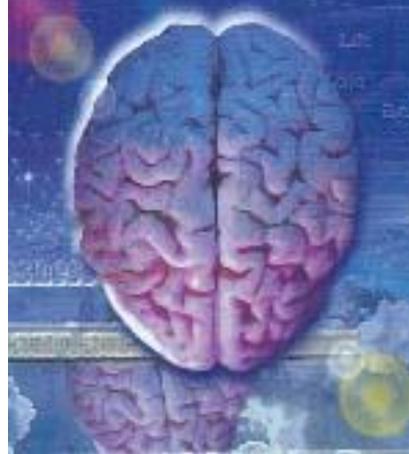


**God Particle to Consciousness
Life-science, Neuroscience and Nonlocal science
hold the key**

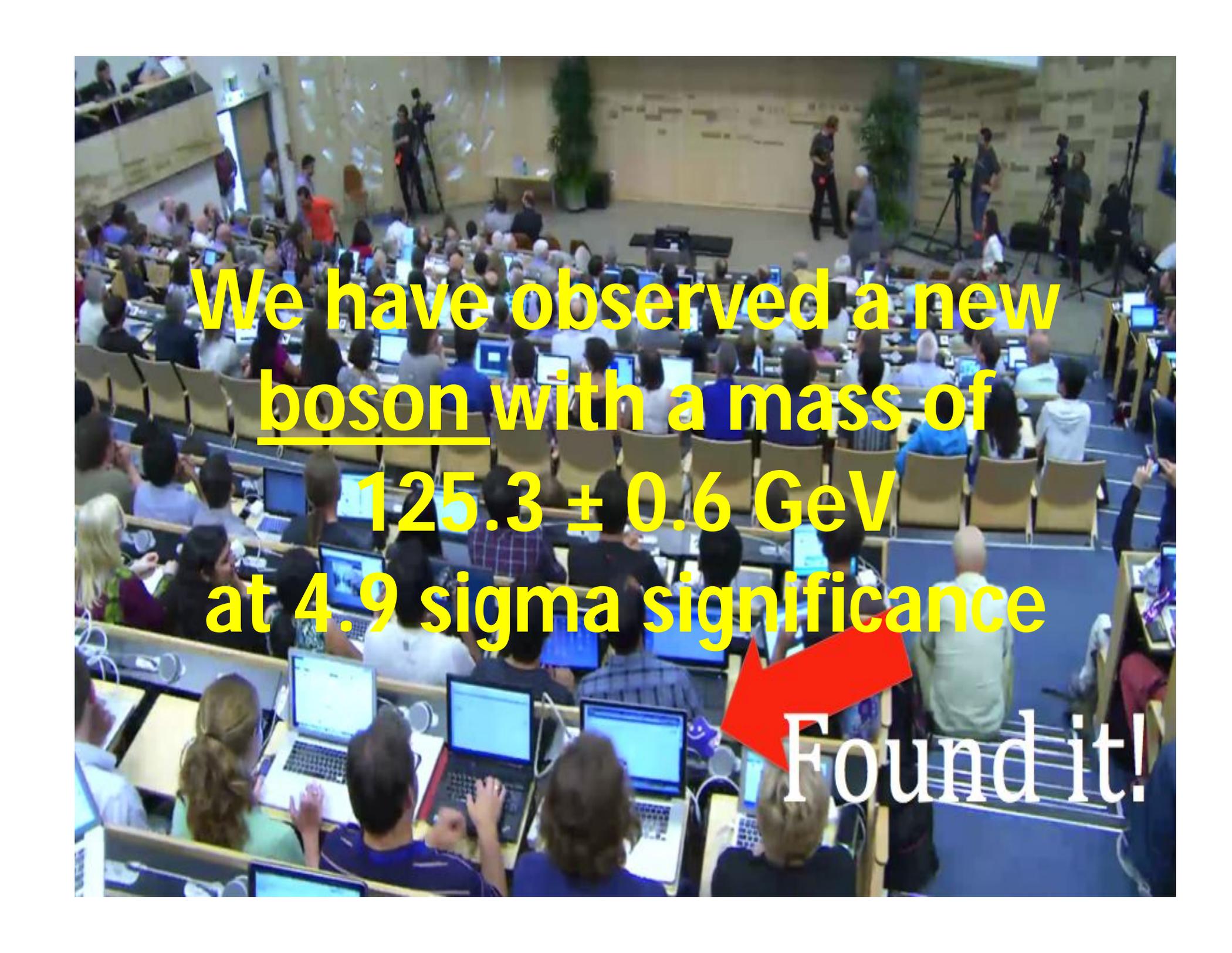


Dr. A. K. Mukhopadhyay, MD.
All India Institute of Medical Sciences, New Delhi
www.akmukhopadhyayconsciousness.com



Science & Spiritual Quest, 1st – 2nd September, 2012

Indian Institute of Science, Bangalore



We have observed a new
boson with a mass of
 $125.3 \pm 0.6 \text{ GeV}$
at 4.9 sigma significance

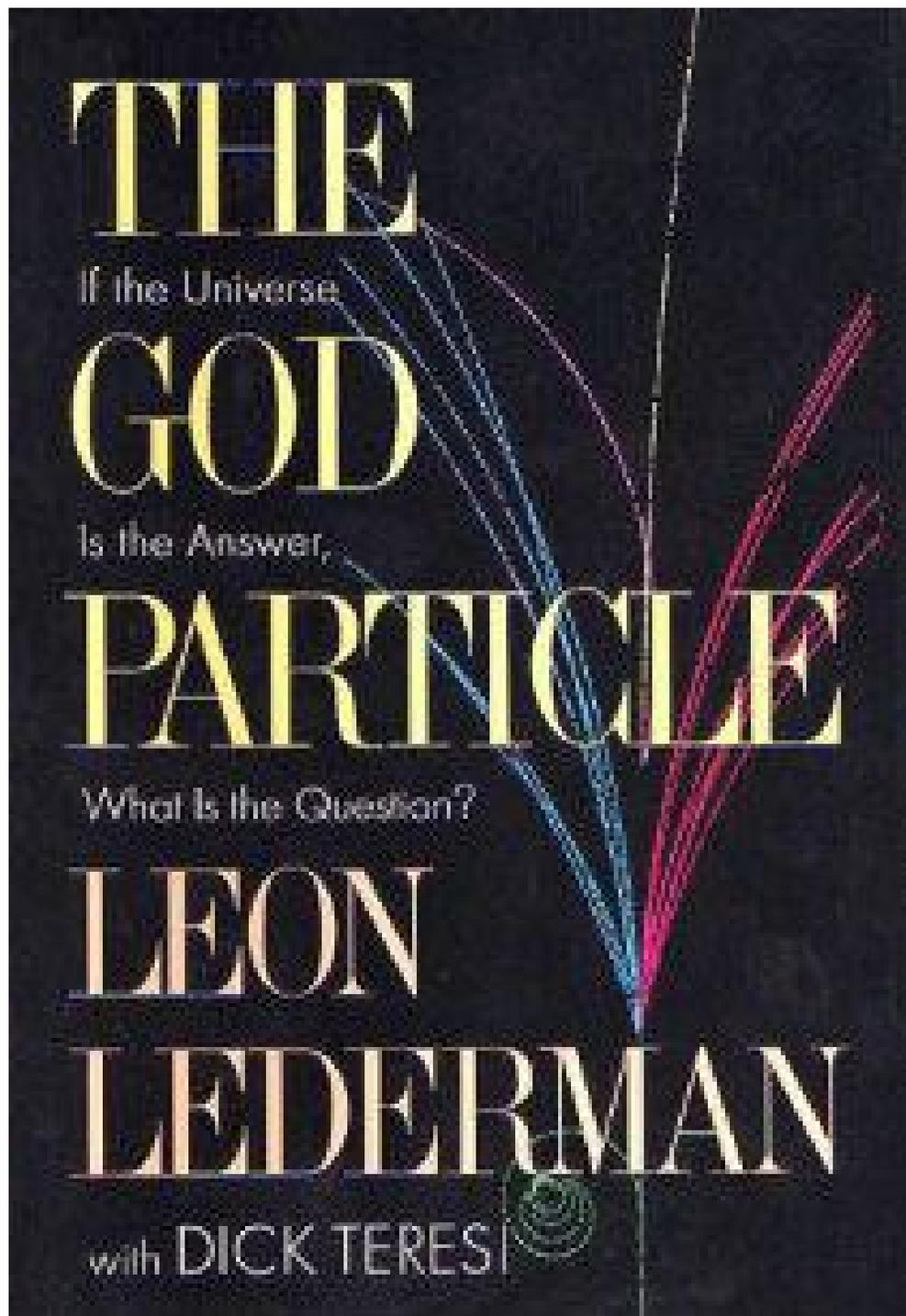
Found it!

Higgs-Boson demonstration

1. Origin of Mass

2. Completion of standard Model of Physics

3. Probable unification of four Forces of Nature



God Particle .net

A Revelation is coming to the World

Mini Black Hole

Proton makeup

1. Smashing protons

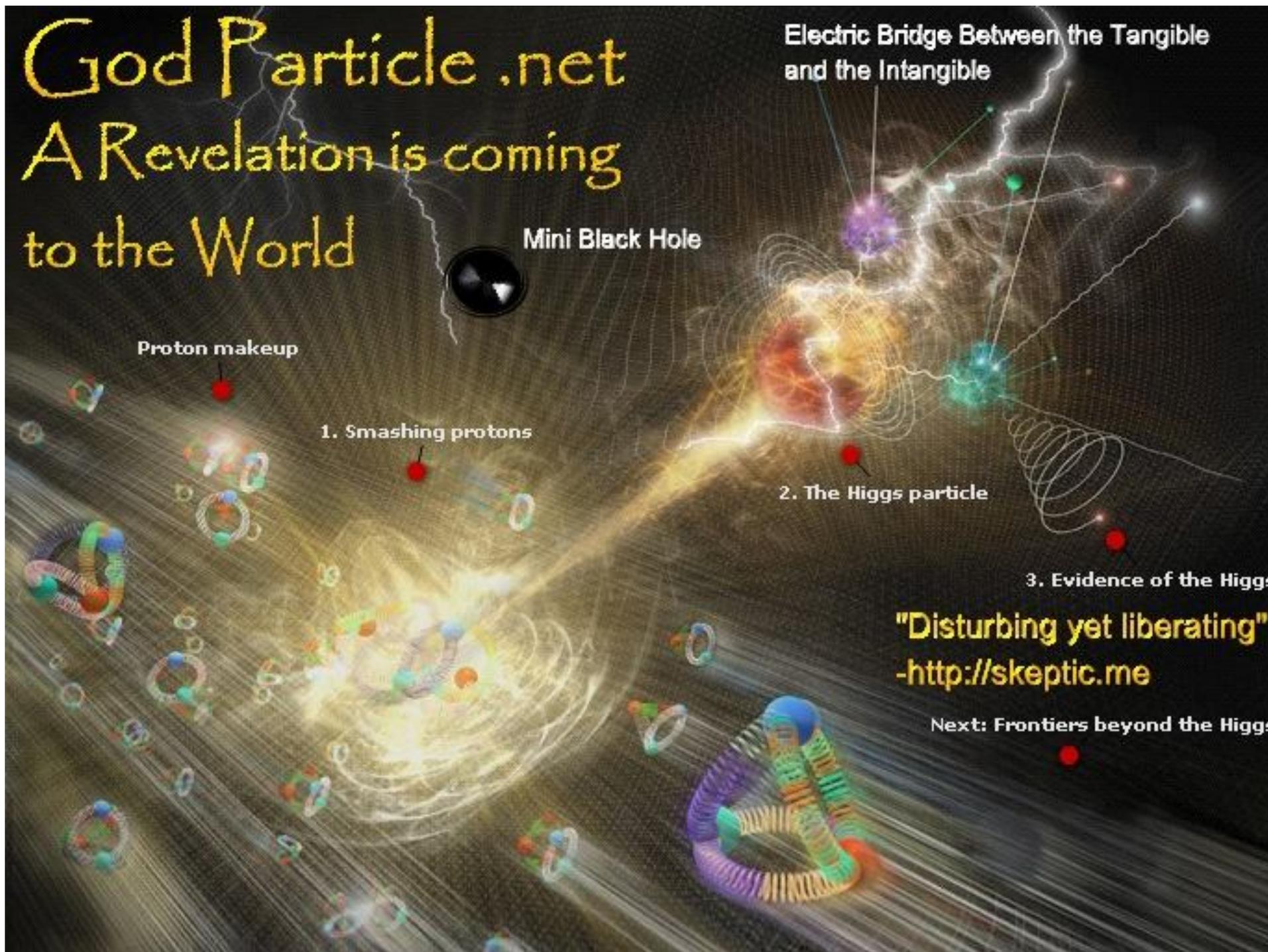
Electric Bridge Between the Tangible and the Intangible

