

## New Science Media Resource Directory

The following is a directory of 13 scientists who are pioneers in the New Science. Most of them are actively involved in research which argues for a broader view of science, humanity, spirituality and the connections between them. We have also added information on the work of two journalists, both of whom have made translating the discoveries of quantum physics and the New Science into layman's terms their life's work.

It is certainly not an exhaustive list. There are dozens and dozens of other researchers delving into topics that were never even broached just decades ago. But that is the history of science. What is nonsense today is creed tomorrow, and creed today, nonsense tomorrow.

This directory has been prepared by Captured Light Industries, distributor for the *What the BLEEP* films. They can be reached at [media@whatthebleep.com](mailto:media@whatthebleep.com).

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### Introduction by William Arntz

– Producer/Director *What the BLEEP Do We Know!?*

What is the major “debate” for our time? Is it whether or not to recycle? Is it global warming? Is it stem cell research? No. The real debate is about something that seems very simple and incredibly basic.

Is there a non-physical Reality? Another way to ask the question is: Do things exist that are not perceived by our five senses or the mechanical extensions we have created to augment them?

Since the ascendancy of science around Newton's time, and the success of the Industrial Revolution, the notion of anything non-physical being real has been relegated to the world of dreamers, religious fanatics, and charlatans.

While the triumphs of science have been earthshaking, it seems to me this narrow view is a replay of the arrogance that once proclaimed, “We are the center of the Universe.” The only difference is now we are saying: “There is no reality beyond what we humans glimpse through the windows of our sense perceptions.” We have limited the entire Universe within the confines of what we can see, hear, taste, touch and smell.

Having created the *What the BLEEP* movies and gotten a very adverse reaction from the mainstream media, as well as the societal and scientific realms, it seems that putting forward the hypothesis that there is more to the Universe than meets the eye is like bringing up religion or politics at a dinner party – a very bad idea. Certainly it is a very revolutionary idea. There is not one field of human endeavor that would not be influenced by such a different view of Reality.

Strangely, this is the view 21<sup>st</sup> century humanity finds itself facing. Quantum mechanics has been telling us for over seventy-five years that everything we see is actually part of one vast ocean of infinitesimally small particles that also take the form of invisible waves. Not only is this “reality” beyond the perception of our five senses, intrinsic to quantum mechanics is the fact that everything physical is connected within this vast sea. This is revolutionary indeed. Once we embrace this in everyday thought, everything changes.

The scientific community is, by and large, antithetical to extending the quantum viewpoint to ordinary life. Yet the scientific method - the very backbone of science – is beginning to be applied to do just that, bring light to this subject and expose cracks in the edifice of scientific materialism. Applying the scientific method, studies now show that: praying for someone can statistically increase the chance of healing; focused human intention can affect quantum events in a way that is considered impossible; and information embedded at the Planck Scale may be the background carrier of reality that transcends time, space, and the physical senses.

The mainstream scientific world does its best to ignore the ramifications of these discoveries. And yet the true glory of science is that it does move itself forward. Early discoveries and theories of quantum mechanics were so preposterously wild few scientists could accept them as true. But despite the “impossibility” of their discoveries, the evidence eventually was overwhelming, and a radical new way of addressing the physical Universe came into being.

The new reality is already here. For this reason we are presenting media professionals with an introduction to some extraordinary and world renowned scientists involved in groundbreaking experiments and discoveries. There is evidence, at times overwhelming, that our physical world is just the tip of the iceberg, and that the Universe is vaster than currently imagined. The scientists presented here, using the tried and true methods of rigorous experimental inquiry, are pointing out the limitations of a strictly materialistic worldview, and ultimately re-introducing consciousness into the Universe.

In the past, science struggled to keep the scientist out of experiments in some idealized state of separation. Now quantum physics and the Observer Effect keep shoving the experimenter – the human being - back into the picture. For centuries, the *inner* experience of “ourselves” has been segregated from what is considered “reality.” Even our most ever-present perception – that fact that we exist – has been relegated to the world of fancy, or, as some neurologists will have it, to the realm of epiphenomena. The scientists showcased here are moving science beyond the belief that human

consciousness is just an unexpected by-product of brain cell function. It seems to me that these scientists, seeking to bridge the inner and the outer, are the true explorers of the 21<sup>st</sup> century.

## Fritjof Capra, Ph.D.



**Fritjof Capra, Ph.D. is a physicist, researcher, bestselling author and lecturer.** Capra received his Ph.D. in theoretical physics from the University of Vienna and did research in particle physics at the University of Paris (1966-68), the University of California at Santa Cruz (1968-70), the Stanford Linear Accelerator Center (1970), Imperial College, University of London (1971-74), and the Lawrence Berkeley Laboratory at the University of California (1975-88). He also taught at U.C. Santa Cruz, U.C. Berkeley, and San Francisco State University. In addition to his research in physics and systems theory, Capra has been engaged in a systematic examination of the philosophical and social implications of contemporary science for the past 30 years.

