

**CAN SCIENCE BE EXTENDED TO INCORPORATE
NORMAL, PARANORMAL AND SPIRITUAL EXPERIENCE?**



Talk to Transpersonal Psychology Section Annual Conference

REFERENCES FOR FURTHER DETAILS

Worlds Apart? Can Psychical Research Bridge
The Gulf between Matter and Mind?

Proceedings of SPR, Volume 59, 1- 96 (2008)

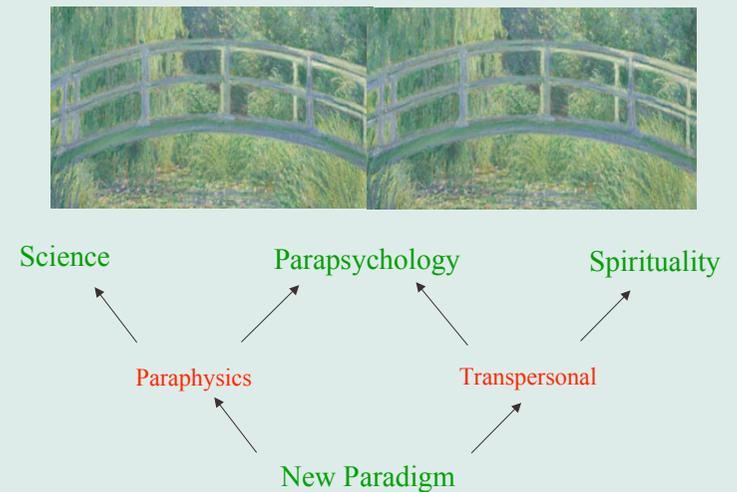
Parapsychology as a Bridge between
Science and Parapsychology

Christian Parapsychologist, Volume 18, 134-148 (2007)

PARAPSYCHOLOGY AS A BRIDGE



Double-bridge!

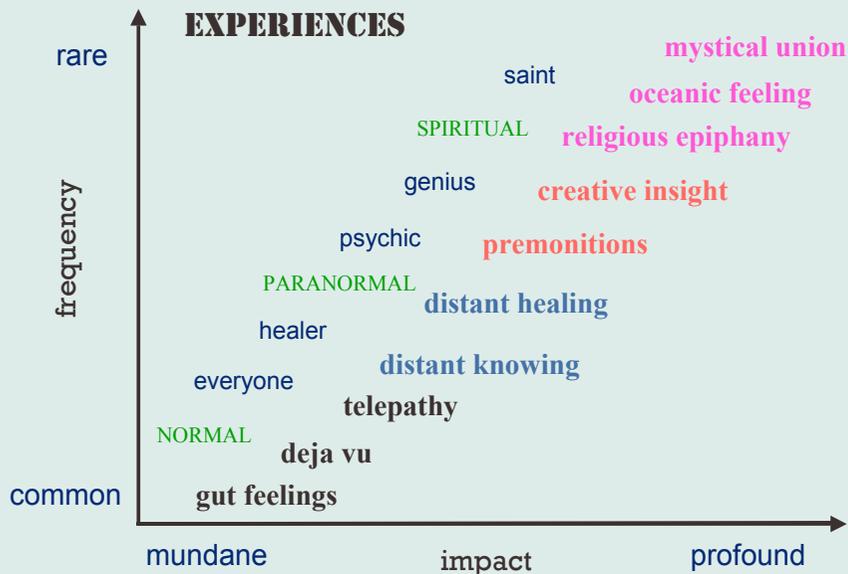


The strain of the bridge!



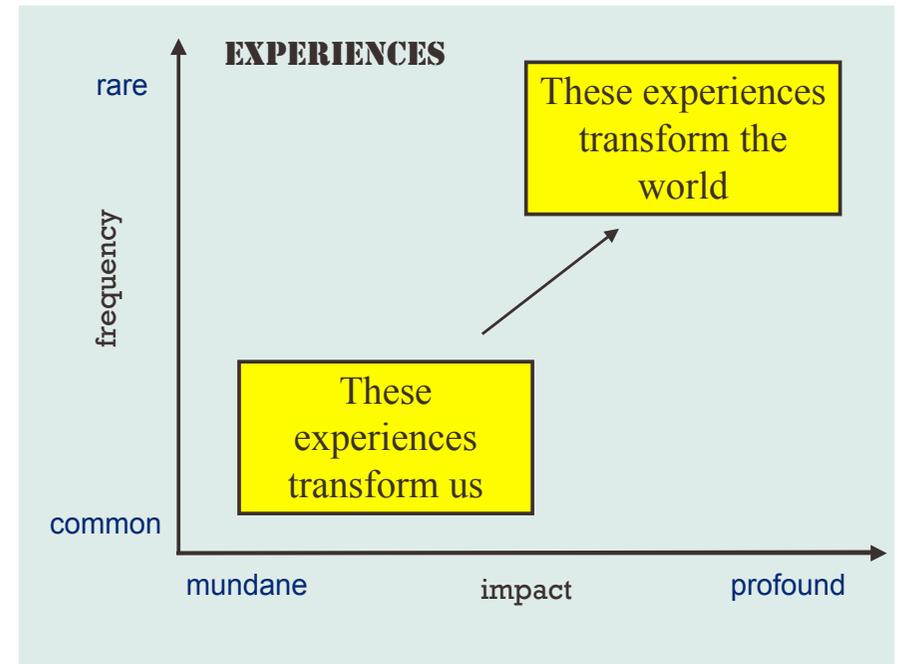
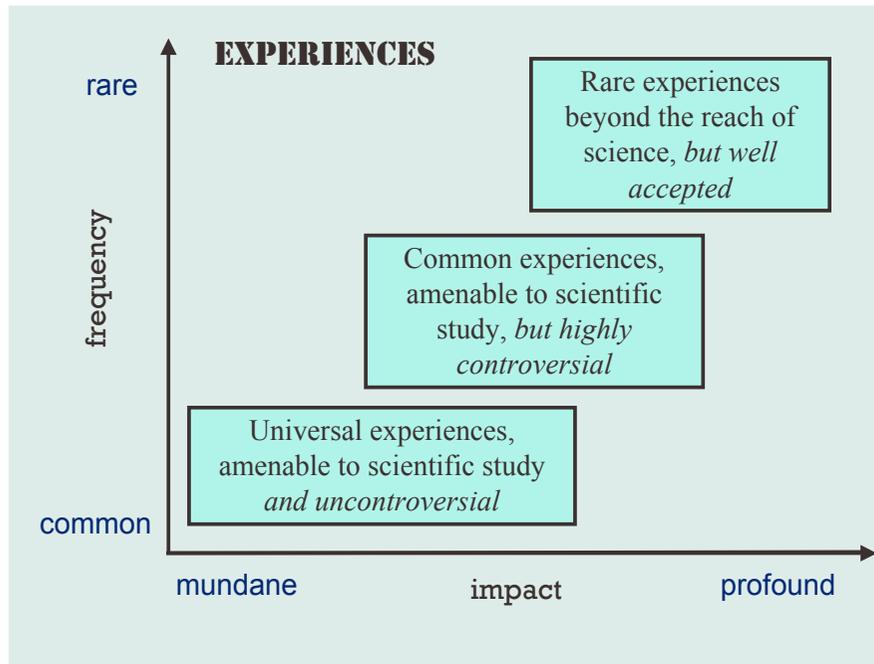
Outline