2. The Higgs particle

3. Evidence of the Higgs

"Disturbing yet liberating"
-<http://skeptic.me>

Next: Frontiers beyond the Higgs





New Technology from CERN Laboratory

1. Real time computation of enormous magnitude
2. Giant superconducting system along 27 km. underground circular track
3. Unique way of data-sharing - World Wide Web

Steven Weinberg in The New York Times

What is left to be known?

**How Higgs-Boson
is
connected with
Dark Matter and Dark Energy?**

*“The God Particle:
if the Universe is the
Answer,
What is the Question?”*

- *Leon Lederman*

***The question
we are raising & addressing
in this presentation,
how far***

***Consciousness, the ‘God’ of science,
is away from God Particle?***

God Particle  **God of Science**

Mass

Information

Mind

Life-Principle

Self

consciousness

We will attempt to draw

A Big Picture
where

Higgs-Boson, Dark Matter, Dark Energy,

Information, Life

&

Visible Matter and Visible Energy

Find their respectable place

The methodology is based on

1. Intuition

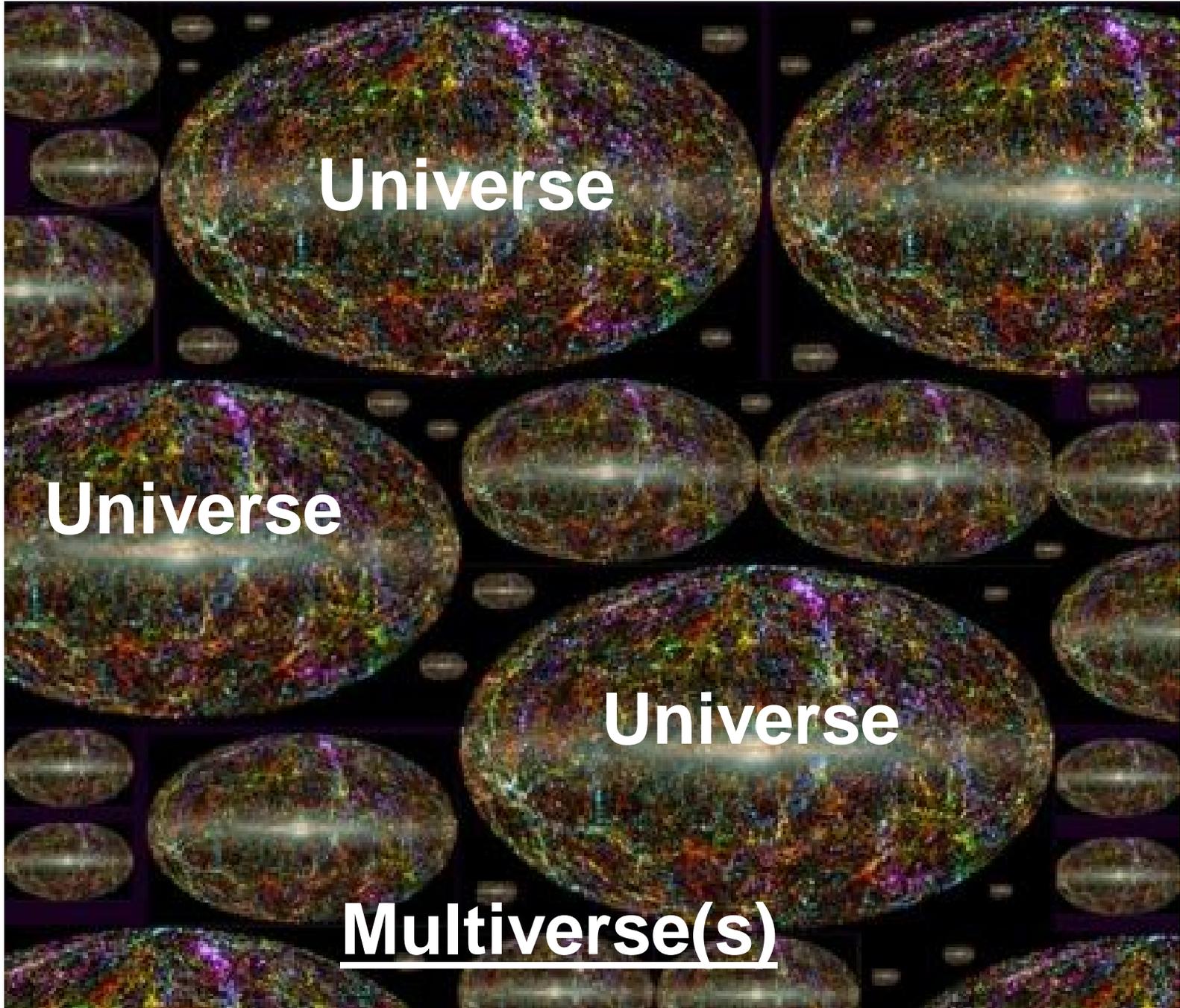
2. Speculation

3. Constructive logic

We have to change our assumptions!

The universe is not created from any matter or energy.

The universe is created out of information signaled from the *Essence* of the Multiversity!



Universe

Universe

Universe

Multiverse(s)



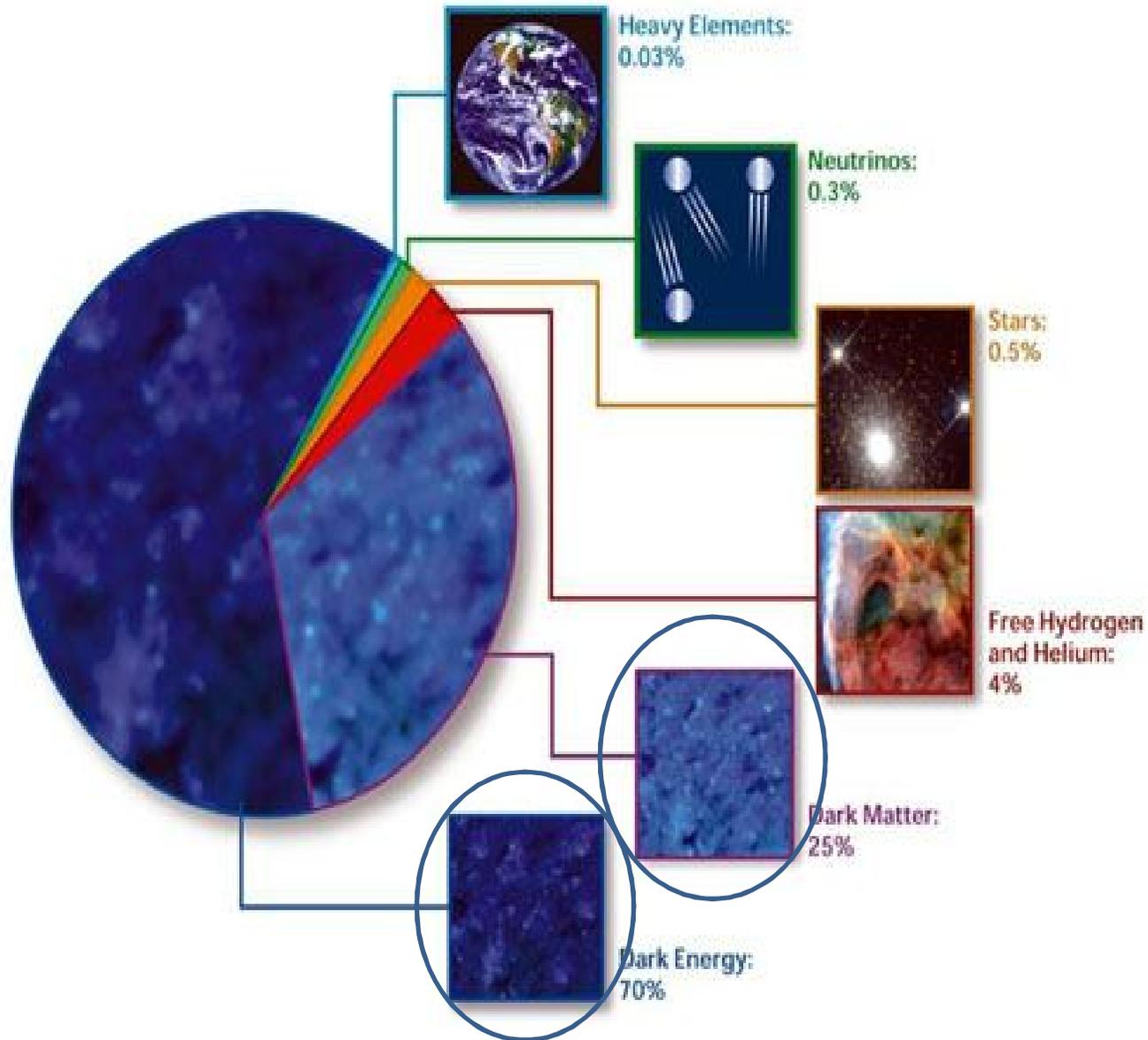
We are not considering or talking of 'Infinity'