- He is author of four international bestsellers including: *The Tao of Physics* (1975), published in 43 editions in 23 languages: examines the striking parallels between ancient mystical traditions and the discoveries of 20th century physics; *The Turning Point* (1982), examines paradigm shifts in biology, medicine, psychology, and economics and a corresponding transformation of world views and values in society.
- Co-wrote the screenplay for *Mindwalk* (1990)
- Capra has been the focus of over 50 television interviews, documentaries, and talk shows in Europe, the United States, Brazil, Argentina, and Japan, and has been featured in major newspapers and magazines internationally.
- He was a subject of the BBC's new documentary series "Beautiful Minds" (2002).
- A founding director of the Center for Ecoliteracy in Berkeley, California, which promotes ecology and systems thinking in primary and secondary education.

## Social Impact

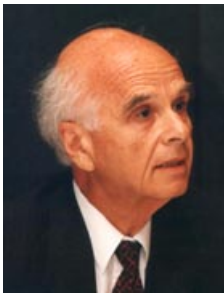
Publication of his book, *The Tao of Physics*, which explained and explored quantum physics and compared science's latest findings with age-old mystical traditions East and West, catapulted lay interest in physics through the roof. He was the first major accredited physicist to publicly speculate on the similarities between the wave function of

particles, mass/energy equivalency, coherence, and entanglement (the simultaneous interaction of particles at a distance) and mystical states of consciousness often described as “oneness” and direct perceptions of the interconnectedness of all life. His work and writings began a rapprochement between science and religion that continues to this day.

Like many scientists investigating interconnectedness, his focus has turned to a most pressing issue – the survival of the planet and its species. As a founding director of the Center for Ecoliteracy, he is actively pursuing a practical aspect of that connectivity – how we and the planet are ultimately tied together, and what humanity needs to do to sustain the health of everyone and everything.

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## Ervin Laszlo. Ph.D.



**Ervin Laszlo, PhD, is a pioneer of systems thinking in philosophy.** Twice nominated for the Noble Peace Prize, he is the author or editor of 70 books, including *The Connectivity Hypothesis: Foundations of an Integral Science of Quantum, Cosmos, Life, and Consciousness* (2003). Born in Budapest in 1932, he achieved international fame as a concert pianist in his early teens, then turned to science and philosophy a few years later in his search for a better understanding of man and his world. He

has degrees in music from the Franz Liszt Academy in Budapest, and in philosophy from the Sorbonne in Paris (Docteur es-Lettres). He has been a Research Associate at the University of Fribourg in Switzerland, Visiting Fellow at Yale, and Visiting Professor at Indiana and Northwestern universities. He is currently Professor of Philosophy at the State University of New York's College of Arts and Science at Genesco.

- Member of the International Academy of Science, the World Academy of Arts and Science and the International Academy of Philosophy.
- Lazlo worked as program director for the United Nations Institute for Training and Research (UNITAR).
- Former President of the International Society for Systems Sciences.
- Founder of The Club of Budapest. An international organization “with a core objective to create and implement holistic solutions to problems that face the entire human family.”
- Served as advisor of the UNESCO Director General and Ambassador of the International Delphic Council.

## Research & social impact

**Research:** Considered one of the founders of Systems Theory, Laszlo has been at the forefront of scientific thought for decades. His research into large complex systems, led him to his Connectivity Hypothesis. This overarching theory shows how the Universe is, in fact, inter-related on every level from the tiny (Quantum) level through the biological level, up to the large (Astronomical) level. His theory provides the broadest framework for all of the New Science mentioned herein.

In this theory Information is considered a basic construct of reality, as basic as energy and matter, time and space. Using tools he developed in Systems Theory, Laszlo shows how these complex systems inter-relate, and pass information up and down through organized layers of reality.

**Social impact:** Realizing the far reaching impact of his hypothesis, Laszlo founded The Club of Budapest to bring these realizations into practical use. “The philosophy of the Club of Budapest is based on the realization that the enormous challenges that humanity is currently facing can only be overcome through the development of a global cultural consciousness. Its mission is to be a catalyst for the transformation to a sustainable world. The Club perceives itself as a builder of bridges between science and art, ethics and economy, between cognition and realization, between old and young, as well as between the different cultures of the world.” <http://www.clubofbudapest.org>

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## Bruce Lipton, Ph.D.



**Bruce Lipton, Ph.D. focused his initial research upon discovering the functions and dynamics of the cell membrane.** He received his Ph.D. Degree in Developmental Cell Biology from the University of Virginia at Charlottesville before joining the Department of Anatomy at the University of Wisconsin’s School of Medicine in 1973. Dr. Lipton’s research on muscular dystrophy, focused upon the molecular mechanisms controlling cell behavior. Work on an experimental tissue transplantation technique with colleague Dr. Ed Schultz , published in *Science*, was later used as novel form of human genetic engineering. An interest in quantum physics and its application to cell’s information processing systems lead Lipton to produce breakthrough studies at Stanford University’s School of Medicine on the cell membrane.

- Dr. Lipton has published dozens of scientific papers on cell structure, operation, development, and regeneration,
- His books include: *Muscle Regeneration* (1979); *Basic Histology*; *The Biology of Belief: Unleashing the Power of Consciousness, Matter and Miracles* (2005); *Healing Our Planet, Healing Our Selves: The Power of Change Within to Change the World* (2005); and *Healing the Heart of the World: Harnessing the Power of Intention to Change Your Life and Your Planet* (2005)
- Dr. Lipton is an internationally sought-after keynote speaker and workshop presenter on biology and the mind-body connection..