- Linking normal, paranormal and spiritual experience
- The bridge between parapsychology and spirituality
- The bridge between physics and parapsychology
- Seeking a new all-embracing scientific paradigm



[Following four pictures adapted from Dean Radin]





“Transpersonal psychology and the paranormal”

Daniels, M. (1998). *Trans.Psych. Rev.* 2, 17-31.

- Auras and subtle energy systems
- Channelling and mediumistic experiences
- Experiences of Angels
- Experiences of synchronicity
- Lucid dreaming
- Near death experiences (NDE)
- Out of body experience (OOBE)
- Past life memories
- Possession
- Prophecy and precognition
- Reincarnation experiences
- Sense of Presence
- Shamanic experience
- Spiritual healing
- Stigmata, and other bodily transformations
- Telepathy, clairvoyance and the “siddhis”
- Trance
- Experiences of UFOs, alien contact or abduction
- Psychokinetic phenomena
- Witchcraft and Magic

Transpersonal psychology versus parapsychology

“As I was looking on, she (Saint Teresa of Avila) was raised about half a yard from the ground without her feet touching it. At this I was terrified, and she, for her part, was trembling all over. So I moved over to where she was and I put my hands under her feet, over which I remained weeping for something like half an hour while the ecstasy lasted. Then suddenly she sank down and rested on her feet and turning her head round to me, she asked me who I was, and whether I had been there all the while.”

Transpersonal psychology and parapsychology overlap but use different methodologies and address different questions

WHY THE ANTIPATHY FROM THE SPIRITUAL SIDE?

- *Psychic powers are a distraction from spiritual path*
- *Mystical experiences are beyond science*
- *Psychic experiences are insufficiently spiritual*

WHY THE ANTIPATHY FROM PARASYCHOLOGICAL SIDE?

- *Discomfort with spirituality*
- *Experiment versus experience*
- *Lab versus life*

SIGNS OF BRIDGE CONSTRUCTION

ECOLOGICAL VALIDITY OF LAB WORK

- *Psi-conductive states (ganzfeld)*
- *Training subjects (meditation)*
- *Selecting subjects (creative)*
- *More interesting targets (emotive)*
- *Experimenter effect (people matter)*

GREATER EMPHASIS ON EXPERIENCE IN PSYCHOLOGY

(inside view of psi)

- *Rising status of Transpersonal Psychology in British Psychological Association*
 - *But split from Consciousness and Experiential Psychology*
- Tart (1997) "Body, Mind, Spirit: Exploring the Parapsychology of Spirituality"*

HOW PARAPSYCHOLOGY HELPS SPIRITUALITY

- *Study of OBEs, NDEs, DBVs (brain function?)*
- *Evidence for survival (soul?)*
- *Problem with reductionism (higher physics?)*

Nuns help scientists see the light with 'God Spot' scans

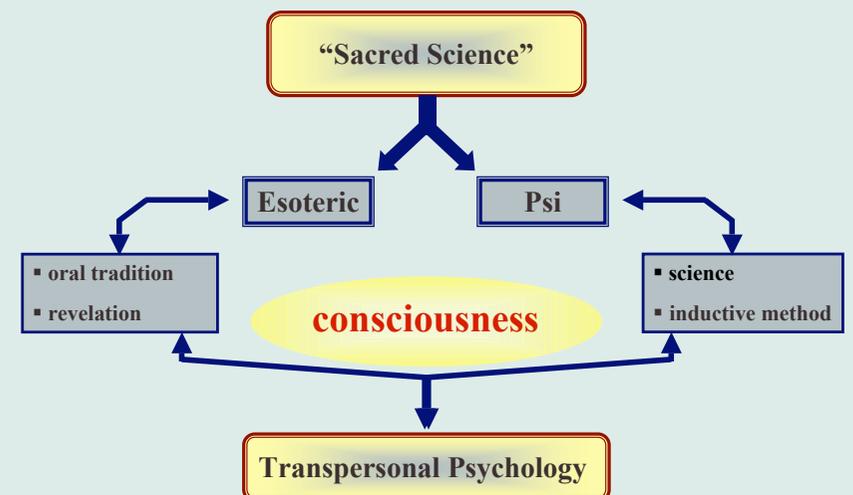
SCANS have shown that the brains of nuns flicker into life when they feel the presence of God, according to researchers. The findings contradict the common belief that human brains may have evolved with a single "God Spot" that lights up in response to deeply religious thoughts. Psychologists at the University of Montreal say the research, which appears in the journal Neuroscience Letters, set out to examine how the brain behaves during profound religious experiences. Mario Beauregard and

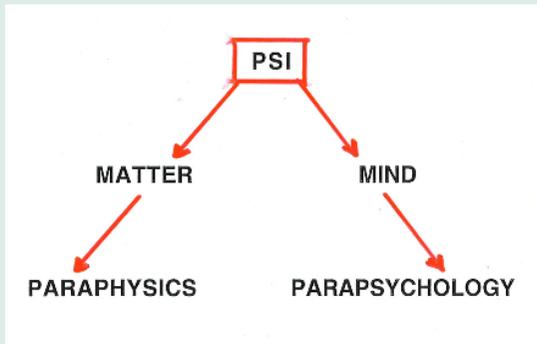
BY ROB SINGH

Vincent Pasquet used functional magnetic resonance imaging to scan the brains of 15 Carmelite nuns after they were asked to recall the most intense mystical experience they had ever had. The scans showed a surge in activity in regions of the brain that have been shown to govern feelings of peace, happiness and self-awareness. When compared with scans taken beforehand, the scientists found electrical

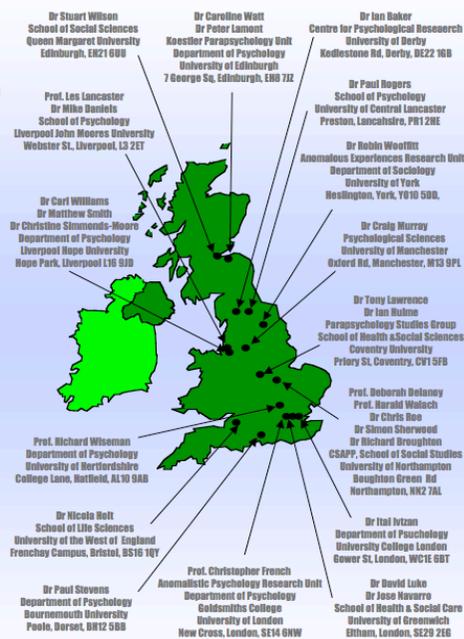
activity and blood oxygen levels had surged in at least 12 regions of the brain. It suggests that the feelings that accompany religious experience are linked to this increased electrical activity. The scans showed different brain activity from those taken when the nuns were asked to remember intense emotional experiences that involved another person. Dr Beauregard said: "Rather than there being one spot that relates to mystical experiences, we've found a number of brain regions are involved."