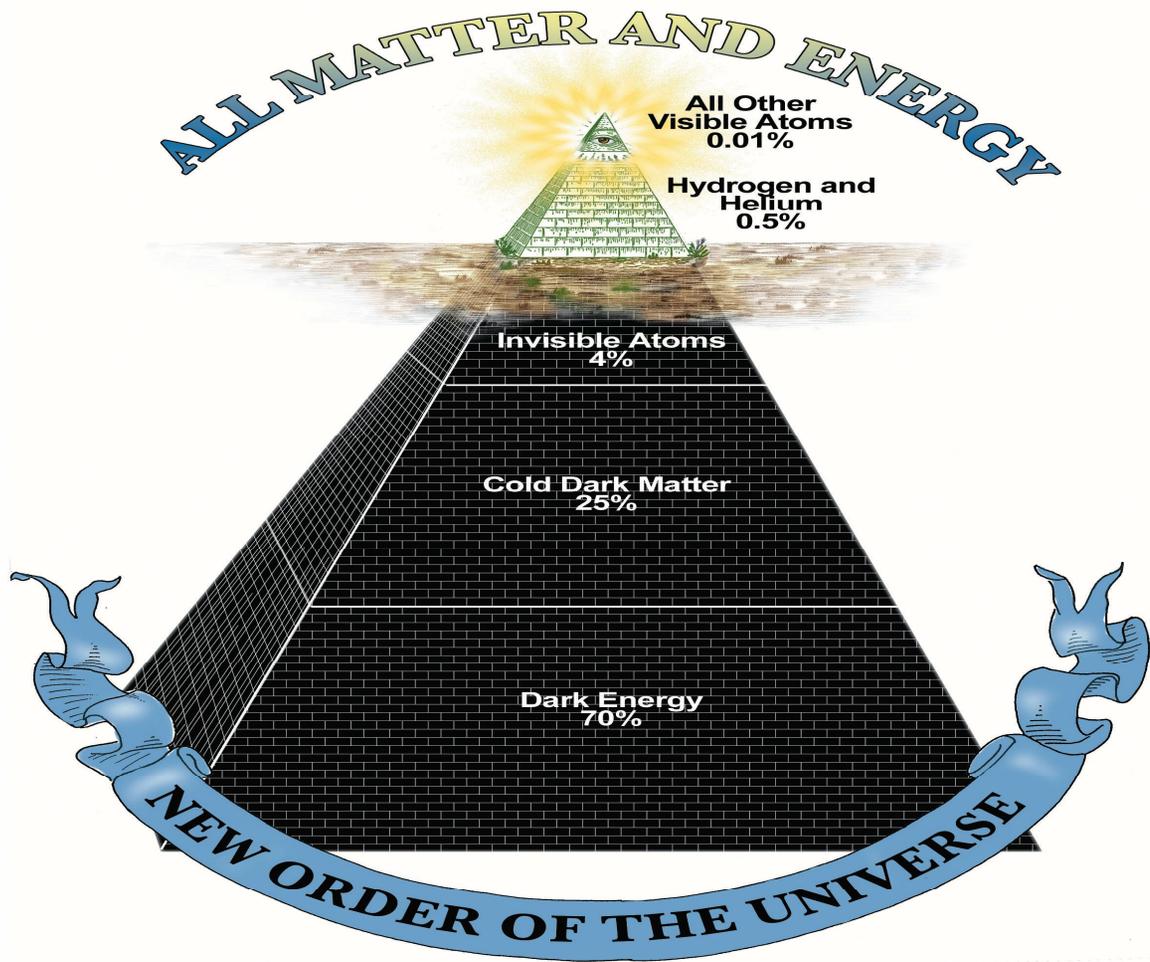
**Both our beginning and end remain the
Essence of the Multiversity.**

**The Essence of the Multiversity is within
finite realm.**

'Infinity' is difficult to handle with intellect.

COMPOSITION OF THE COSMOS





Big Question?

**What is the Source
of
Dark Matter & Dark Energy?**

A Radical View of Information On its Nature and Science

A. K. MUKHOPADHYAY

All India Institute of Medical Sciences, New Delhi
mukhoak53@yahoo.com

Abstract

This paper focuses on a possible fundamental nature and character of information. It develops arguments on the primacy of information in the context of its relationship with space, time and energy, self, memes and genes. For investigating these relationships seven tentative postulates have been made which merit further deliberation. Information-split phenomenon may be the connection between science confined to locality and science of nonlocal domain.

The Background

If one browses through internet, using key phrase like 'what is information', one comes across numerous websites, which work with definition of information limited to message, signal, code, data, facts, text, instruction, lore, symbols, concept, construct, knowledge, wisdom etc. This paper takes the view that almost all of these are nothing but space time construct of information and the information itself is something else!

It may be said that the message in this paper is nothing but a moving space time construct of information author's mind has been processing. During the act of reading the article, this moving space time construct stimulates reader's mind to catch and fix the same information. If there is concurrence, the paper becomes understandable. If otherwise, the paper is rejected as 'not sensible'.

The notion that information is inextricably related to mind could be traced to the time of Greek

Philosophers Socrates, Plato and Aristotle. This could also be noted across the religious sects particularly in their respective mystical traditions; the oldest document of such scriptures is Upanishad.

The science of information, however, in its present form is positivistic and accommodates only the measurable component of information. The notion was formalised since Claude E. Shannon's classic paper, *A Mathematical theory of communication* appeared in *Bell system Technical Journal* in 1948. The Information Theory is based on probability theory and statistics. Quantification of information is used in entropy, in random variable and the amount of information in common between two random variables. One of the most important and direct application of information theory is coding theory. The same measurable component of information is now being harnessed in quantum information theory.

The hard core physicists, information scientists and mathematicians, although, do not acknowledge any trace of subjectivity in science, the fact that information has a subjective and an objective/measurable facets, has been acknowledged recently in the works of scientists like David Bohm (in his ontological interpretation of quantum mechanics)¹, Robert Jahn^{2,3}, Basel Hiley⁴ and cognitive scientists like Bernard J. Baars (in his *Global Workspace Theory*)⁵ and Johnjoe McFadden (in his *Conscious electromagnetic field theory*)⁶, to name some prominent few.

That 'self' can handle information has been noted by modern phenomenologists, many amongst them consider that the mechanism in both subjective and objective phenomenology is directed by information. The issue of 'View from within, First-person approaches to the study of Consciousness' has been dealt in depth in two joint issues⁷ of *Journal of Consciousness Studies*. That amplification of phenomenal information could be a mechanism towards conscious experience has been articulated⁸ by Liane Gabora.

Common sense experience tells us that information can not be generated by inanimate objects which at best can store, or activate information. Information is generated by a living entity and metaphysically this generation of information is linked with operation of *life-principle*. In a recently published essay, A. Grandpierre concludes, 'living organisms have access to an inexhaustible source of information, universally, in the same manner as the physical objects have an access to information content present in the Hamilton principle or to the action principle.'... "Universally available information source is the life-principle."⁹

Information, although, seems to be more powerful than energy in various live situations, its distinct relation with energy is yet to be settled in what we call 'hard science'. The question how information is related to energy has bothered¹⁰ numerous front runner scientists from the time of James Clerk Maxwell and there is no answer yet

Information

(Latin: Information)
(Noun)

(Greek: Informare)
(Verb)

IN

(Prefix)

(within/into)

FORM

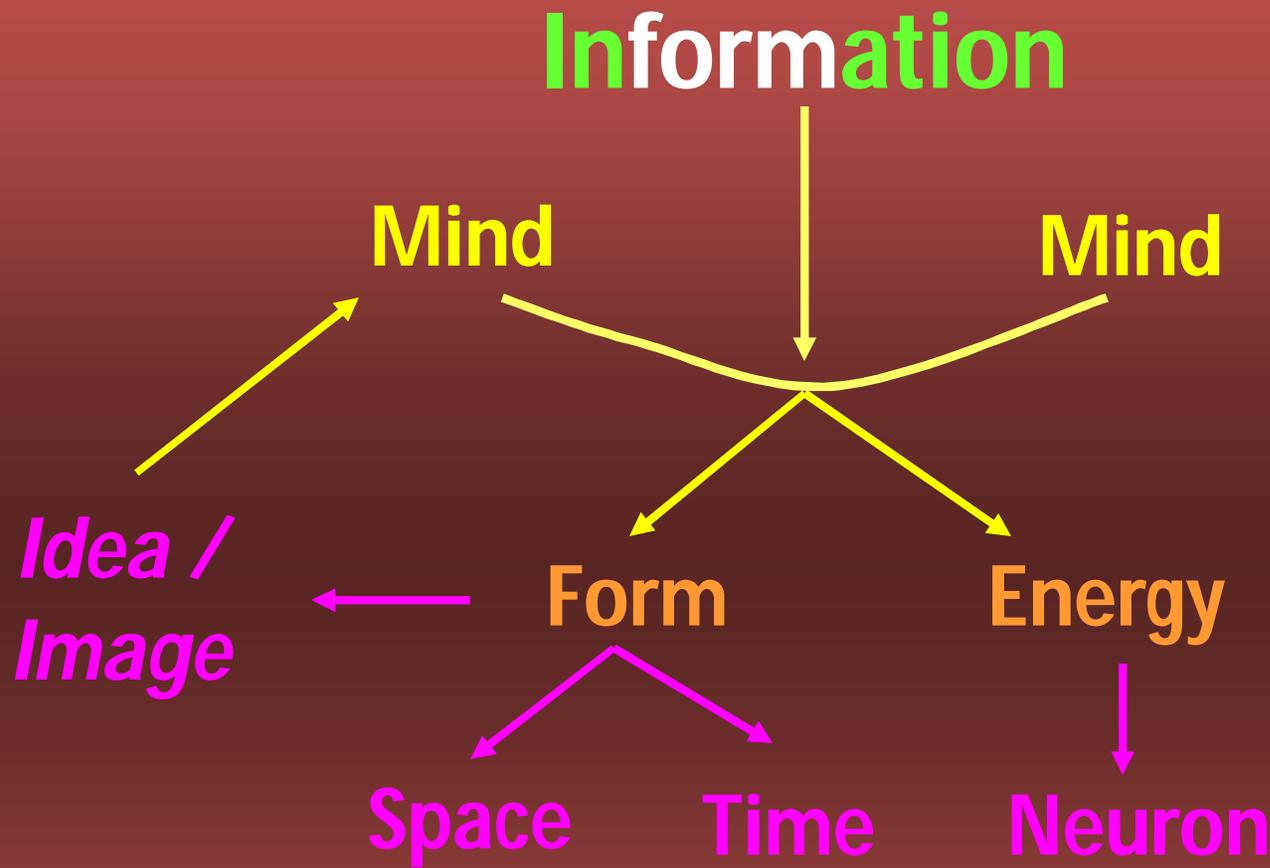
(Root)

(forma)

ATION

(Suffix)