## Research & social impact

**Research:** Lipton's research lead him to understand that the outer cell membrane functioned very much along the lines of a computer chip which had programmed information that enabled it to respond to the environment and actually turn genes on and off as appropriate, thus controlling the behaviors, physiology and health of the cell. In essence, the cellular membrane is the cell's equivalent of a brain. It is directly responsive not only to its physical environment, but to the thoughts and emotional states of its "host" human.

- His discoveries run counter to the established scientific view that life is controlled by the genes
- His research was a forerunner of the science of epigenetics. (The study of the reversible inheritable changes in gene function that occur without a change in the sequence of nuclear DNA. It is also the study of the processes involved in the unfolding development of an organism.)
- Two major scientific publications derived from these studies defined the molecular pathways connecting the mind and body.

**Social impact:** Dr. Lipton's findings on the inter-relationship and communication dynamics between the human body's cells via the cell membrane and the environment, including the cell membrane's responsiveness to its attitudinal and emotional environment, reveal the mechanisms – and thus prove the existence - of mind-body interaction. "As you think, so you are." Lipton's work has taken this statement out of the realm of New Age mumbo-jumbo and placed it squarely in the domain of provable science.

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## Edgar Mitchell, Sc.D



**Edgar Mitchell, Sc.D. was the sixth man to walk on the Moon during the Apollo 14 mission** on February 9, 1971. He graduated with a B.S. degree in industrial management from

the Carnegie Institute of Technology, and another B.S. from the U.S. Naval Postgraduate School in aeronautical engineering. He received a doctorate of science degree in aeronautics/astronautics from the Massachusetts Institute of Technology. Selected as one of the National Aeronautics and Space Administration's (NASA's) fifth group of astronauts in 1966, Mitchell joined Project "Apollo". On February 5, 1971, he touched down in the highlands of the moon's Fra Mauro region on Apollo 14.

On the return flight to Earth, Mitchell had a transformational experience. "As he hurtled earthward through the abyss between the two worlds, Mitchell became engulfed by a profound sensation 'a sense of universal connectedness.' He intuitively sensed that his presence, that of his fellow astronauts, and that of the planet in the window were all part of a deliberate, universal process and that the glittering cosmos itself was in some way conscious. The experience was so overwhelming Mitchell knew his life would never be the same." <http://www.edmitchellapollo14.com/edmbio.htm>

This experience led to the founding of the Institute of Noetic Sciences (IONS) in 1973 to "expand knowledge of the nature and potentials of the mind and spirit, and to apply that knowledge to advance health and well-being for humanity and our planet." In 1996 Mitchell published a book about the consciousness-expanding aspects of his moon voyage titled *The Way of the Explorer*.

## Research & social impact

**Research:** Vitally interested in the untapped potential of the human mind, Mitchell has used his prestige and influence as a NASA astronaut and engineer to further investigation into psi and other consciousness studies. IONS ( <http://ions.org> ) is often considered the premiere research organization bringing studies and experiments about the mind/matter interface, and other psychic phenomena to the scientific community. The research is in three primary areas: Extended Human Capacities, Integral Health & Healing, and Emerging Worldviews

**Social impact:** By creating a research organization to give scientific backing to the claims of mystics and spiritual geniuses, Mitchell has moved this area of inquiry from the caves of Tibet to the scientific laboratory. Answering questions about humanities' hidden abilities, and giving them a basis in strict scientific method, may well be the can opener that peels back the lid on the prevailing materialistic worldview. The impact of this is nothing short of revolutionary.

**More information & contact info:** <http://www.edmitchellapollo14.com/> and <http://ions.org>; Institute of Noetic Sciences, 101 San Antonio Road, Petaluma, CA 94952 USA; 707.775.3500; TMitchell@noetic.org

**Roger Nelson, Ph.D**



**Roger Nelson, Ph.D., has been director of the Global Consciousness Project (GCP) at Princeton University since its inception in 1997.** Nelson received his Ph.D. in Experimental Psychology from New York University, and his undergraduate degree in Psychology, Mathematics, & Physics from the University of Rochester, Rochester, NY. He tenured as a Professor of Experimental, Cognitive and Applied Psychology at Johnson State College before going on to become Coordinator of Research at the Princeton Engineering Anomalies Research ([PEAR](#)) laboratory

directed by Robert Jahn in the department of Mechanical and Aerospace Engineering, School of Engineering/Applied Science, Princeton University.

## Research & Social impact

**Research:** Nelson's work integrates science and spirituality by focusing on group human consciousness as it impacts the quantum field to create measurable effects in random event generators (REG). The Global Consciousness Project (GCP) is an international effort involving researchers at over 65 laboratories in Europe, the US, Canada, India, Fiji, New Zealand, Japan, China, Russia, Brazil, Africa, Thailand, and Australia. The hypothesis is that linked REGs will show anomalous deviations associated with Global Events with large-scale participation or reaction to a particular event. So far, global events, such as 911 demonstrate that human consciousness does interact with random event generators ([REGs](#)), apparently "causing" them to produce non-random patterns, in some cases starting hours before the events themselves.

These findings are in violation of every "law" of quantum mechanics, and a dramatic example of the mind/matter interface. Unsurprisingly, the largest deviation from randomness so far registered was on September 11, 2001. Experiments with these REGs may prove to be as revolutionary to the field of consciousness studies as the infamous double slit experiment was in quantum physics. Nelson's work focuses on the impact of global consciousness. Other researchers have found that even individuals have been shown to be able to move the REGs away from randomness, by simply intending to do so. This is deemed impossible in current quantum theory.

