

Many Dimensions of Consciousness Studies.

(1)

1. Consciousness is Subject whose study is of interest to many in different levels of life. This is illustrated in the Transparency T₁.
2. Consciousness is one among entities which cannot be defined in absolute terms - like space, time, life.. since they are fundamental entities. A working definition is that it is something that is necessary for a variety of activities of organisms - particularly the higher organisms and most certainly in man. When consciousness is not present, these activities are not there - not possible.
3. The brain and its accessories - the neurons, the glial cells, the sensors are necessary for consciousness.
4. Mapping of the brain through anatomical studies - and in recent years through the scan instruments - tomographic instruments - Identification of the different cortical, their particular functions. T₂...
5. The Neuron - generation of action potentials at the sensor. transmission through the neurons. the role of synapses - the neurotransmitters - the role of dendrites. T
6. Illustration of the Collective Action of large number of neurons for specific purposes - like thinking of a discuss.

7. The Physico-Chemical processes in (i) the Sensation. (ii) in transmission of pulses. (iii) transmission through Neurons. (iv) Generation of 40 Hz oscillator and its modulation. (v) the structure of microtubule-high frequency pulses generated by transitions in the Protein Molecules and in the water layers of the microtubules. - Evidence for quantum processes. - tunneling of electrons in synapses.
8. Immunological and endocrinal processes associated with brain activities.
9. Crick's hypothesis. - coherence of neuronal firings - brought about by 40 Hz (?) -
10. Granting that these neuronal firings are essential, what is the connection between their configuration of firings and particular sensation, feelings.
11. The answer is supposed to be "emergence" - This can happen only if there is a transcendence in our ideas - of various concepts.
12. physical examples of transcendence -
 - (a) tunneling of α -particles through the nuclear potential barrier. - a process that cannot be conceived in terms of classical concepts. give up the idea of a trajectory. bring in probabilistic interpretations.
 - (b) Superconductivity, Lasers, behavior of electrons in plasmas.
 - (c) Statistical behavior of bosons and fermions. influence of spin. (property of individuals)

"Quantum theory forces us to renounce the possibility of a causal account of phenomena and to be content with probabilistic rather than deterministic laws" of Max Delbrück

13. Same Constituent. - different properties.

C, N, O - different molecular configurations give rise to alcohols, fatty acids, sugar - highly different properties - that can be expected only in nature.