*(into action or
process)*

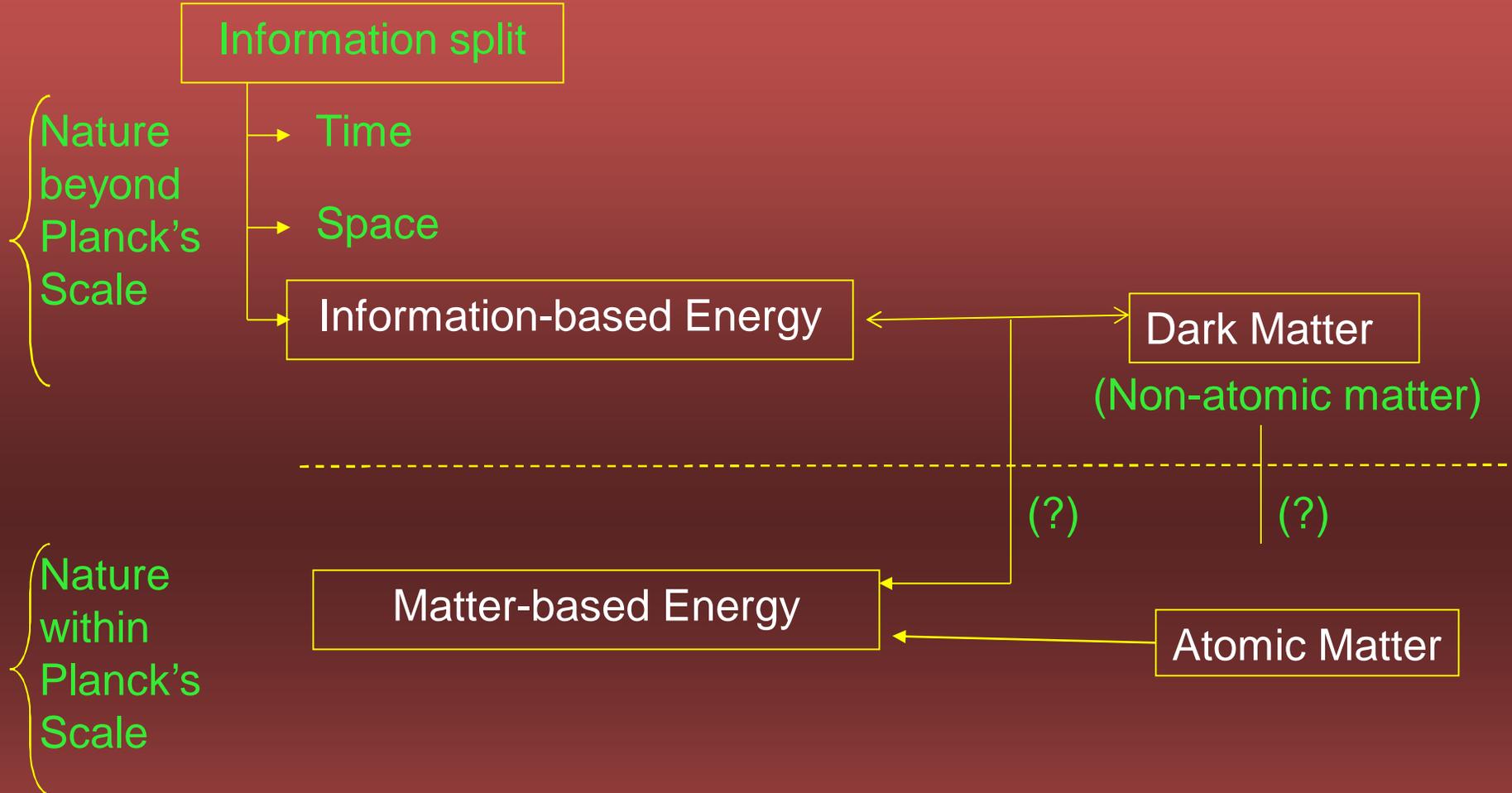


Information split: The basis of psychosomatic connection

**Information is the Source of
both Time, Space!**

&

Energy!



Relevant Questions:

Q.1 How non-atomic matter is converted into Atomic matter?

Q.2 How dark energy is converted into white energy?

What is the Missing Link?

Q.3 What stands in between nature outside Planck's scale and nature within Planck's scale?

Dark Matter



Dark Energy

25%

70%

**Attracts the
components
of the universe**

**Pulls apart the
components
of the universe**

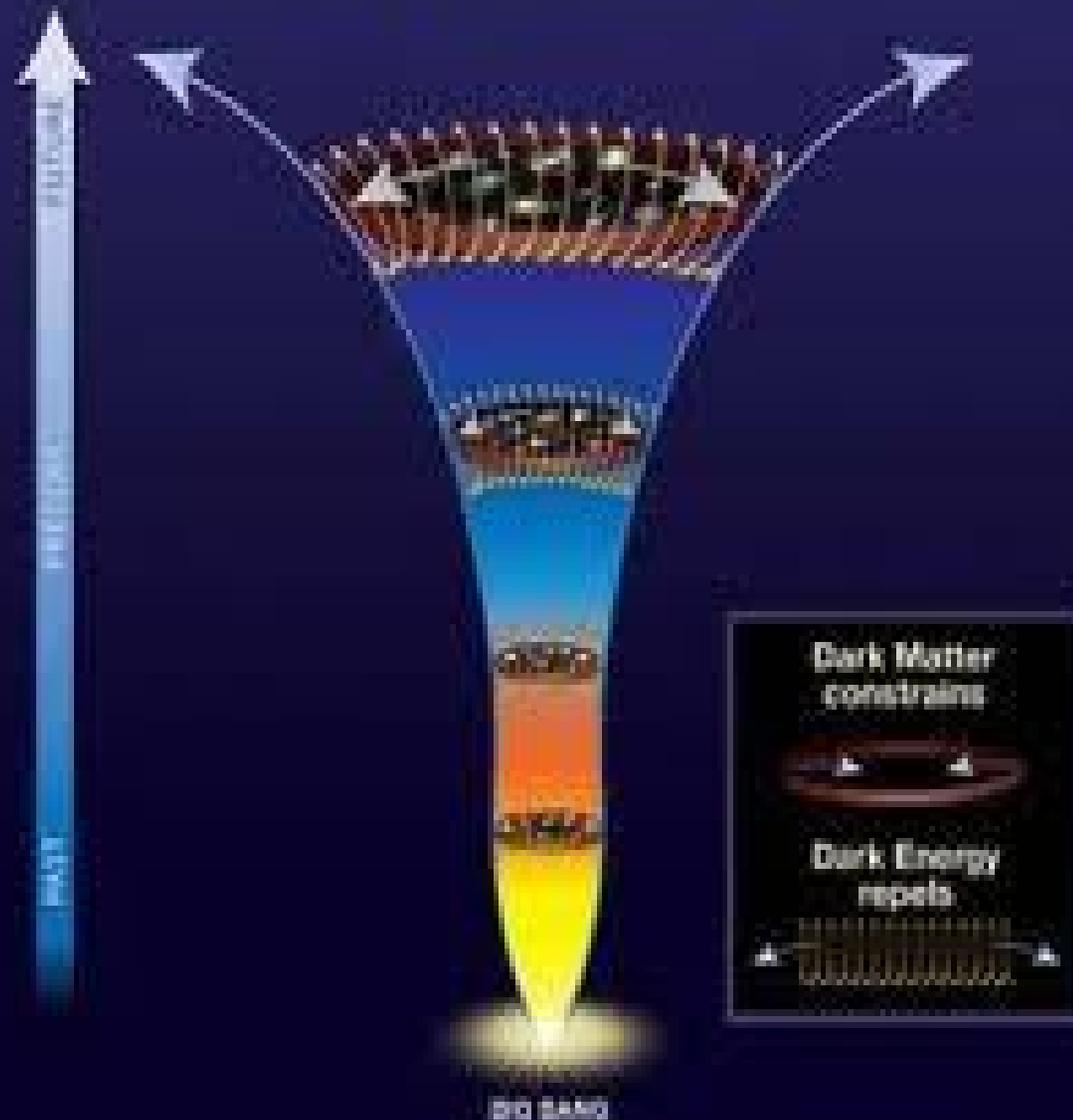
A balanced proportion of
dark energy and dark matter
maintains the dynamically changing
size of the universe.

This is an extremely strenuous job.

**Nature is visibly almost harassed
to maintain even the status quo.**

Cosmic tug of war

The force of dark energy surpasses that of dark matter as time progresses.



Nature is visibly under strain!

How to manage random bombardment of information and production of dark matter and dark energy!

How to handle the cosmic tug of war?

How to reconcile nature beyond Planck's scale and nature within Planck's scale?

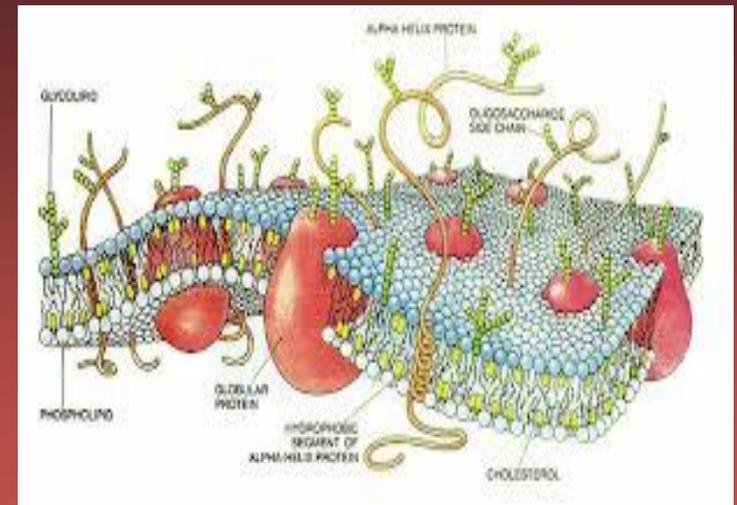
How to ease out this relentless tiring Exercise?

- 1. Amino acids or Protein Molecules didn't offer any relief!**
- 2. Naked RNAs could not do so!**
- 3. Naked DNAs are found to be of no value either!**
- 4. Virus too failed to rise to the occasion!**

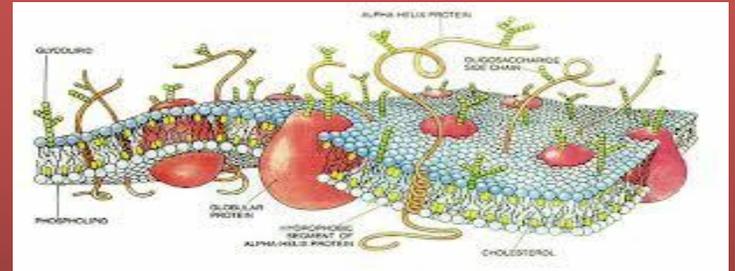
Decision for an Enclosure:

Enclose the DNAs and form a 'unit' of Life,
The 'life-form'

'Enclosure' of
Biomolecules as life



Decision for an Enclosure:



1. This was not an easy job either!
2. Where from the protein and lipid require to form the boundary come?
3. Could these which are available in the environment serve the purpose?
4. Does virus contribute to this formation?
5. How did it change from a simple molecular partition to a complex membrane?

Astrophysicist, Cosmobiologist and Life Scientist

The momentous phenomenon of enclosure of DNAs as 'life-form',

- (i) Did reverse the flow of information within it, in contrast to what was happening before enclosure
- (ii) Made the information accessible!

Molecular 'World'



Protein 'World'



RNA 'World'



DNA 'World'

Momentous transition

**'Enclosure' of
Biomolecules as life**



DNA



RNA



Protein

Key word: Inversion of axis when outside becoming in.

**Location
Non-addressable**

**Content
Non-addressable**

**Context
Non-addressable**

Information

Momentous transition

**'Enclosure' of
Biomolecules as `life'**

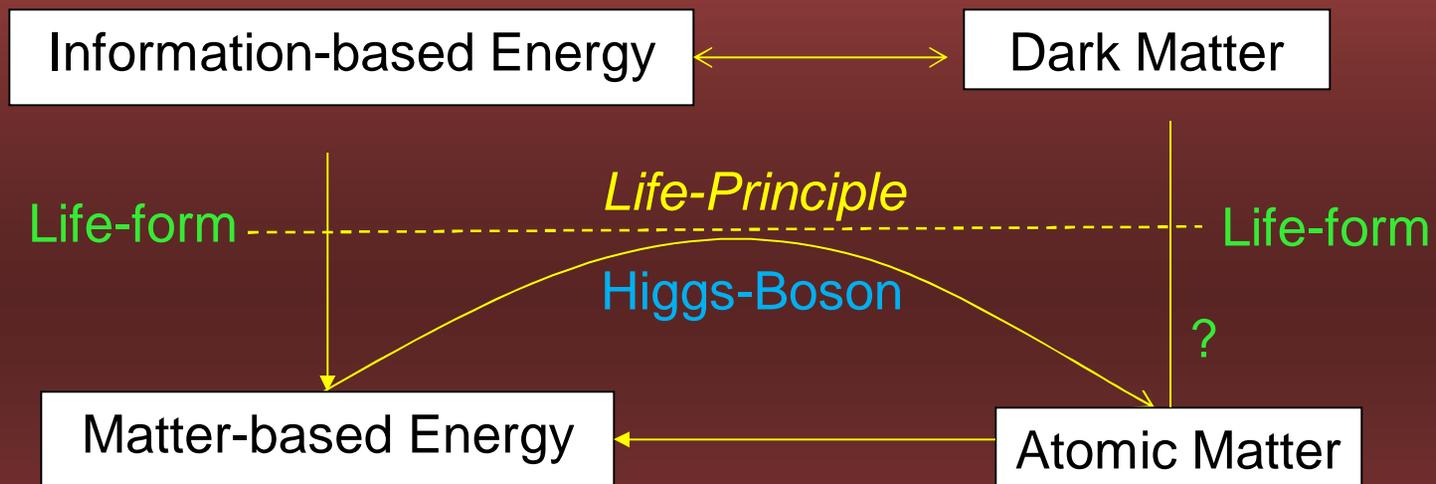


Information

**Location
addressable**

**Content
addressable**

**Context
addressable**



The result is what Leon Lederman
stresses as *Intangics*:

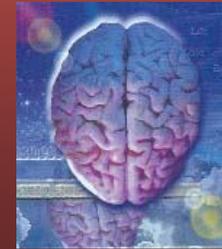
intangible made tangible.