**Social Impact:** Experimental verification of the mind/matter connection, and the reality of a collective consciousness, is as revolutionary as it gets. He appears to give a statistical backing to the theories of Dr. Laszlo, Dr. Sheldrake, and Carl Jung. When all the research is put together, it seems to indicate that interconnectedness pervades all levels influencing everything, and that cultures possess a group mind, just like individuals possess their own mind. Further, it indicates that these collective minds influence the planet, other individuals, and other life forms.

It becomes easy to see why so many researchers in these fields are drawn to the study of ecology and sustainable technologies and lifestyles for humanity.

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## Andrew Newberg, M.D.



**Andrew Newberg, M.D. has researched the neuro-processes of the human brain and correlated them to mystical and religious experiences.** He received his medical degree from the University of Pennsylvania School of Medicine and completed a Fellowship in Nuclear Medicine in the Division of Nuclear Medicine, Department of Radiology, at the University of Pennsylvania. He is Board-certified in Internal Medicine, Nuclear Medicine, and Nuclear Cardiology. Dr. Newberg is currently an Associate Professor in the Department of Radiology and Psychiatry and Adjunct Assistant Professor in the Department of Religious Studies at the University of Pennsylvania. He is the director and co-founder of the Center for Spirituality and the Neurosciences, also at the University of Pennsylvania.

- He has published over seventy-five articles, essays and book chapters.
- He is the co-author of the best selling book, *Why God Won't Go Away: Brain Science and the Biology of Belief* (Ballantine, 2001) and *The Mystical Mind: Probing the Biology of Religious Experience* (Augsburg Fortress Publishers,
- He is author of *Why We Believe What We Believe*.
- He has appeared on Nightline, Good Morning America, ABC's World News Tonight, National Public Radio, London Talk Radio and over fifteen nationally syndicated radio programs, as well as Time, Newsweek, the Los Angeles Times, the Washington Post, the Philadelphia Inquirer, and many other newspapers and magazines.

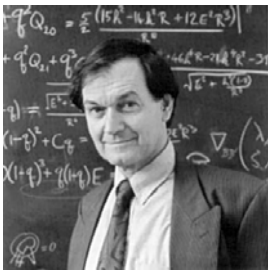
## Research & social impact

**Research:** Dr. Newberg has done neuro-imaging research projects on the study of aging and dementia, Parkinson's disease, depression, and other neurological and psychiatric disorders. He has also researched the neurophysiological correlates of acupuncture, meditation, and alternative therapies, and how brain function is associated with mystical and religious experiences.

**Social impact:** His research has led to a thorough examination of the dynamics involved in the development and sustaining of human beliefs; where they come from, and why do we hold on to them - sometimes against all common sense and wisdom. Fundamentally Newberg argues that humans are biologically wired to find meaning and wholeness throughout their lives and that the human brain has the capacity to create and maintain a system of beliefs which far exceed those needed for physical survival. Because these belief systems shape our lives – our relationships with community, family, and work associates, our everyday decisions on everything from what coffee we buy, to what church we attend, to the car we drive, our morals and our ethics, and even our health, a deep understanding of the dynamics of belief is essential. If we do not understand what drives us, what generates our happiness and our sadness, our peace and our friction, as a population we will be ever helpless pawns to our “biology of belief.” In the end, a better understanding of beliefs can foster a more compassionate perspective on people who hold other beliefs and point the direction towards a more positive life and society.

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## Sir Roger Penrose, Ph.D.



**Sir Roger Penrose, Ph.D. is an internationally renowned cosmologist and mathematician.** He received his Ph.D. for work in algebra and geometry from the University of Cambridge. Later he worked as Professor of Applied Mathematics Birkbeck College, London. In 1973 he was appointed Rouse Ball Professor of Mathematics at the University of Oxford, now Emeritus. He has held visiting positions at Yeshiva, Princeton and Cornell, Rice University in Houston and served as Distinguished Professor of Physics and Mathematics at Syracuse University in New York, and Distinguished Professor of Physics and Mathematics at Pennsylvania State University.

- Penrose has published many important papers on cosmology and mathematics dealing with Euclidean space, relativity and its unification with quantum theory.
- In 1994 he was knighted for services to science.
- Popular works include *The Emperor's New Mind : Concerning computers, minds, and the laws of physics* in 1989 and *Shadows of the mind : A search for the missing science of consciousness*, 1994.
- In 1996 Penrose and Dr. Stephen Hawking published *The nature of space and time*.
- Scientific prizes include the Dannie Heinemann Prize from the American Physical Society and the American Institute of Physics; the Royal Society Royal Medal; the Dirac Medal and Medal of the British Institute of Physics; the Eddington Medal of the Royal Astronomical Society; the Naylor Prize of the London Mathematical Society; and the Albert Einstein Prize and Medal of the Albert Einstein Society.

- Science Book Prize; Adams Prize from Cambridge University; the Wolf Foundation Prize for Physics (jointly with Stephen Hawking for their understanding of the universe).

