

Consciousness conundrum

[Anil K. Rajvanshi](#)

anilrajvanshi@gmail.com

“Chimpanzees are more intelligent than humans in some ways”, said Professor Tetsuro Matsuzawa of Kyoto University, Japan. He was the first speaker at the conference [“Consciousness, Cognition and Culture – Implications for 21st Century”](#), held in NIAS Bangalore from 9-12 December 2015. He showed that Chimpanzees can be taught to recognize numbers (1 to 20) in correct sequence regardless of the order they are presented on the computer screen and that their response in identifying them was far faster than that of any humans. Thus their working memory for numbers is vastly superior to that of humans. Professor Matsuzawa was trying to show through his 37 years’ of research in primates, that the awareness of reality and consciousness varies in different species and that comparisons with humans may not be appropriate.

Similarly Professor Mayank Mehta of University of California at Los Angeles showed that rats behave in a similar way both in real and virtual worlds. With very clever measurements of the rat’s brains (by measuring the firing of individual neurons) he and his team showed that very few (order of 100) neurons were capable of creating a brain map of the maze! His research also showed that rats use 60% less neurons while travelling in virtual world than what they use while travelling the same route in the real world. This is a mystery and they do not know why it is so. His research is throwing light on the whole body of how brain thinks and which part of brain reacts to different stimuli and how.

An interesting paper by Dr. Rajesh Rao of University of Washington, U.S.A. showed that humans can have a telepathic conversation with each other via the use of brain-computer interface.

All these talks and others tried to address the question of what is the neural basis of perception of reality and ultimately consciousness.

There were 23 papers presented in 3 days of the conference. Couple of invited speakers were absent. The papers covered diverse topics such as neural basis of consciousness; art and emotions; schizophrenia; autism in children; consciousness in Indian philosophy, etc. About 180 or so participants attended the conference.

Naturally with such vast area to be covered some talks were given in a precise and entertaining manner while other speakers rambled on without saying much of consequence.

There were also some good foreign researchers who presented their work but their delivery and language were incomprehensible which could not do justice to their work.

One of the interesting aspects of the conference was that many young research scholars from across the country and some even from abroad were specially invited to attend it. This allowed them to hear and discuss with the experts in their fields. Since most of these students came to the conference in search of research topics for their degrees either in Philosophy or Psychology, this interaction helped them. Thus number of very interesting lectures covering areas like autism in children; auditory hallucinations in schizophrenic patients; role of music in patients suffering from dementia and Alzheimer's disease were liked by these scholars.

The conference could be compared to an Indian *thali* where one samples lots of different dishes put in small *katoris* (bowls). Though one gets to taste varied dishes but is never fully satiated. Similarly with vast number of areas covered one got an overview or a glimpse of the subject, but in-depth knowledge of any one area was hard to come by.

The conference ended on the 4th day with half a day session on Modern Physics and insights of classical traditions regarding reality. Here the organizers raised deep questions with which physicists have been grappling such as origin of universe, quantum entanglement, time and consciousness and what is ultimate reality. The panel which consisted of practitioners of Vedanta, Buddhism, Jainism, Yoga and Kashmir Shaivism were asked what the traditional systems have to say about these

matters. Naturally the responses were based upon how much knowledge the panelists had about the understanding of the traditional systems in the light of modern physics. I thought the replies of Swami Atmapriyananda and who quoted Swami Vivekananda ad-verbatim provided most lucid answers to the questions.

Consciousness is a hard subject to tackle. Since time immemorial philosophers have tried to describe it and now the scientists are trying to do the same. I came to this conference thinking that it will provide some clarity on this subject, but overall was disappointed. I guess all of the speakers added their small bits and pieces to the jigsaw puzzle but it might need a person like Einstein to put all of them together to finally develop a comprehensive and great theory of consciousness.

[HOME](#)

[Report published in NATURE \(India\)](#). 17 December 2015.