"I have been looking for spontaneous generation for twenty years without discovering it. No, I do not judge it impossible. But what allows you to make it the origin of life? You place matter before life and you decide that matter has existed for all eternity. How do you know that the incessant progress of science will not compel scientists...to consider that life has existed during eternity, and not matter? You pass from matter to life because your intelligence of today...cannot conceive things otherwise. How do you know that in ten thousand years one will not consider it more likely that matter has emerged from life?" - Pasteur, L. (1857).

Mémoire sur la fermentation appelée lactique (Memoire on lactic fermentation). *Compt. Rend.* 45, pp. 913–916.

Nature beyond Planck's Scale

Spiritual
abstraction



Scientific
Rationale

Nature within Planck's Scale

Life-form stands at the boundary of nature beyond Planck's scale and nature within Planck's scale.

Five Purposes of designing Life-forms

- 1. Information Management*
- 2. Dark Matter and Dark Energy Economy*
- 3. Conversion of dark energy into 'white' energy*
- 4. Manifestation of nature outside Planck's scale into nature which is observable, measurable and reproducible.*
- 5. Resolution of conflicts between two sides of nature*

What does Dark Matter and Dark Energy do
inside a Cell?

Probable role of Dark Matter in Cell Biology

1. Maintaining the conformity of DNA
2. Maintaining the conformity of folded protein, enzymes etc.

Probable role of Dark Energy in Cell Biology

Dark Energy generated within the cell may exploit the property of 'fluidity' of genes, may explain why the genes jump and thus change the grammar of the language of genes!



Courtesy of the
Cold Spring Harbor Laboratory Archives

Relevance in Neuroscience

Human brain is a miniature universe.

10¹¹ stars make a galaxy. 10¹¹ galaxies make our universe. In the human brain there are 10¹¹ neurons and ten times of it are glial cells.

More than 90% of brain's functions are as obscure as the universe.



There is information bombardment on the cerebral cortex from outside, from above!

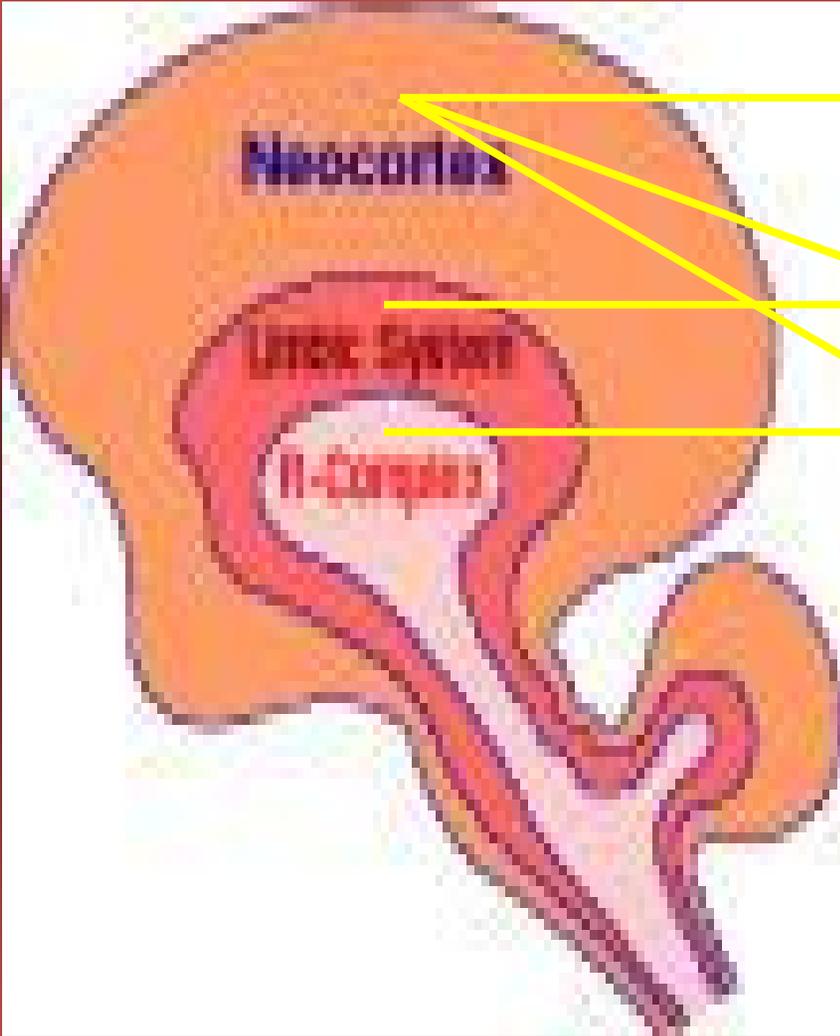


When the 'self' becomes aware of

Supracortico-cortical interaction

It is pronounced as

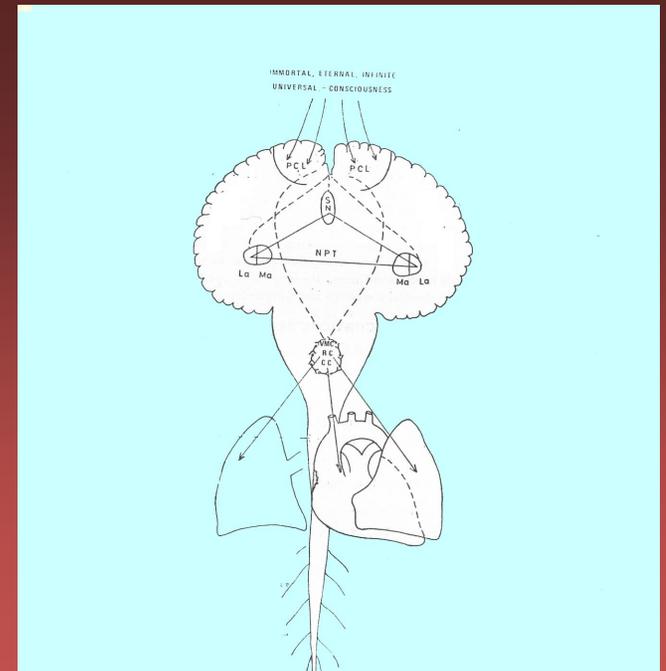
Supracortical Consciousness

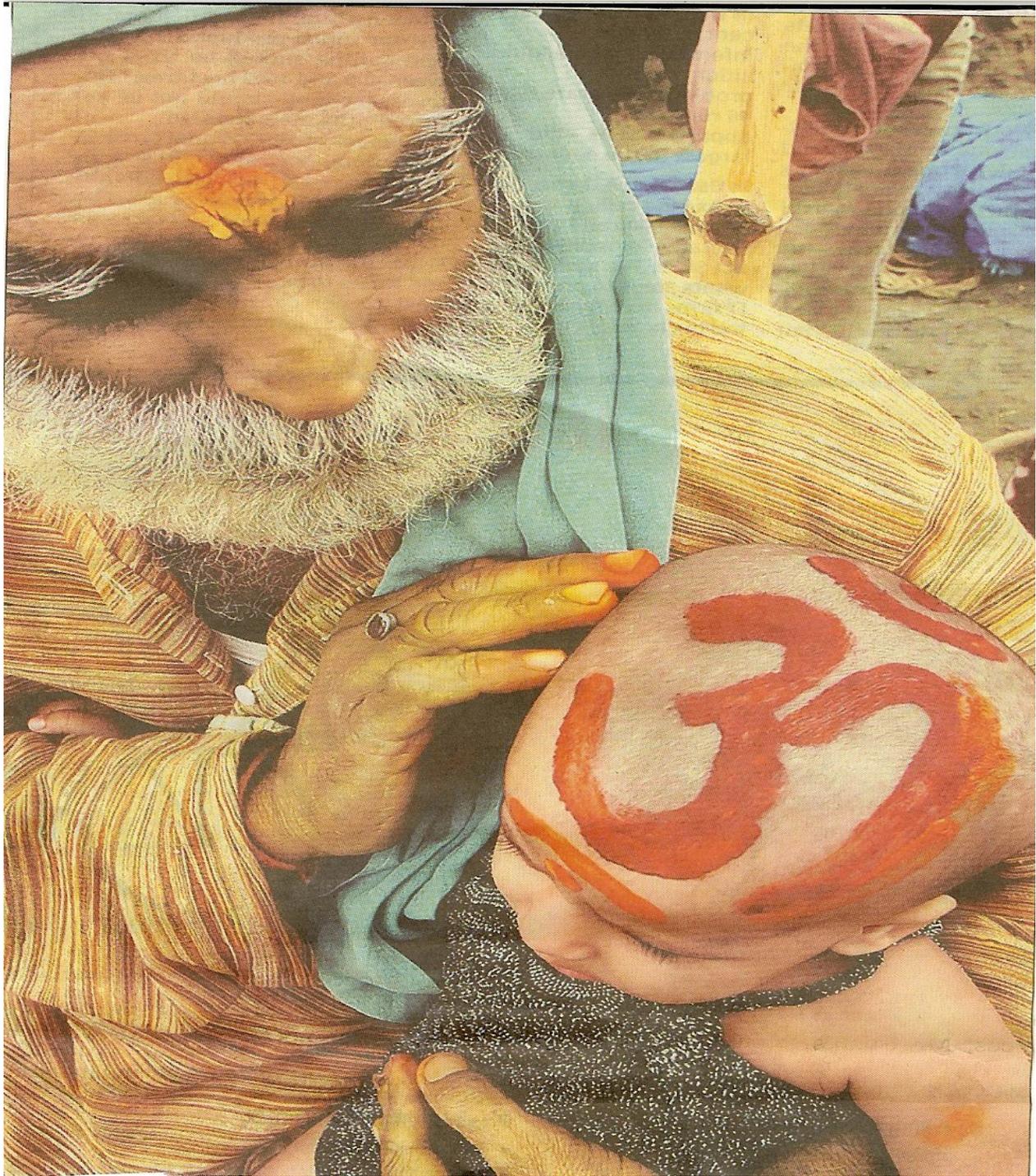


Cortical Being

Limbic Being

Brain-stem Being







Amritanandamayi Ma **is**
 blessing and
 kissing the head
 Of Sh. L. K. Advani, Deputy
Prime Minister of India
25th Sept., 2003