## Research & social impact

**Research:** Penrose has published a series of important papers on cosmology and mathematics, including *The apparent shape of a relativistically moving sphere* and *A spinor approach to general relativity*, and with Henry Whitehead and Christopher Zeeman, *Imbedding of manifolds in euclidean space*. One of Penrose's major breakthroughs was his introduction of twistor theory in an attempt to unite relativity and quantum theory.

Considered a hard core theoretical physicist/mathematician, Penrose has delved into many issues usually ignored by scientists, such as the nature of consciousness, how human know what is real, and what we can understand about that perceived reality.

“I believe that the reality exposed by modern physics is fundamentally alien to the human mind, and defies all power of direct visualization.” – *The Emperor’s New Mind*.

**Social impact:** Aide from his strictly scientific works, Penrose has written popular books on the connection between physics and human consciousness. He argues that known laws of physics are inadequate to explain the phenomenon of human consciousness. With Dr. Stuart Hameroff he constructed a theory in which human consciousness is the result of quantum gravity effects in microtubules in the neurons of the brain.

His attempts to link the study of consciousness itself into the scientific debate, and thus introduce living systems to the equations of physics, is representative of the boundaries between disciplines that the New Science is trampling down.

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## Candace Pert, Ph.D.



**Dr. Candace Pert is an internationally recognized pharmacologist who has published over 250 scientific articles on peptides and their receptors and the role of these neuropeptides in the immune system.** Dr. Candace Pert received her Ph.D. in pharmacology from Johns Hopkins University School of Medicine, served as Chief of the Section on Brain Biochemistry of the Clinical Neuroscience Branch of the National Institute of Mental Health (NIMH), held a Research

Professorship in the Department of Physiology and Biophysics at Georgetown University School of Medicine in Washington, DC, and is currently the Scientific Director of RAPID Pharmaceuticals, Inc.

- Dr. Pert and her collaborator, Dr. Michael Ruff, developed the viral entry inhibitor Peptide T. which is now undergoing testing for the treatment of AIDS and neuroAIDS.
- She is the author of the book *Molecules of Emotion: The Scientific Basis Behind Mind-Body Medicine* (Scribner, 1997), *Everything You Need to Know to Feel Go(o)d*; (Hay House, 2006), and the musical guided imagery CD *Psychosomatic Wellness: Healing your Body-Mind*.
- She appeared in the feature films *What the Bleep Do We Know!??* and *Down the Rabbit Hole*, and Bill Moyer's TV program "Healing and the Mind."

## Research & social impact

**Research:** Dr. Pert exploded onto the scientific scene in the 1980's with her discovery of the receptor/cell mechanism. Previously only hypothesized, she isolated the peptide/receptor mechanism that was responsible for the effect of heroin on the body. This discovery revolutionized cellular biology, and even penetrated popular culture as recognition of endorphins (peptides) and the "runners high."

While further researching the function of classical immune cell receptors, Dr. Pert, with her collaborator Dr. Michael Ruff, developed the first of a new class of treatments for HIV/AIDS, the viral entry inhibitor Peptide T. This non-toxic experimental therapeutic blocks the virus from binding to its cellular chemokine receptor CCR5 and infecting the cell. Recent human studies show that Peptide T substantially reduces HIV in the blood and the treatment resistant, persistently infected cellular reservoirs which do not respond to current therapies.

Dr. Pert holds a number of patents for modified peptides in the treatment of psoriasis, Alzheimer's disease, chronic fatigue syndrome, stroke and head trauma. Peptide T is currently undergoing research, in the United States, for the treatment of AIDS and neuroAIDS. More information about Peptide T can be found at <http://www.tinm.org/>.

**Social impact:** Pert's research into neuropeptide receptors in the brain and later the immune system have provided a biochemical basis for interdependent communication between mind and body and have contributed to the emergence of the field of psychoneuroimmunology. In other words, she has isolated the actual biochemical molecules that are created in and released from the brain as a reaction to thoughts and external conditions in a person's life, which trigger a cascade effect in the body which are then interpreted in the brain as emotions.

The psychological implications are immense, for once people begin to understand the biochemical nature behind their emotional states, and understand what triggers these states, the more likely they are to be able to gain control over these states rather than

being the victims of them. In addition, Pert's work with neuropeptide receptors provides one of the first direct, scientific links between mind and body states.

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## Dean Radin, Ph.D



**Dean Radin, Ph.D is one of the worlds premiere scientific researchers in psi potentials and effects.** He earned a BSEE with honors, *magna cum laude*, in electrical engineering from the University of Massachusetts, Amherst, an MS in electrical engineering and a Ph.D in psychology from the University of Illinois, Champaign-Urbana. Early in his career he was a Member of Technical Staff at AT&T Bell Laboratories and later a Principal Scientist at GTE Laboratories, where for a decade he was engaged in R&D on advanced

telecommunications products, systems and devices. For twenty years he has conducted experimental studies of psi ("psychic") phenomena for academia and industry, including appointments at Princeton University, University of Edinburgh, University of Nevada, and SRI International. He also served as head of psi research at Interval Research Corporation a Silicon Valley consumer electronics laboratory. President of the Boundary Institute, a nonprofit research think-tank dedicated to the exploration of the boundaries between physics and consciousness. He is now Senior Scientist at the Institute of Noetic Sciences (IONS) in Petaluma, California. He also serves as adjunct faculty at Sonoma State University and on the Distinguished Consulting Faculty at Saybrook Graduate School in San Francisco.