Les Lancaster





UK
research in parapsychology



UK
research in parapsychology



UK
research in parapsychology



CLASSIFICATION OF PSYCHIC PHENOMENA

Delusional	Simple physical explanation	Unexplained physical inter'n	Purely mental
CLASS 1	CLASS 2	CLASS 3	CLASS 4
Pyramid power Bermuda triangle Psychic surgery Conjuring	Kirlian photos Firewalking Some EVP? Anomalous?	Telepathy? Clairvoyance Precognition Psychokinesis	Transpersonal Multiple personality Hallucinations Hypnosis
1/2	2/3	3/4	
Loch Ness monster Human combustion UFOs Crop circles	Dowsing Poltergeists Psychic healing ITC	Pastlife memories OBEs/NDEs/DBVs Apparitions Mediumistic	

← domain of paraphysics

AVERSION OF PHYSICISTS TO PSYCHICAL RESEARCH

John Taylor (1978)

"There is a clear contradiction between science and most supernatural phenomena..... The entire edifice of physics would have to be reconstructed from the ground up if it had to embrace psi phenomena."

Gerard 't Hooft (2000)

"Modern physics seems to offer leeway to the paranormal. As a theoretical physicist, I must assert most emphatically that this leeway is only apparent. There is absolutely no way one can explain the paranormal in this fashion."

Brian Pippard (1988)

"If the existence of these phenomena is doubtful, it is because the evidence is scanty and often of dubious provenance, it is not because they cannot be invoked in physical terms. They involve after all, a class of system beyond the scope of physical theory - that is to say, conscious human beings....I do not say consciousness is not at this time understood from the laws of physics - I say it cannot be so understood."

AVERSION OF PSYCHICAL RESEARCHERS TO PHYSICS

John Palmer (1978)

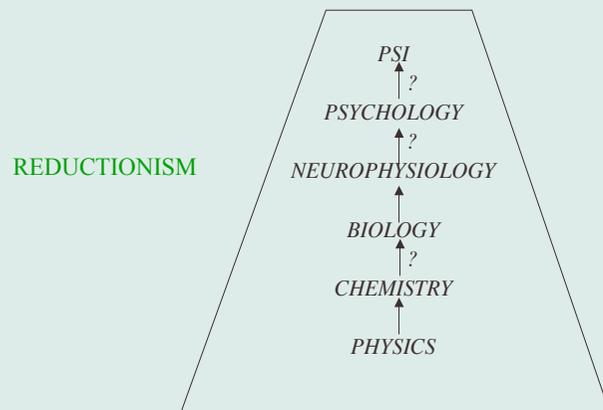
"Generally speaking, the experimental evidence suggests that ESP can occur at great distances and does not decline with distance. These findings do not fit well with most hypotheses that physical energies mediate the transmission of extrasensory information. "

John Beloff (1988)

"The attempt to reconcile physics and parapsychology is misguided. Asking for an explanation of the mind-matter interaction could only lead to an endless and profitless regress."

Physicists reject psi because of threat TO reductionism

Parapsychologists reject physical model because of threat OF reductionism



REASONS FOR CONNECTING PSI AND PHYSICS

* Good for psychical research

"No amount of empirical evidence, no mere collection of facts, will convince all scientists of the veracity and the significance of your reports. You must provide some sort of model, you must advance bold constructs...in terms of which ESP can be theoretically understood" (Henry Margenau 1985)

* Good for physics

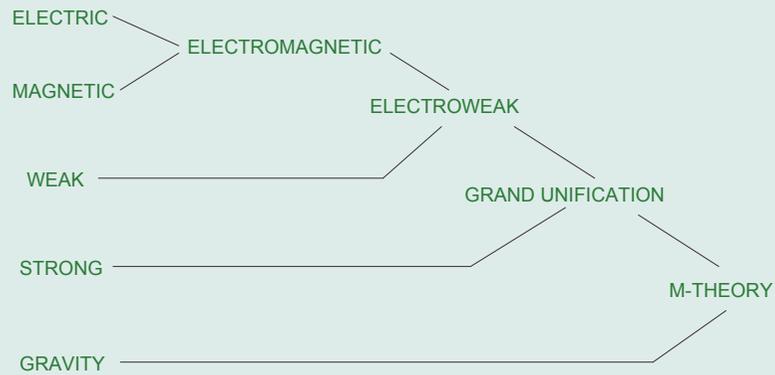
"Even if one regards the probability of psi being real as small, its significance - if confirmed - would be so immense that its investigation is worth undertaking."

* Physics is already exotic enough to accommodate psi (Arthur Koestler 1972)

"The unthinkable phenomena of extra-sensory perception appear somewhat less preposterous in the light of the unthinkable propositions of modern physics."

* Interaction with physics is required

UNIFICATION OF FORCES



CONSCIOUSNESS IS UNIMPORTANT

John Watson (1913)

"The time seems to have come when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation."

Daniel Dennett (1991)

"Consciousness appears to be the last bastion of occult properties, epiphenomena and immeasurable subjective states - in short, the one area of mind best left to philosophers, who are welcome to it. Let them make fools of themselves trying to corral the quicksilver of phenomenology into a respectable theory."

CONSCIOUSNESS IS IMPORTANT

John Wheeler

"Mind and Universe are complimentary"

Bernard d'Espagnat

"The doctrine that the world is made up of objects whose existence is independent of human consciousness turns out to be in conflict with quantum mechanics and with facts established by experiments."