WHEN FAITH MEETS SCIENCE

Reuter



AN OCCASION WHEN RELIGION MEET SCIENCE

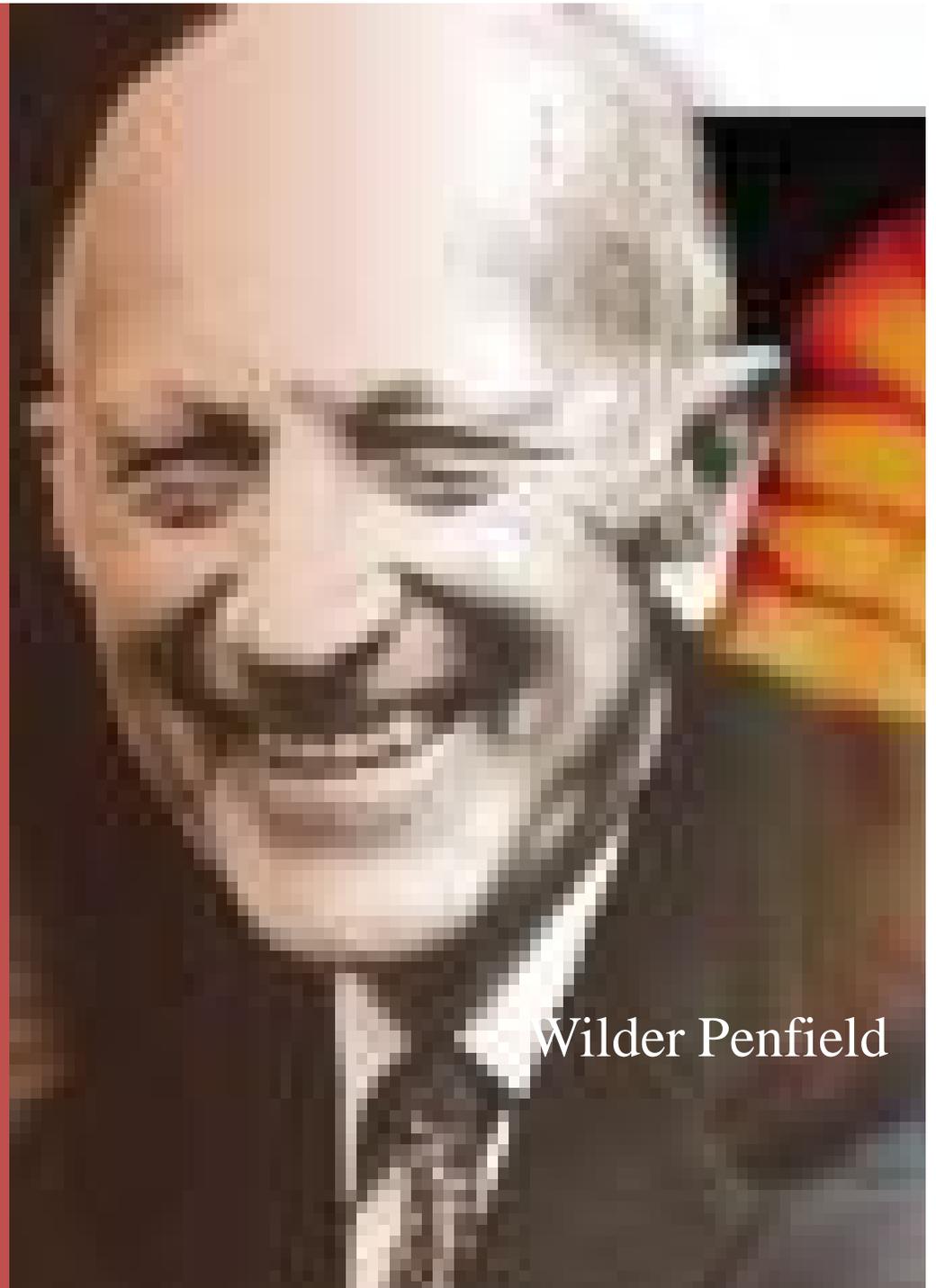
"Galileo saw nature as a book whose author is God" – Pope Benedict XVI

“that there is no good evidence...that the brain alone can carry out the work that the mind does (and that it is easier to rationalize man’s being on the basis of two elements than on the basis of one)”

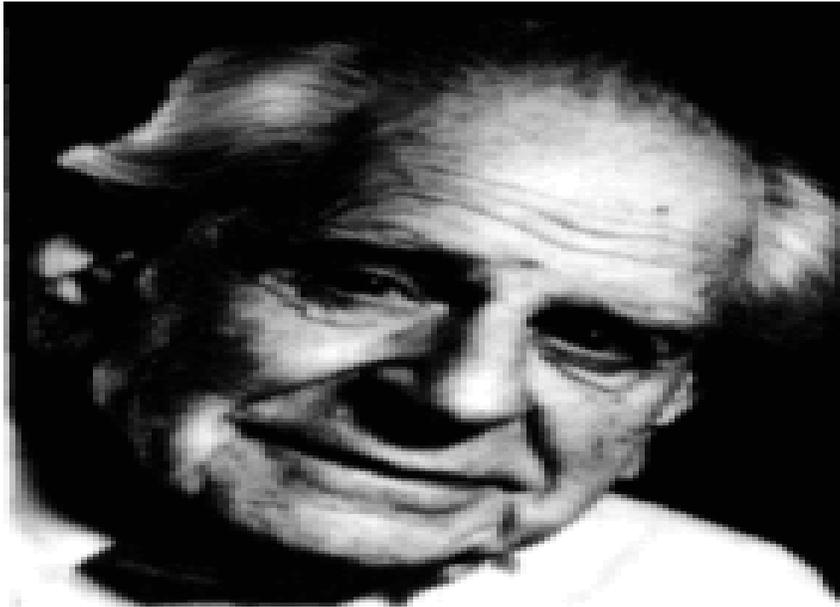
“To suppose that consciousness or the mind has localization is a failure to understand neurophysiology”

- *The Mystery of the Mind*

Consciousness is not found inside the Brain!



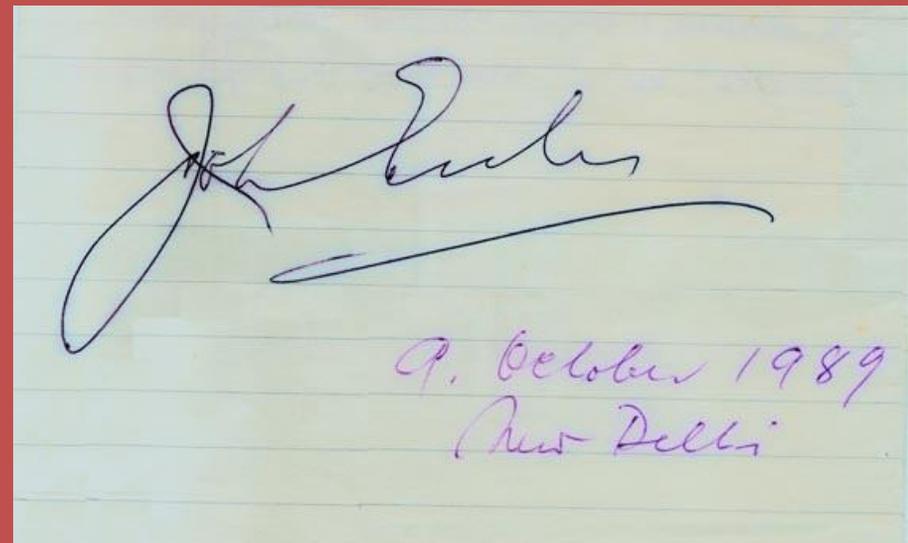
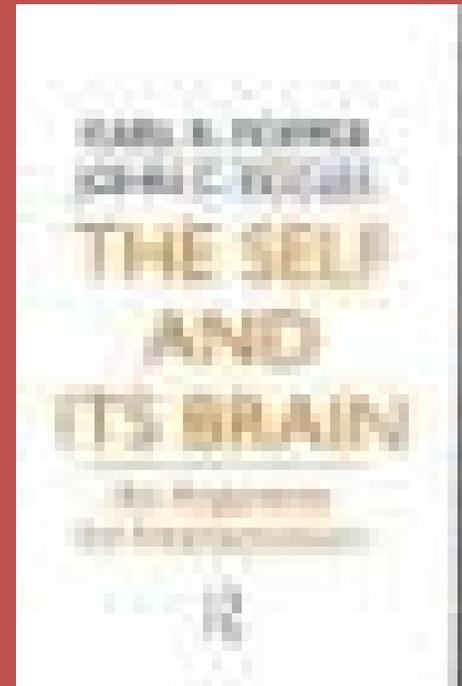
Wilder Penfield



