique for transforming their life. It is a little embarrassing that after years and years of research and experimentation, I have to say that the best answer is – just be a little kinder.”

~ Aldous Huxley
novelist, philosopher



1894-1963

“Three things in human life are important. The first is to be kind; the second is to be kind; and the third is to be kind.”

~ Henry James

novelist

1843-1916



Let's go deeper,
Go deeper.
For, if we do,
Our spirits will embrace
And interweave.

Our union will be so glorious
That even God
Will not be able to tell us
apart....

~Hafiz

Persian poet
1324-1390



A satellite photograph of Earth showing the Atlantic Ocean on the left and the Americas on the right. The ocean is a deep blue, and the landmasses are shown in shades of green and brown, indicating vegetation and terrain. The text "thank you" is overlaid in white, italicized font on the ocean.

thank you

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