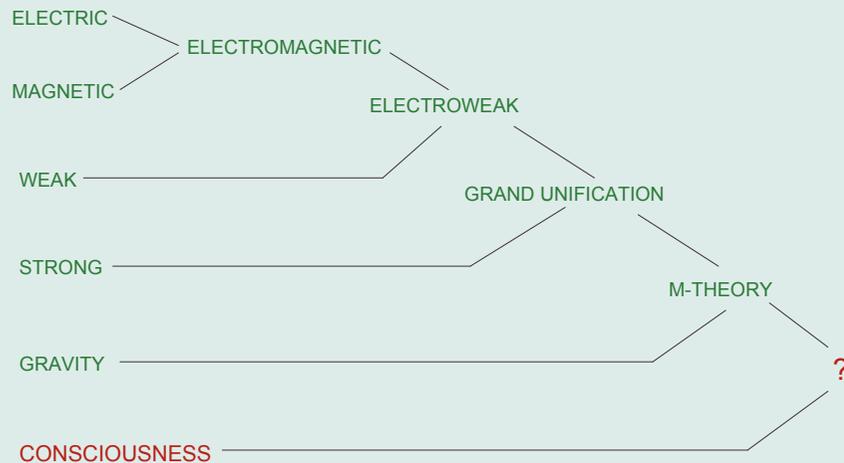
Noam Chomsky

"Physics must expand to explain mental experiences"

Roger Penrose

"We need a revolution in physics on the scale of quantum theory and relativity before we can understand mind"

UNIFICATION OF FORCES



CAN QUANTUM THEORY EXPLAIN PSI?

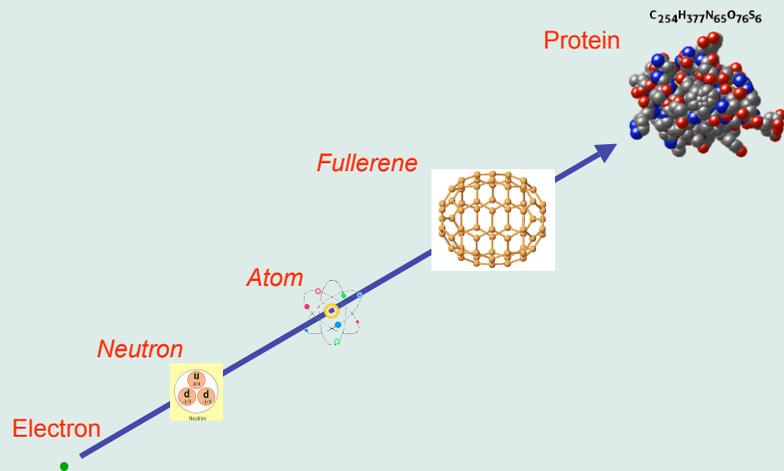
ENTANGLEMENT

Occurs when two or more particles interact, causing their fates to become linked *outside of space & time.*

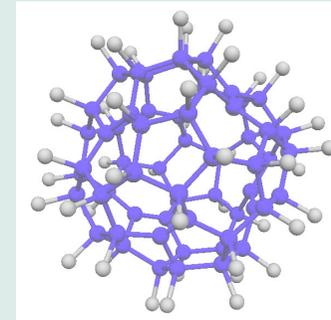
Radin "The Entangled Mind" (2005)

[Following ten pictures adapted from Dean Radin]

What can be entangled?



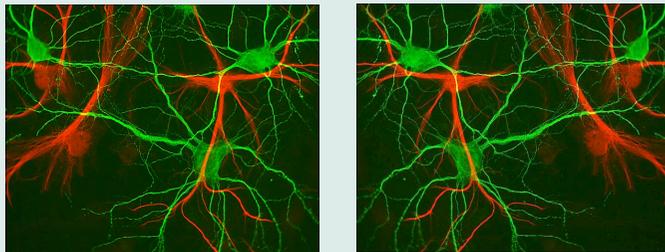
Current World Record:



- Formel: $C_{60}F_{48}$
- Mass: **1632** amu!
- **108** atoms in a single object

Non-local correlations between separated neural networks

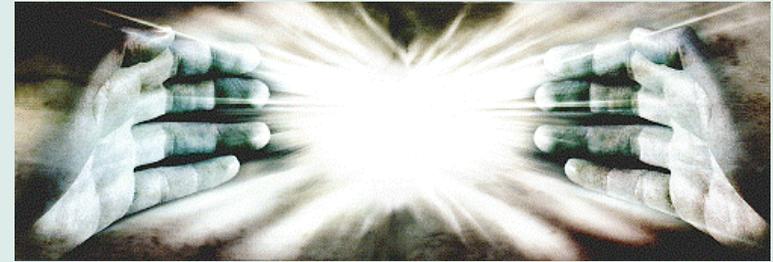
Pizzi, Fantasia, Gelain, Rossetti & Vescovi
Department of Information Technologies
University of Milan



Is psi an experiential glimpse of the holistic fabric of reality?

What if the universe
were fully entangled?

What would
experience be like in
that holistic medium?



- ▲ We might occasionally feel connected to others, at a distance
- ▲ We might know things without the use of the ordinary senses
- ▲ Our intentions might reverberate throughout the entangled medium

classical medium



isolated objects,
communicating
through time,
via signals &
forces, by
causal means

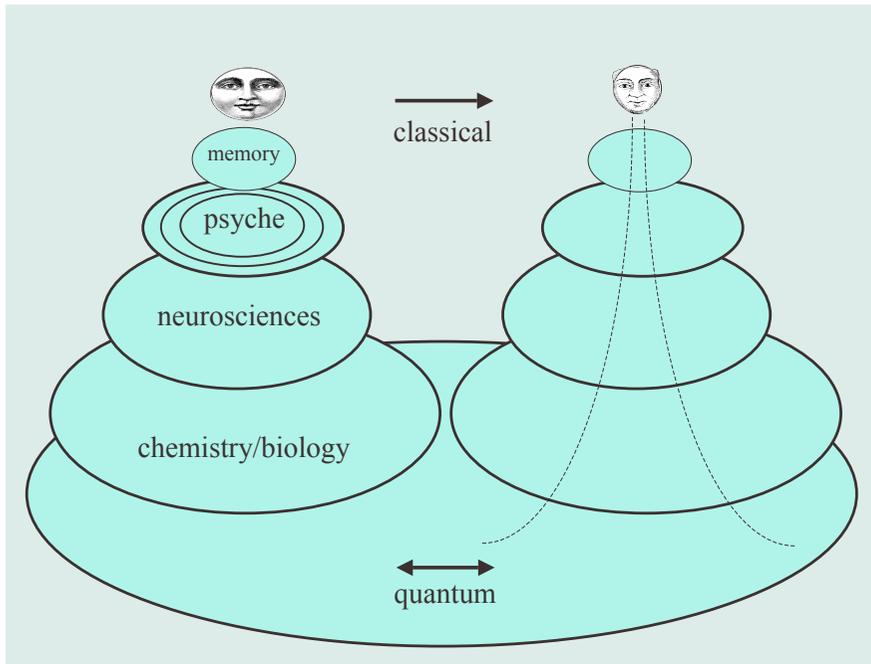


holistic medium



apparently
different
objects, acausal
connections
transcending
spacetime, no
signals or
forces





POWER OF THE PARADIGM



Paradigms are a form of perception

Psi reveals gaps in current paradigm

What does psi imply about next one?