Karl R. Popper



John C. Eccles

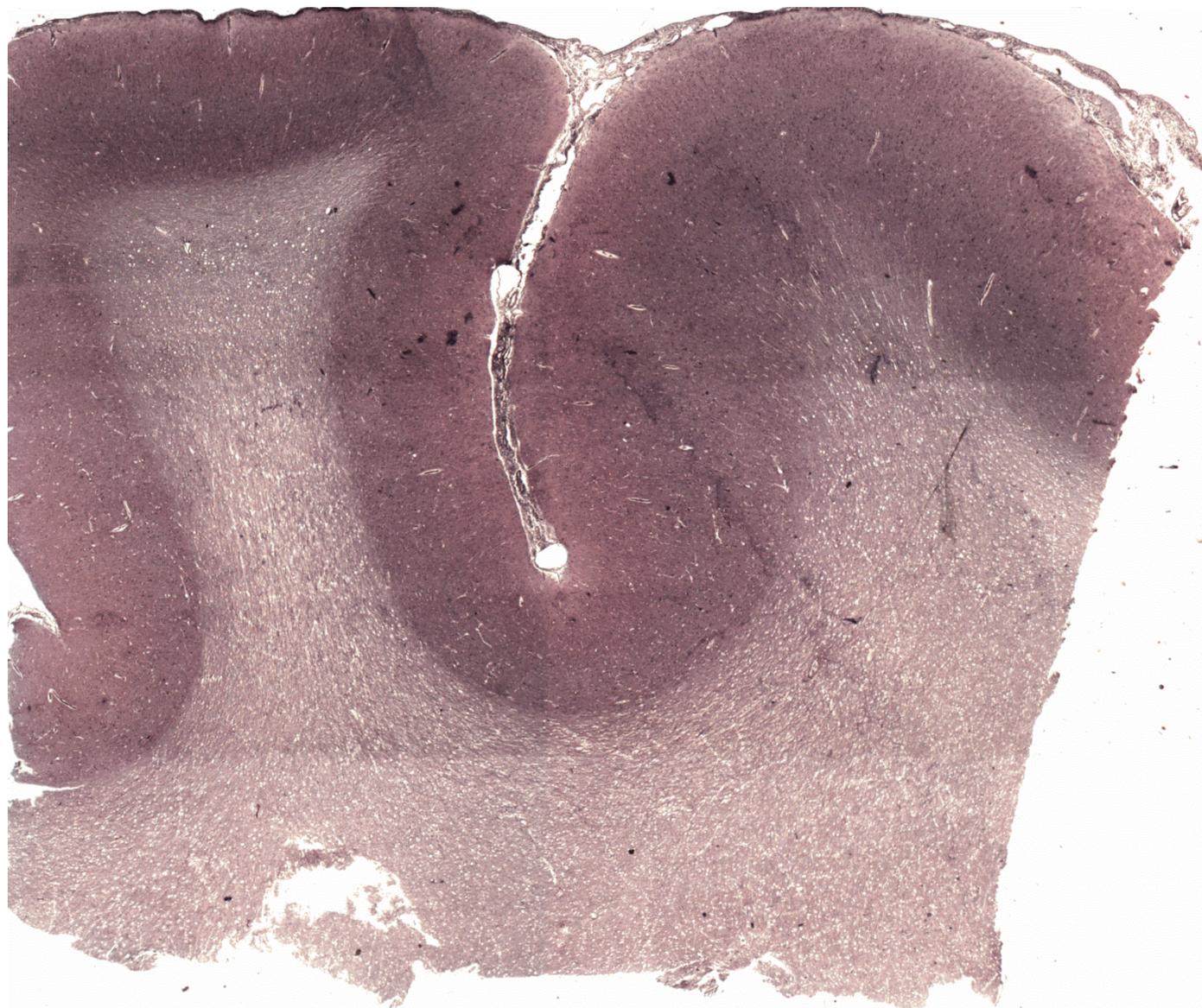


Inverted Neuraxis

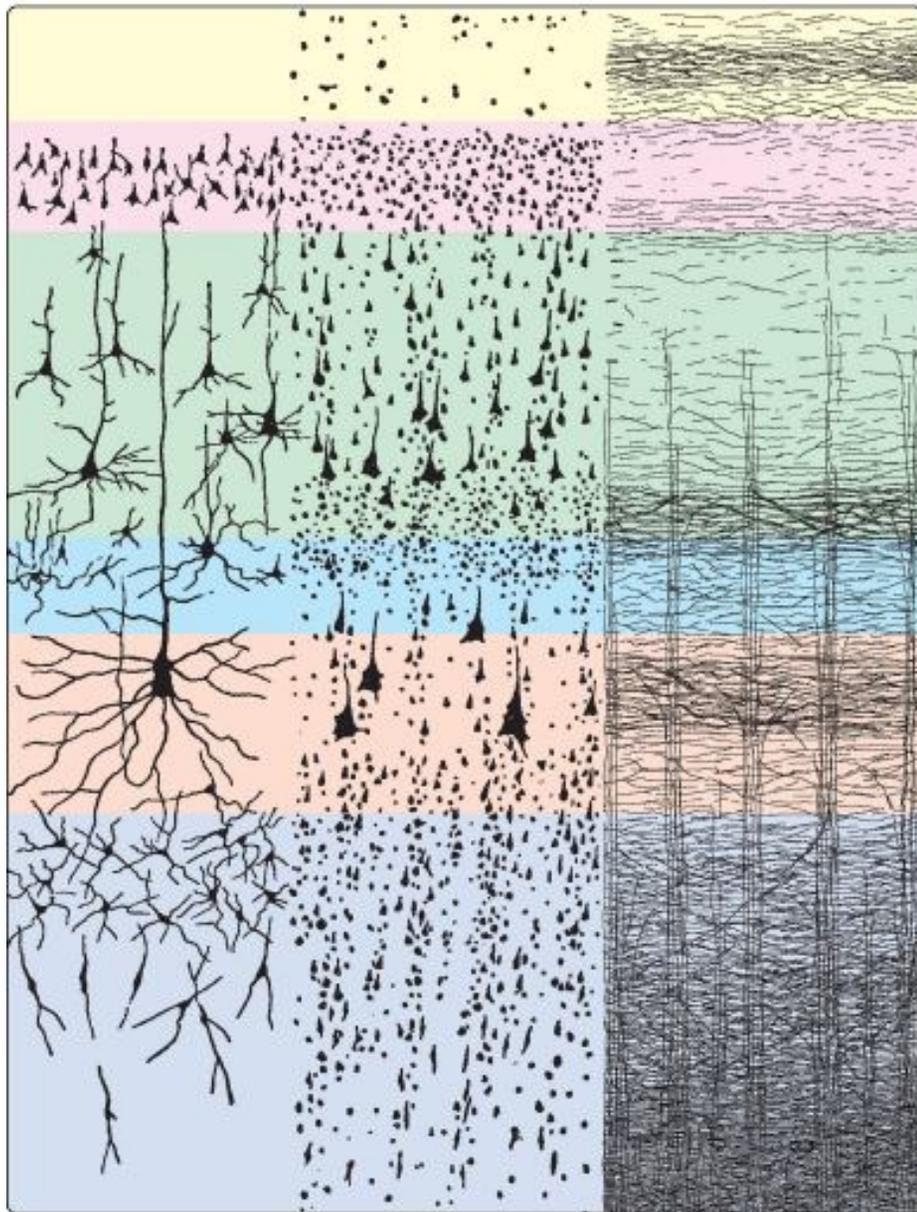


**Human tabernacle is
like a Tree upside
down**

- Upanishad**
- Bhagavad Gita
(15/1)**



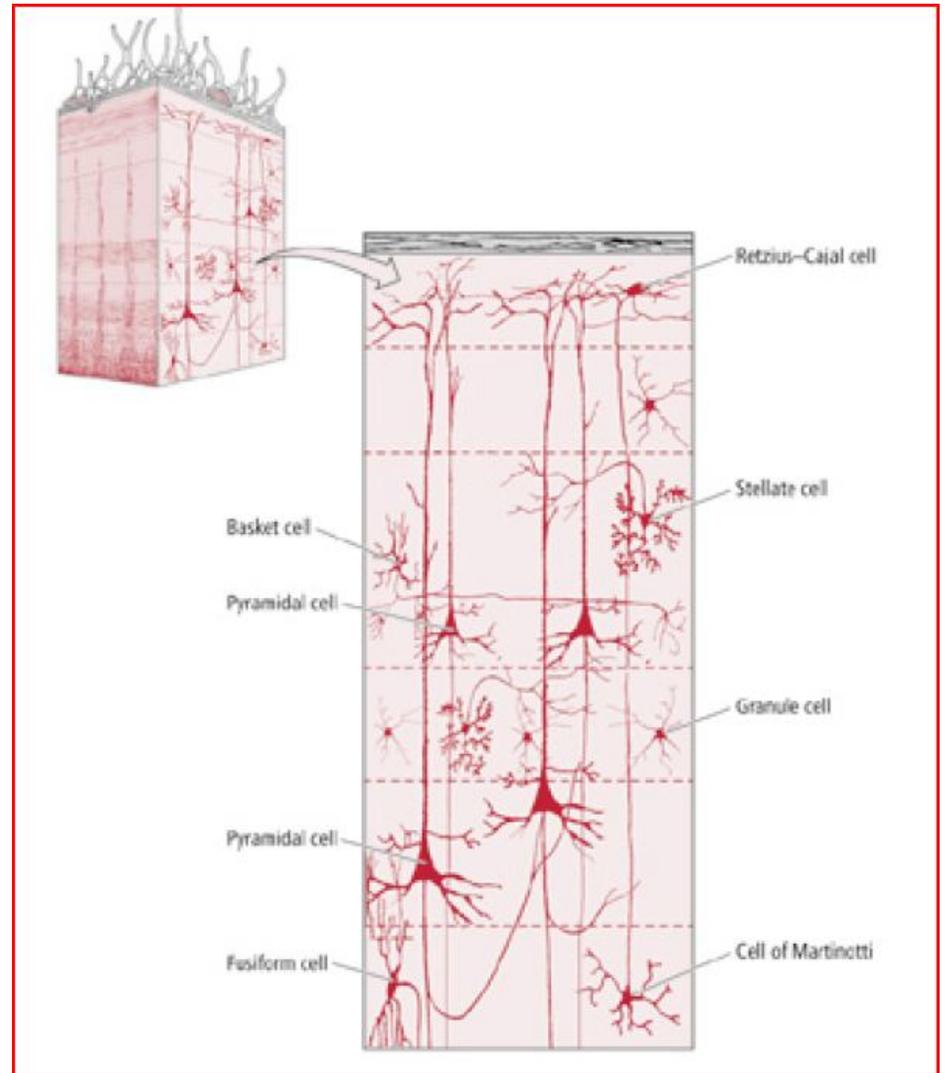
- | | |
|---|---|
|  Plexiform (molecular) |  Internal granular and external band of Baillarger |
|  External granular |  Ganglionic layer, containing inner band of Baillarger |
|  Pyramidal |  Multiform (polymorphous) |



Golgi

Nissl

Weigert



From Gray's Anatomy & Text book of Neuroanatomy

Three Foolish Adventures of Brain

1. Epilepsy

2. Hysteria

3. Permanent loss of Information from brain

Could not be fully explained without the knowledge of Supracortico-Cortical and Cortico-Supracortical enterprise

Three Intelligent Functions of Brain

1. Nonsensory perception

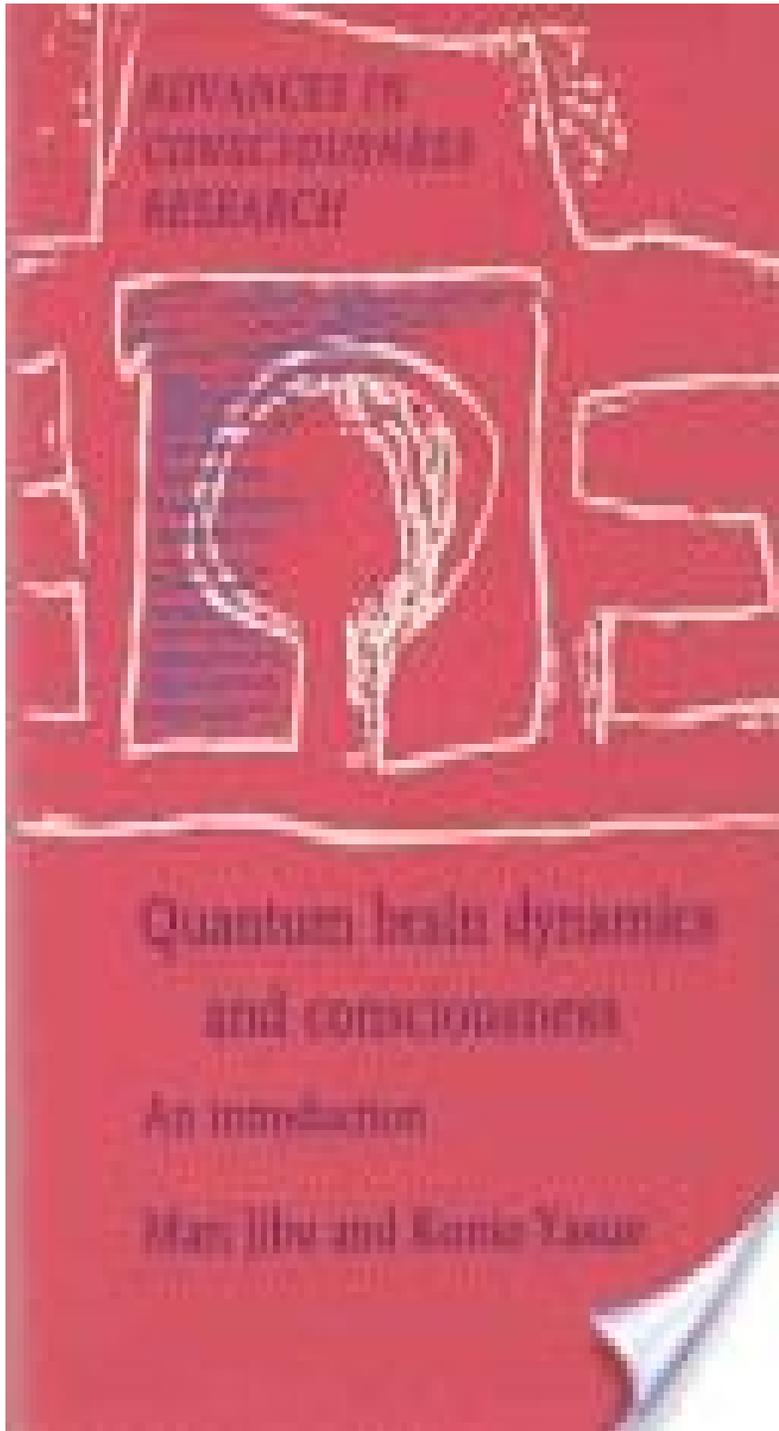
2. Intuition

3. Revelation

Could not be accounted fully without the knowledge of supracortico-cortical and cortico-supracortical enterprise

Distinction from Mary Jibu & Kunio Yasue

1. They consider 'water dipole' rather than dipoles on the dendrites
2. They seek explanation of every phenomena within Planck's scale of nature
3. They have not accepted anything as supracortical



What all do we need, therefore, in the tangible domain to make supracortical consciousness a science?