- Has served four times as President of the Parapsychological Association (PA)
- Serves on the editorial boards for the Journal of Alternative and Complementary Medicine, Subtle Energies and Energy Medicine, Journal of Scientific Exploration, and Journal of the International Society of Life Information Science.
- Awards include Merit Awards from GTE Laboratories and Bell Labs; the Parapsychological Association's Outstanding Achievement Award; Rhine Research Center's Alexander Imich Award for advances in experimental parapsychology.
- Radin's research has been featured in the New York Times, New York Times Magazine, Psychology Today, Life, New Scientist, and the Wall Street Journal.
- He has appeared on The Nature of Things (CBC), History's Mysteries (History Channel), Closer to Truth (PBS), Thinking Allowed (PBS), NOVA (PBS), 20/20 (ABC), Life After Life (HBO), The Unexplained (A&E), Good Morning America (ABC), Discovery Magazine, Discovery Health, Daily Planet, Science Daily (Discovery Channel), and Unsolved Mysteries (NBC).

- He is author or co-author of over 200 journal articles and technical reports, and is the author of the award-winning book, *The Conscious Universe* (1997, HarperCollins) and the recent *Entangled Minds: Extrasensory Experiences in a Quantum Reality* (2006) <http://www.deanradin.com/NewWeb/EMindex.html>

## Research & social impact

**Research:** Radin's research in psi phenomena has been wide ranging:

- Entangled Minds. Has conducted rigorously controlled experiments investigating the unconscious connection between two isolated people.
- Random Event Generators – collective and individual consciousness effecting quantum events. (with Roger Nelson – see above)
- Psychophysiological evidence of possible retrocausal effects in humans. (i.e. the present influencing the past, the future influencing the present.)
- Double-blind tests of the effects of distant intention on water crystal formation. (with Dr. Masaru Emoto – *The Hidden Message of Water*)
- The sense of being stared at: A preliminary meta-analysis.
- Assessing the evidence for mind-matter interaction effects.
- Possible effects of healing intention on cell cultures and truly random events.
- Distant healing intention: Definitions and evolving guidelines for laboratory studies.

See also: <http://www.deanradin.com/NewWeb/activitiespubs.html>

**Social impact:** Radin's meticulous scientific methodologies in psi research have helped bridge the gap between science and psi, making the latter if not acceptable in scientific circles, then at least very slightly less objectionable. His most recent book, *Entangled Minds*, examines psi effects in terms of quantum theory and the interactive wave form aspect of elementary particles that explains what Einstein labeled as "spooky action at a distance" – i.e. the ability of particles to instantaneously affect each other over vast distances. Radin's work builds on recent discoveries that scale these findings up to the level of bio-entanglement and the entanglement of living systems, thus providing a back-drop for explaining mental entanglement, or psi.

His meticulous experimental research has given the New Science an important calling card to the scientific community, challenging them to engage in the debate, instead of simply waving it off as superstitious mumbo-jumbo.

**More information & contact info:** Institute of Noetic Sciences, 101 San Antonio Road, Petaluma, CA 94952 USA; 707.775.3500;  
<http://www.deanradin.com/NewWeb/deanradin.html>

## Robert John Russell, Ph.D.



**Robert John Russell, Ph.D. is a cosmologist and theologian.** He received his degree in physics from Stanford University, and his Ph.D. in physics from the University of California, Santa Cruz. He also received an M. A., in Theology from the Pacific School of Religion. A Professor of Theology and Science at the Graduate Theological Union, Berkeley, he is the Founder and Director of The Center for Theology and the Natural Sciences, Berkeley. He is ordained in the United Church of Christ to Ministry in higher education.

- Dr. Russell serves as primary editor of the CTNS-Vatican Observatory volumes on science and divine action.
- He is editor of the *festschrift*, *Fifty Years in Science and Religion: Ian G. Barbour and His Legacy*, and is author of numerous articles in the science and religion dialogue.
- Dr. Russell serves as Co-editor of *Theology and Science* journal and as P.I. of STARS: Science and Theology Advanced Research Series: "Science and the Quest for Ultimate Reality".
- He recently published the book, *Cosmology, Evolution and Resurrection Hope*, (Pandora Press).

### Research & social impact

**Research:** Dr. Russell's research has primarily been in the areas of Creation and cosmology/evolution as well as Divine action and how it shows up through the laws of nature as revealed via the sciences of quantum physics, relativity, and chaos/complexity theories. His research also delves into theological anthropology and human genetics and artificial intelligence. His research includes such papers as:

- "Systematic approach for comparing paraelectric tunneling models to resonance data," *Physical Review B*. Vol. 26, No. 6 (1982).
- "Kerr Solution to Whitehead's Theory of Gravity," (with Christoph Wassermann), *Bulletin of the American Physical Society*. Vol. 32, No. 90 (1987).