Science has yet to learn how to think about psi



We need
A NEW PARADIGM

which incorporates...

- * consciousness
- * transcendence of space and time
- * mental phenomena in some radically new way

“Parapsychology is littered with hypothetical structures to explain the psi process, or some features of it, but no comprehensive theory... Either psi does not exist or psi is so fundamental that it is intimately interwoven into the very fabric of reality” (Jim Beichler 1998)

PARADIGM SHIFTS - CHANGING DIMENSIONALITY OF PHYSICS

NEWTONIAN PICTURE



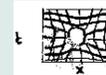
Absolute space and time 3D

SPECIAL RELATIVITY



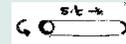
Space + time = spacetime 4D

GENERAL RELATIVITY



Gravity = curved spacetime >4D

KALUZA-KLEIN PICTURE



Electromagnetism = 5th dimension 5D

M-THEORY



Other forces = other dimensions 11D

TWO WORLDS

MATTER

- External
- Objective
- Public
- 3rd person
- Real
- Experiment
- Science

MIND

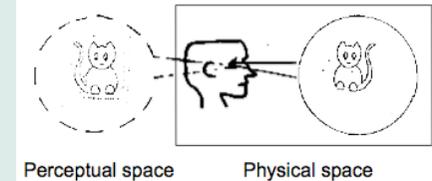
- Internal
- Subjective
- Private
- 1st person
- Imaginary
- Experience
- Mysticism

Outer

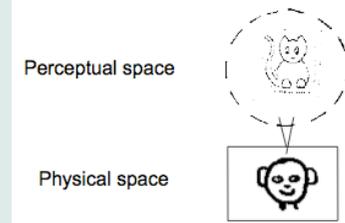
Inner

SPACE

PHYSICAL PERCEPT



MENTAL PERCEPT



- Representative theory V naive realism
- Telepathy => perceptual space is external
- Clairvoyance => physical space is internal
- Real space is itself only a representation!
- Psi => need another space

IS THERE A SPACE FOR PSI?

* Apparitions

Hallucinations? Veridical? Collective cases? Physical trace?

* (

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life

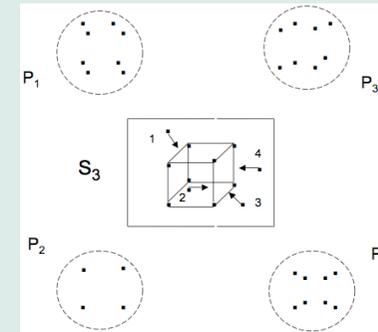
* P

Need a space which is not the same as physical space but related to phenomenal space, memory space, dream space, ESP space, C

UNIVERSAL STRUCTURE

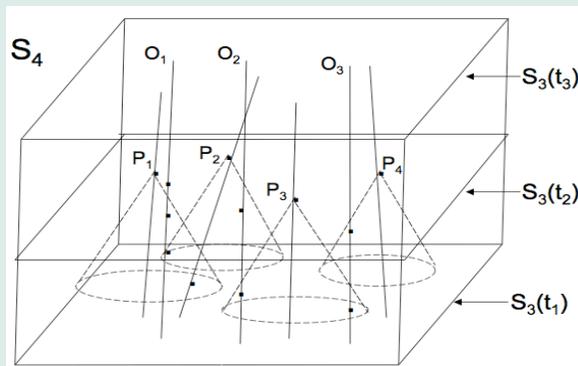
* Step 1

There exists 3-dimensional space in which are localized both physical objects and sensors through which we observe objects. Each observer has only partial information about this space but there exists 3-dimensional configuration which gives 2-dimensional projections concordant with those presented. Physical reality is 3-dimensional structure which consistently reconciles our perceptions of it.



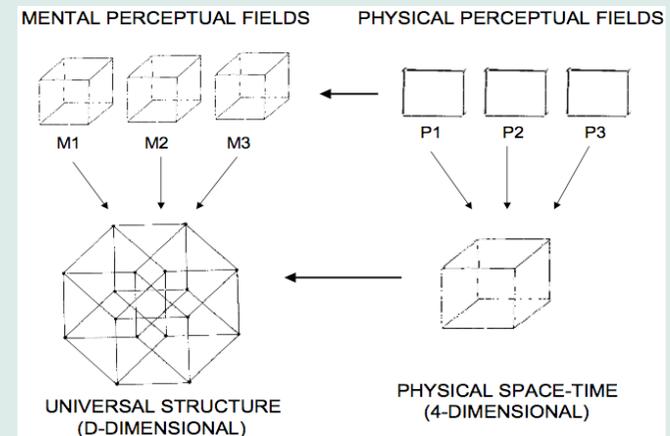
* Step 2

Relativity theory implies that physical world is 4-dimensional, with the objects and observers being represented by world-lines and perceptual fields being 3-dimensional. Physical reality is 4-dimensional structure and this consistently reconciles our perceptions of it.



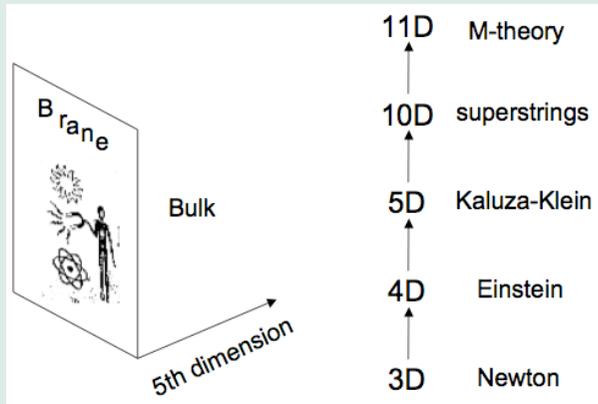
* Step 3

Space required to accommodate mental experiences must be a reality structure of more than four dimensions. This "Universal Structure" is higher-dimensional information space which reconciles our different experiences of the world. It has a hierarchical structure and incorporates physical space (past and future), as well as non-physical parts accessed only by mind.



*** Step 4**

Universal Structure is identified with the higher-dimensional space invoked by Kaluza-Klein paradigm. In particular, with Randall-Sundrum model, in which 4-dimensional **brane** embedded in higher dimensional **bulk**. This leads to "extended physics" which describes both standard physics and mental interactions.