Perhaps only five!

They are:

Information,

Quantum fields,

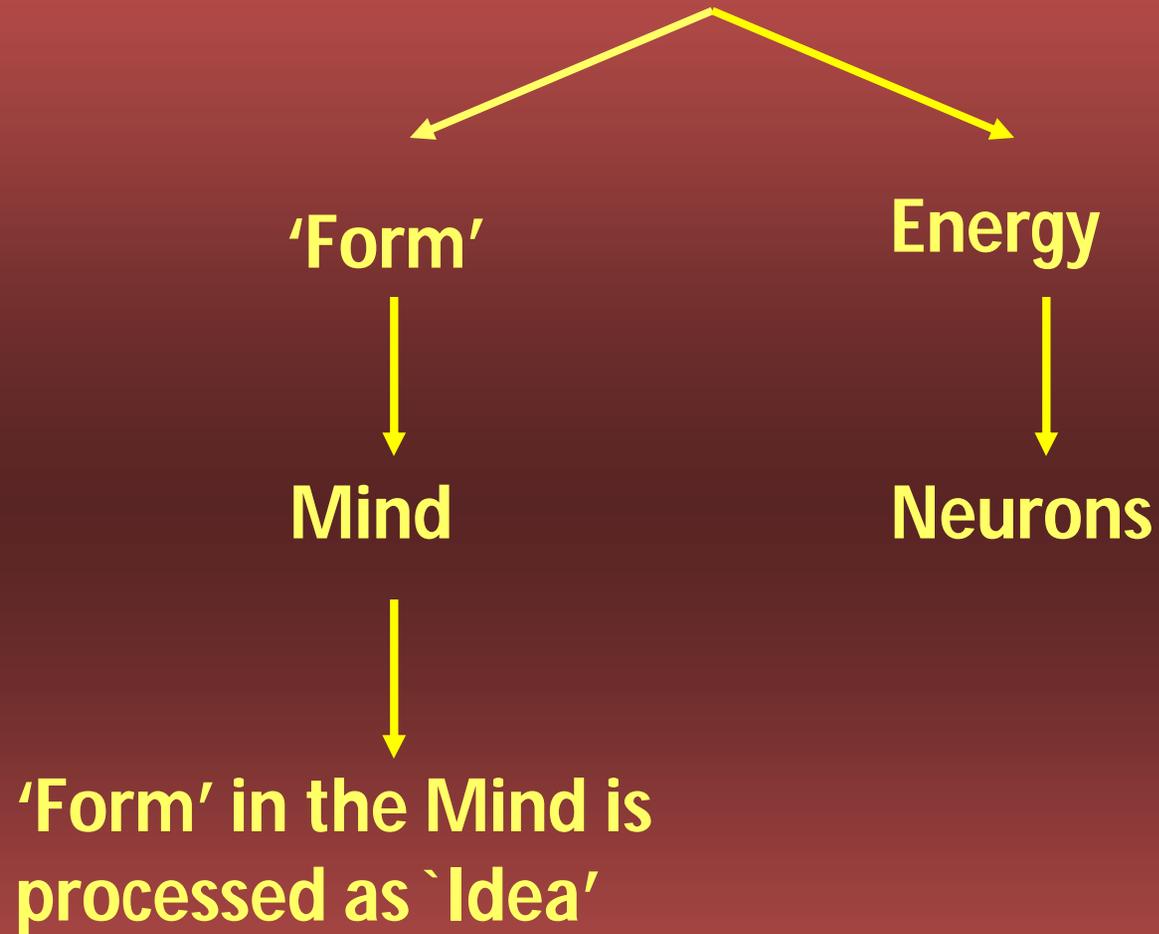
Higgs-Boson,

Weak Force and

Electromagnetic Force.

Relevance of Dark Energy in Neuroscience

Information Split



Information

Mind

Mind

Form

Energy

(Information-based)

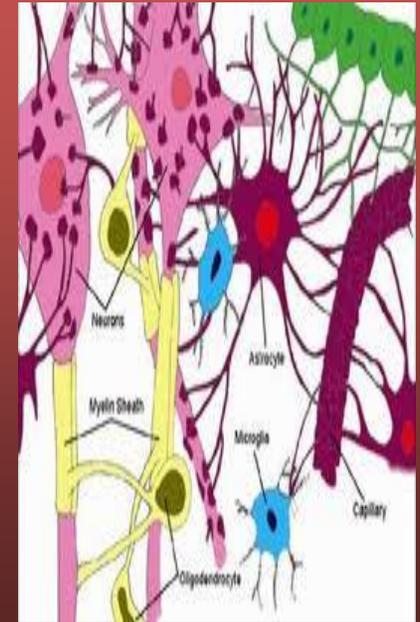
Dark Energy

Life-form
Glial filter

one neuron is supported and
protected by 7-10 glial cells

Matter-based energy

Neuron



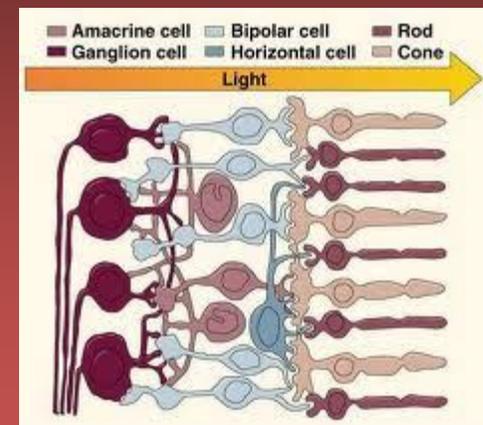
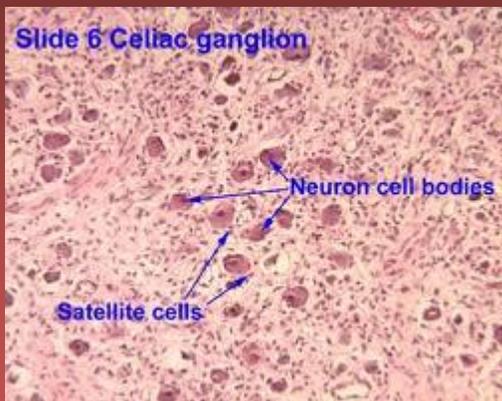
Damaging?



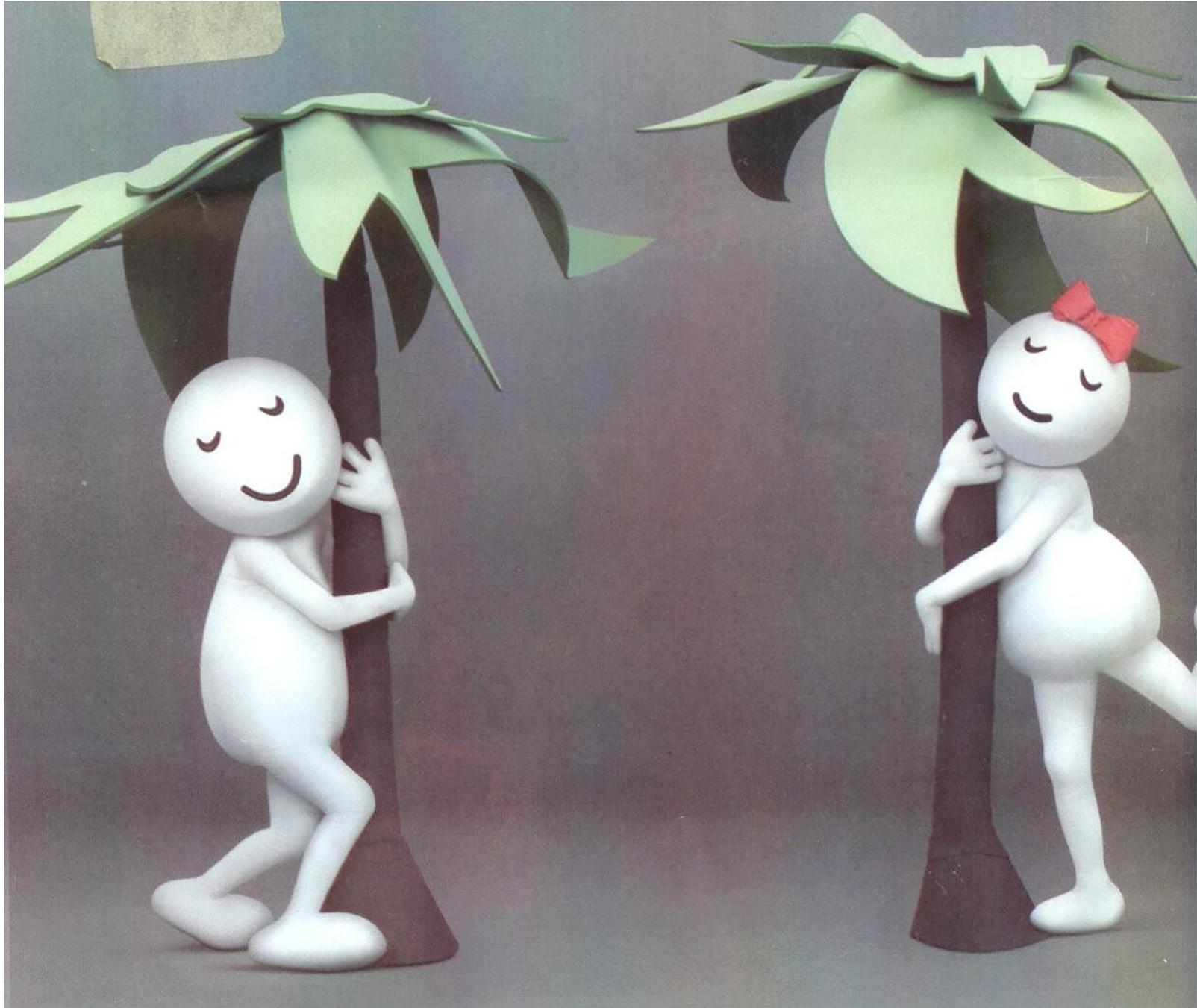
© AKM(2012)

Possible role of 'Life' and therefore of Glial cells in Mind-Body (Neuron) connection

Where communication between neurons is merely a signal transmission and not transmission of information, astrocytes are irrelevant. That is why ganglion, a collection of nerve cells outside the central nervous system has no astrocytes.



Following deft conversion of dark energy into rational energy by its cellular mechanism the brain gets back near to its original composure.



The Effect of Dark Energy within the Brain



Fight here.

Non local Science

Consciousness

Self

Mind

Life
principle

Information

Energy

Matter

Time

Space

Local Science



Indian Institute of Science (1909)
Where Spirituality and Science Meet



Thank you all for your attention