**Social Impact:** As a university professor and also as Founder and Director of the Center for Theology and the Natural Sciences, Dr. Russell has helped promulgate a closer connection between the scientific and religious/spiritual communities via research,

teaching and public service in the areas of physics, cosmology, evolutionary biology, and genetics, with additional topics in the neurosciences, technology, the environmental sciences, and mathematics. The central theological focus of Dr. Russell is on Christian theology, ethics and spirituality, with additional attention to the theological issues arising from the engagement between the sciences and world religions. The Center for Theology and the Natural Sciences has successfully created and administered a variety of local and international programs that have helped extend the science and religion dialogue world wide such as *The Theological and Ethical Implications of the Human Genome Initiative*, *The Science and Religion Course Program*, the *Science and the Spiritual Quest Program* and currently, *STARS: Science and Transcendence Advanced Research Series*.

**CONTACT INFO:** The Center for Theology and the Natural Sciences, 2400 Ridge Rd., Berkeley, CA 94709 USA (510) 848-8152; E-mail: [Director@ctns.org](mailto:Director@ctns.org)

## Rupert Sheldrake, Ph.D



**Rupert Sheldrake, Ph.D. is responsible for breakthrough research in biochemistry and cell biology.** He received his Ph.D. in biochemistry from Cambridge University after first studying philosophy at Harvard University. A former Research Fellow of the Royal Society, he carried out research on the development of plants and the ageing of cells at Clare College at Cambridge University where he was also Director of Studies in biochemistry and cell biology. From 1974 to 1985 he worked at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in Hyderabad, India, where he was Principal Plant Physiologist. He is the current Perrott-Warrick Scholar and Director of the Perrott-Warrick Project. He is also a Fellow of the Institute of Noetic Sciences, near San Francisco, and an Academic Director and Visiting Professor at the Graduate Institute in Connecticut. He is author of more than 75 scientific papers and ten books.

- His first book expounding his revolutionary ideas in biology was *A New Science of Life: The Hypothesis of Formative Causation* (1981).
- He has appeared in many TV programs in Britain and overseas, He has written for newspapers such as the *Guardian*, where he had a regular monthly column, *The Times*, *Sunday Telegraph*, *Daily Mirror*, *Daily Mail*, *Sunday Times*, *Times Educational Supplement*, *Times Higher Education Supplement* and *Times Literary Supplement*, and has contributed to a variety of magazines, including *New Scientist*, *Resurgence*, *the Ecologist* and the *Spectator*.

## Research & social impact

**Research:** Sheldrake's hypothesis of morphic resonance and morphic fields are profound in their implications and also profoundly at odds with current beliefs in the field of biology concerning growth and behavior. In Sheldrake's hypothesis, biological development – like the growth of an embryo or a tree – doesn't depend so much on genetic information as it does on organizing fields of information called morphic fields.

- Growth, as well as the organization of behavior, like the instinct of a spider, for example, depends on morphic, or organizing, fields.
- These fields of information are postulated to reside at the sub-quantum level of the Planck Scale.
- Sheldrake believes that through this morphic field theory of organization in nature we can come to have a new understanding of the nature of the mind.

### **Social impact:**

A popular way of describing Sheldrake's hypothesis of morphic resonance, in which behavior information is transmitted from past members of the species through a kind of non-local resonance, is the 100<sup>th</sup> Monkey hypothesis, which observes that information (i.e. behaviors) seem to mushroom exponentially through a species population once a certain number of individual members of the species develop the behavior.

The implications for humanity are huge. It indicates that the “collective unconscious” of Carl Jung is not a metaphorical construct, but an actual reality. Experiments with Random Events Generator's (see Global Consciousness Project above) bear this out experimentally. It gives the notion of interconnectedness a biological/societal framework.

On a practical level, his book: *Seven Experiments That Could Change the World: A Do-It-Yourself Guide to Revolutionary Science* takes the New Science out of the lab, and into everyone's home, with experiments that challenge the accepted scientific worldview.

**CONTACT INFO:** <http://www.sheldrake.org/homepage.html> Please email through his assistant Pam Smart, [pam@sheldrake.org](mailto:pam@sheldrake.org) or you can write to: 20 Willow Road, London NW3 1TJ, England.

## **William Tiller, Ph.D.**



**William Tiller, Ph.D. has applied Engineering Physics and research to create the new field of Psychoenergetics.** Tiller received his B.A, M.A. and Ph.D. in Science and Engineering Physics at the University of Toronto. He worked as an advisory physicist with Westinghouse Research Laboratories researching the detailed physics of the freezing process in a wide range of

materials, such as water, metals, semiconductors, oxides and polymers. A Fellow to the American Academy for the Advancement of Science, Dr. Tiller has spent 34 years in academia as professor and chair of Stanford University's Department of Materials Science where he is now Professor Emeritus.

- He has published over 250 scientific papers, three technical books and has had five patents issued.
- In the field of semiconductor processing, thin film formation, computer simulation he has published an additional 70 papers.
- He founded the field of psychoenergetics in which he has published to date, an additional 100 scientific papers and two seminal books.
- He is the founding director of the Academy of Parapsychology and Medicine and The Institute of Noetic Sciences.

## Research & social impact

**Research:** Dr. Tiller's specialization in crystal growth, surfaces and interfaces, physical metallurgy, semiconductor processing, thin film formation, and computer simulation, as well as his research into the relationships between the crystallization process and the detailed structure and properties of the solid has enabled him to generate new processes for ingot casting, material purification, single crystal growth, chemical crystallizers.