MATTER, MIND AND HIGHER DIMENSIONS

Bernard Carr

SPR Conference No.33



BRIEF HISTORY OF HIGHER DIMENSIONS

Plato (~400BC): shadows in cave

Henri Poincaré "Le calcul des probabilités" (1894): "metaphysicum" (1671): spirits in the 4th dim

Johann Zöllner "Transcendental Physics" (1878): "...ous invention, less likely than chimera".

George FitzGerald "The Ether and the Electrons" (1889): "...ved 3-d space to unify EM and gravity

Hermann von Helmholtz "Ueber die Erhaltung der Kraft" (1847): "...n 3rd dimension.

Johann Zöllner "Transcendental Physics" (1878) connects 4th dimension with spiritualism

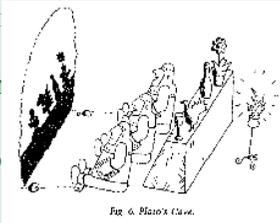


Fig. 6. Plato's Cave.

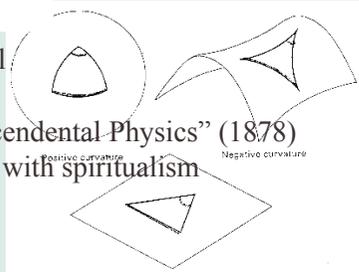


Fig. 57. Evidence of a 4th dimension? "Supernatural" from J. C. F. Zöllner, "Transcendental Physics."

Edwin Abbott (1884)

"Flatland"

J. Rousseau (2001)



Fig. 15. Liqueur thief from the next dimension.

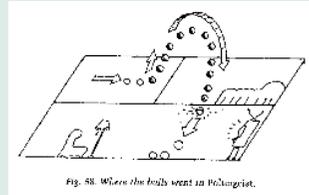


Fig. 58. Where the balls went in Polignac's.

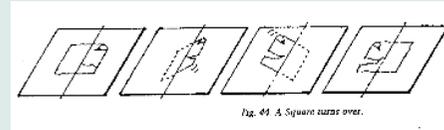


Fig. 49. A Square turns over.

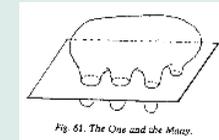


Fig. 61. The One and the Many.

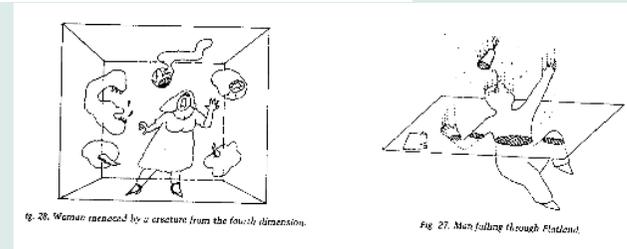


Fig. 28. Woman rescued by a creature from the fourth dimension.



Fig. 27. Man falling through Flatland.

Charles Hinton (1880)
 "What is the 4th dimension?"

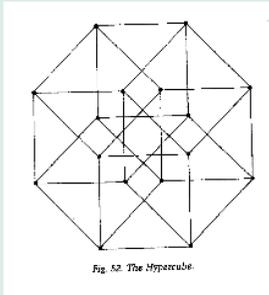


Fig. 52. The Hypercube.

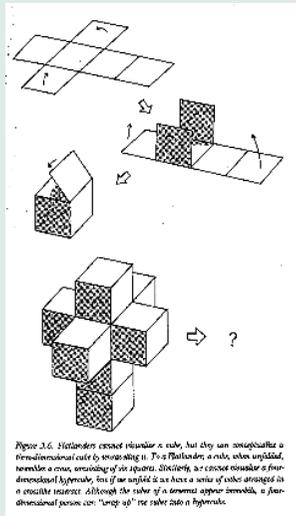
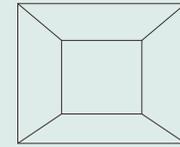


Figure 3.6. Hinton's concept resembles a cube, but they can be visualized as a three-dimensional cube by "unzipping" it. To a flatlander, a cube, when unzipped, resembles a cross, consisting of six squares. Similarly, as a space traveler in four-dimensional hyperspace, the 4D world is as there a series of cubes arranged as a cross-like structure. Although the cube of a normal appear three-dimensional, a four-dimensional person can "unzip" the cube into a hypercube.

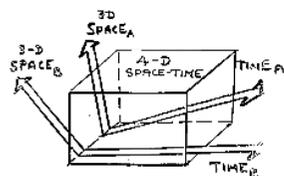
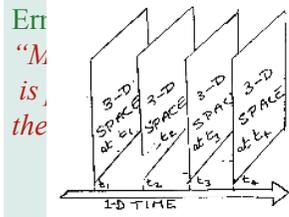


Cube as square in square



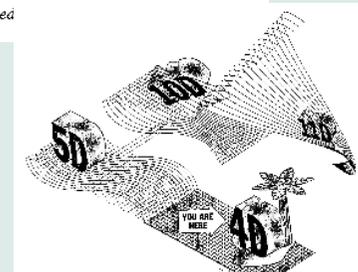
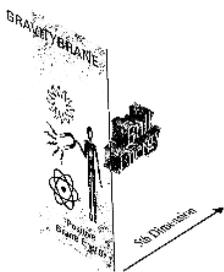
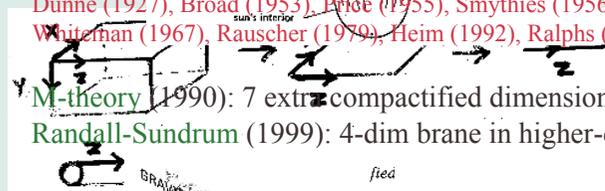
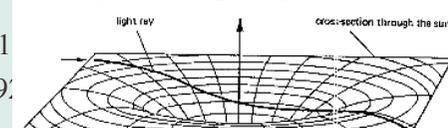
Hypercube as cube in cube

- A.Schofield "Another World" (1888): God and spirits in 4th dimension.
- Oscar Wilde "The Canterville Ghost" (1891): lampooned 4th dimension
- Arthur Willink "The World of the Unseen " (1893): God in infinite-dimensional space.
- H.G.Wells "Time Machine" (1894): time as 4th dimension
- Einstein "Special relativity" (1905): eliminates absolute space and time
- Minkowski (1906): 4-dimensional spacetime
- P.D.Ouspensky "The 4th Dimension" (1908): links to mystical states