Dr. Tiller claims to have discovered a new class of natural phenomena which he calls "subtle energies." He has termed the study of these energies and their relationship to human consciousness as *psychoenergetics*. Tiller has used his background in crystallography as a basis for developing a procedure for actually imprinting a specific human conscious intention into a simple, low tech, electronic device. These Intentionally Imprinted Electronic Devices (IIED) can then be employed to alter a physical environment. One such application is the use of IIEDs to raise and lower the Ph of water.

This entire field of study and application is contrary to quantum mechanics and classical mechanics, both of which hold that human consciousness is unable to affect physical properties in any possible way. Dr. Tiller also claims to have discovered an experimental procedure for measuring and tracking the degree of "thermodynamic free energy change" created in IIED-conditioned space (U.S. Patent Pending).

**Social Impact:** The prevailing scientific theory of reality is that human intention does not, and cannot, directly affect a physical system in any way. Thus thoughts, while meaningful to the thinker, have no direct impact on the world at large. Therefore it's OK to think murderous thoughts about another, just don't pick up anything. Tiller shows that thoughts have a direct effect, seemingly supporting the Christian perspective that thinking an action is the same as doing it.

How adopting this viewpoint will change the social structure is open to speculation. But taking care of the "ecology of the mind", as Dean Radin puts it, may be the largest change to come upon the planet in millennium.

**CONTACT INFO:** <http://tillerfoundation.com>; or email at [info@tiller.org](mailto:info@tiller.org)

## Fred Alan Wolf, Ph.D.



**Fred Alan Wolf, Ph.D. is currently the populist high priest of physics.** He received his Ph.D. in theoretical physics from UCLA and began researching the field of high atmospheric particle behavior following nuclear explosions. A member of the Faculty University of Philosophical Research, the Martin Luther King, Jr. Collegium of Scholars, and the Faculty Holmes Institute, Dr. Wolf was a researcher and corporate consultant, as well as a Professor at the Department of Physics, San Diego State University before turning to writing and full-time consulting work. A published author of several books explaining physics to nonscientists and a popular lecturer/researcher on the new physics and consciousness, Dr. Wolf continues to **conduct research on the relationship of quantum physics to consciousness.**

- Dr. Wolf has taught at the University of London, the University of Paris, the Hahn-Meitner Institute for Nuclear Physics in Berlin, The Hebrew University of Jerusalem, and San Diego State University in the United States.
- He is the author of eleven books including *Taking the Quantum Leap*, *Parallel Universes*, *The Dreaming Universe*, *The Eagle's Quest*, *The Spiritual Universe*, *Mind into Matter*, *Matter into Feeling*, *The Yoga of Time Travel: How the Mind Can Defeat Time*, and his latest book *Dr. Quantum Presents, A Little Book of Big Ideas*.
- He won the National Book Award for Science with *Taking the Quantum Leap*.
- Dr. Wolf has also appeared as the resident physicist on The Discovery Channel's The Know Zone and on many radio talk shows and television shows across the United States and abroad.

## Research & social impact

**Research:** Dr. Wolf's research for Zenith Radio Corp., Hughes Aircraft, Lawrence Radiation Laboratory, General Atomic Corp. and the US Naval Research Laboratories was mainly focused on the theoretical working of topics dealing with computer simulations of energy outputs from metallic vapor lasers; ion molecule collisions in the upper atmosphere after a nuclear burst; and measuring small distances using white light spectrum. Some scientific publications include:

- "Coherent Scattering of Photons by Atomic Hydrogen." *Physical Review*, Vol. 128, No. 6, Dec. 15, 1962, pp. 1686-7."

- "On the Quantum Physical Theory of Subjective Antedating." *Journal of Theoretical Biology*, 1989, Vol. 136, pp. 13-19.
- "The Quantum Mechanics of Dreams and the Emergence of Self-Awareness." in *Toward a Scientific Basis for Consciousness*, Eds. S. R. Hameroff, A. W. Kaszniak, and A. C. Scott. Boston, MA: The MIT Press, 1996, pp. 451-67.
- "The Quantum Physics of Consciousness: Towards a New Psychology." *Integrative Psychiatry*, Vol. 3, No. 4 December, 1985: p. 236.

**Social Impact:** Wolf is best known for his simplification of the new physics for the layperson, and his popular writings in this area have been prolific. An engaging speaker, Dr. Wolf is frequently in demand as a lecturer, keynote speaker, and consultant to industry and the media.

**CONTACT INFO:** <http://www.fredalanwolf.com/> or you can email him at: [questions@fredalanwolf.com](mailto:questions@fredalanwolf.com)

## JOURNALISTS

### Gary Zukav

Gary Zukav wrote the 1979 popular book *The Dancing Wu Li Masters*, which demystified quantum physics while relating it to eastern mysticism and Tai Chi. Although it was written prior to the development of string theory, it remains highly recommended reading for laypersons seeking to grasp the essential connections between physics and spirituality.

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### Lynne McTaggart

Lynne McTaggart is the award-winning author of the bestselling book *The Field* which reviews and summarizes research in quantum physics that indicates the possibility of a zero point energy field in which all the information necessary to create and maintain physical existence is imprinted at the level of the Planck Scale (exponentially smaller than the quantum level). Lynne has become a well-respected spokesperson in both the UK and the US on consciousness, the new physics, and the practices of conventional and alternative medicine. Her latest book is *The Intention Experiment*.

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