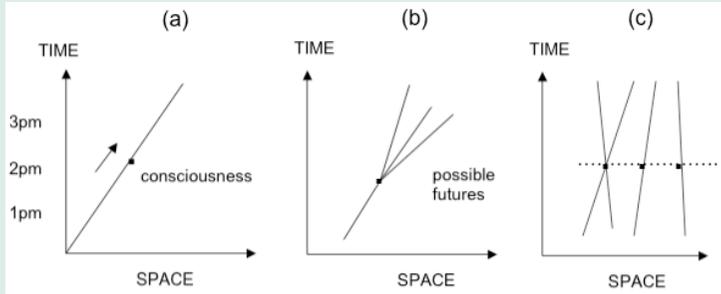


(1908) disagrees:
 world of what
 own only in

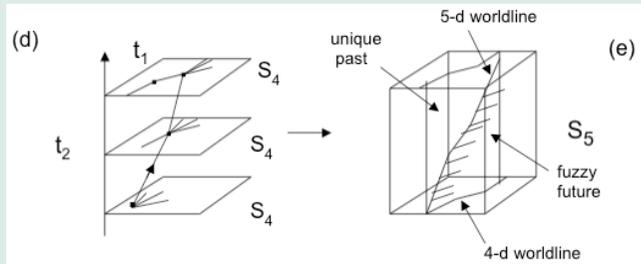
- General Relativity (1916): gravity from curved spacetime
- Kaluza (1919): unification of electromagnetism and gravity
- Klein (1926): compactified dimensions at Planck scale
- Paraphysical applications of higher-dimensional models
- Dunne (1927), Broad (1953), Price (1955), Smythies (1956), Dobbs (1965), Whitefan (1967), Rauscher (1979), Heim (1992), Ralphs (1992), Beichler (1999)
- M-theory (1990): 7 extra compactified dimensions => TOE
- Randall-Sundrum (1999): 4-dim brane in higher-dimensional bulk



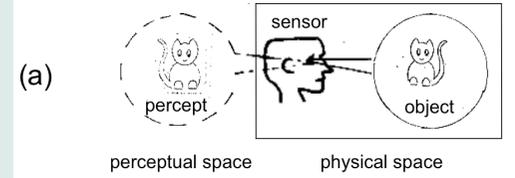
PROBLEM OF TIME



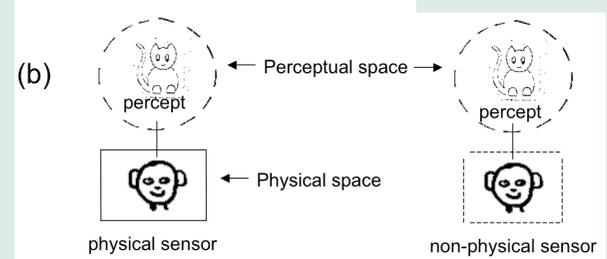
Einstein "block universe" does not describe flow of time => need extra mental time



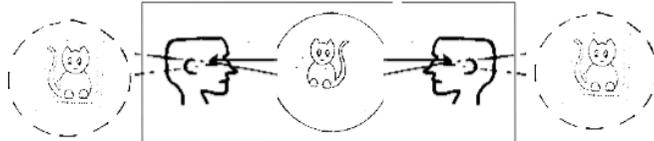
PHYSICAL PERCEPTION



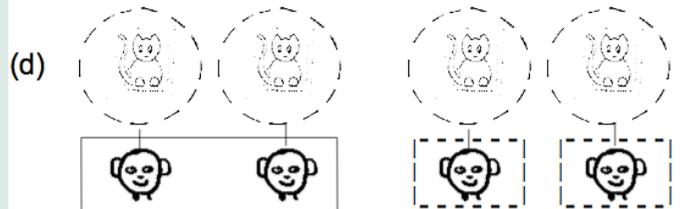
NON-PHYSICAL PERCEPTION



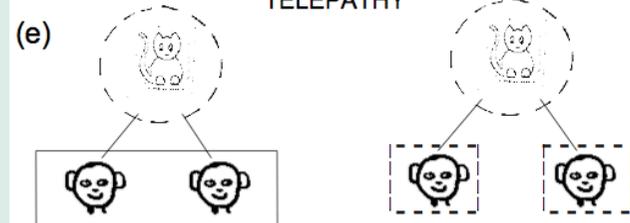
(c) MULTIPLE PHYSICAL PERCEPTION



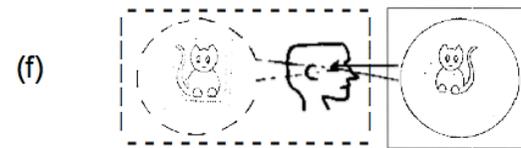
MULTIPLE NON-PHYSICAL PERCEPTION

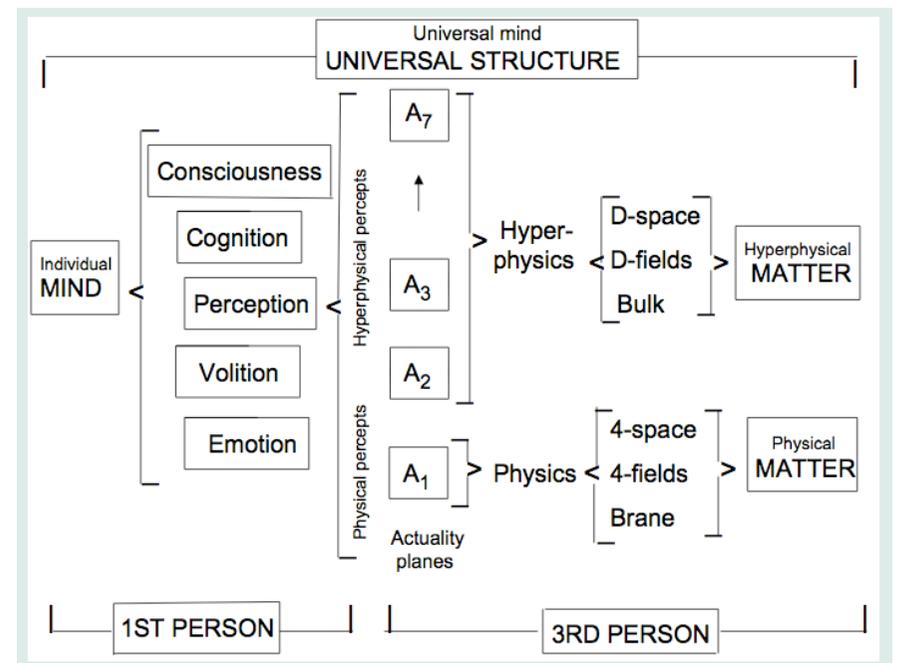
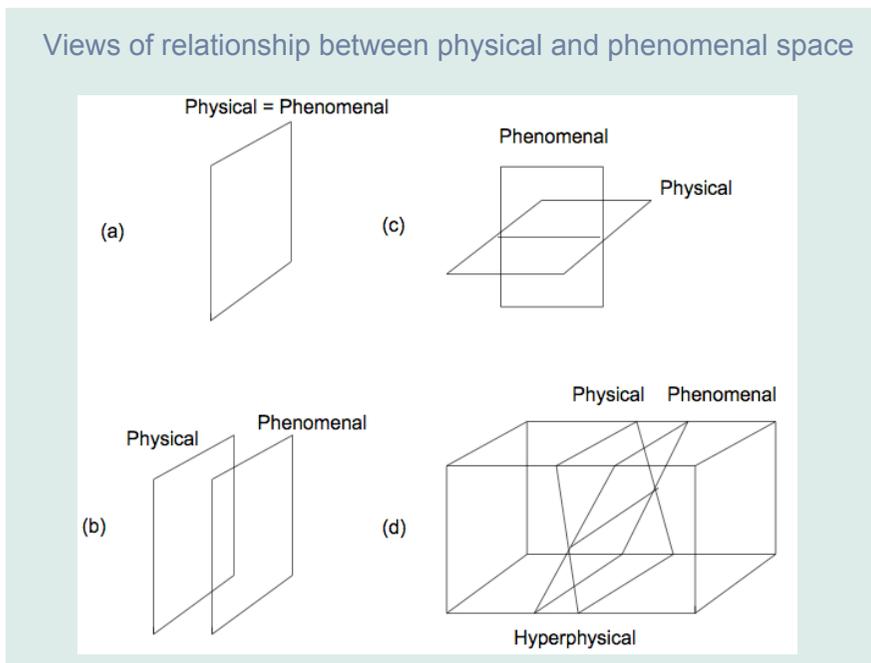
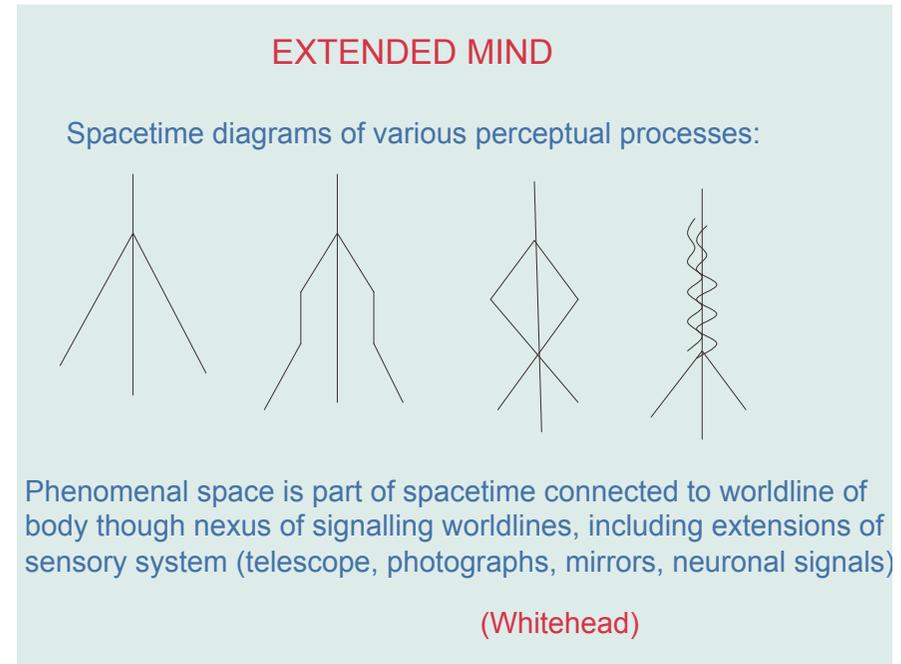
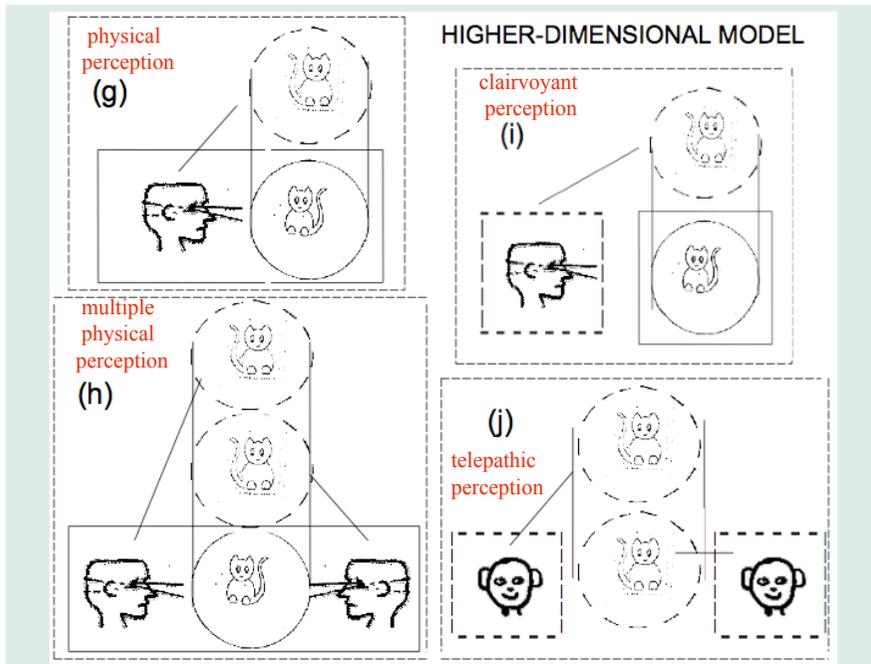


TELEPATHY



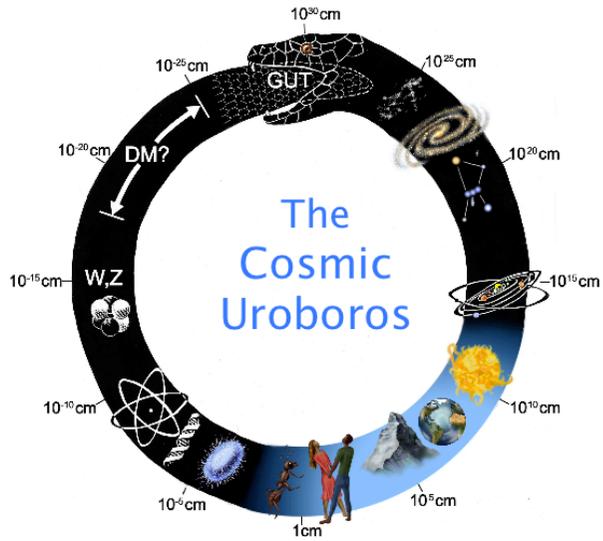
CLAIRVOYANCE





Multiverse Higher dimensions M-theory

Where is the mind?



CONCLUSION

Higher dimensions



Matter

Mind

"We must learn to mentalize space and spatialize mind" Paul Brunton