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Category : May 1990
Published by Anonymous on May. 01, 1990

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Nobel Winners, Brain Sages, Mystic Muses Mesh at Sold-Out Bhaktivedanta Conference

How does something so invisible and immaterial as consciousness/mind relate to the greywhitish, spongy 3-pound brain? At what point does mind go beyond the common definition of thought, emotion, memory, sense of "I" into the omniscience of God Mind, and is the brain part of this spiritual transformation? Is the material cosmos a product of consciousness, and how does the seemingly individual mind/brain take part in a cosmos made up of mind-stuff? Hindu sages have navigated these questions and many more by turning consciousness in on itself. Scientists, in the hot field of the 1990's - brain/mind research - are puzzling over these questions, and a few are finding bridges to Hinduism. In mid-February the Bhaktivedanta Institute of San Francisco, California, orchestrated its first "Study of Consciousness Within Science" conference, attracting most of the top gurus - several in their sagely seventies.

The first entry in my notebook is to bring a dictionary to the second day of the conference. Brain talk can get thick with bio-words. A few minutes earlier Dr. Thoudam D. Singh, wearing a white Vaishnava mark from his forehead to his nose, chanted the "peace invocation" from the Upanishads. In brain geography his tilak mark divides the frontal cortex, a vital area of personality, morality and sense of time. An organic chemist, Singh is the International Director of Bhaktivedanta Institute of Bombay and San Francisco that specializes in consciousness research. He is clearly excited about this event.

The hall we sit in at the University of California, San Francisco, is packed. Standing

room only. While arranging our HINDUISM TODAY press pass with the Institute, secretary/scientist Ravi Gomatam tells us the locale was changed twice to accommodate growing bookings. We asked how many Hindus were attending. He replied, with exasperation, "Not many."

So here we are on a stormy weekend, a sea of some 400 researchers, teachers, psychologists and seekers surrounding the video gear set up in the middle of the room to capture every eyebrow flex and word. Right in front of me is the hairless head of Sir John Eccles, Nobel laureate, one of two Nobelists to talk here. The other is George Wald, whom I unknowingly ran into while we were both looking for the men's room. He turned out to be the best part of the conference. He is fond of telling people the brain feels like a ripe avocado. Note to my wife: buy an avocado so I can try this out. The student on my right says he's here to hear from those "on my right says he's here to hear from those "on the cutting edge of where I want to be." He's studying to be a psychobiologist. Literal translation: study of life of the soul. He probably didn't know that.

Back at the podium, Dr. Singh sums up the conference's purpose with Hindu backlighting, "In our own country of India, our earliest writings of metaphysics, starting with the Rig Veda, have extensive output on the phenomena of consciousness, mind and matter. Traditionally the study of mind and consciousness has been considered the province of psychology, philosophy and theology." But, he points out, science has bumped into the fact that your smelling of a spicy curry dish - a mind/sense state - actually makes that curry real. Hence, he concludes "...an understanding of consciousness is a necessary pre-requisite of completing our study and understanding of purely objective phenomena."

OK. That means to completely understand a cat's purr, spinning galaxies, a plant's photosynthesis, the smell of roses or the effect of chocolate on our moods, consciousness itself must be understood and placed in and through matter. It must also be placed, somehow, in/through/beyond the brain. Ultimately, our sense of mind (personal thought, emotion, memory, will, psychic abilities and the normally untapped infinity of soul-beingness) must be anchored in consciousness. The physical brain, then, is a tiny translation island in that ocean of awareness.

MONO OR DUO DAYDREAMS

Waiting for the next speaker I daydream a bit-instead of scientists on the stage are Hindu sages, eyes closed in ego-suspended meditation, their tranquility pulling my mind into theirs into a single Mind. A voice breaks into the daydream. The images vanish. I recall reading that every ninety minutes, day and night, the human brain goes into a dream state, into a lush, vivid, quicksilver alternative life to our normal waking life. It is like the brain/mind needs to refresh itself in another universe every ninety minutes. But is my daydream a product of brain chemicals that induce drowsy imagination, or of higher consciousness filtering into the cerebral cortex, or a combination of both?

Much of what the men and women below at the panelist table are puzzling over is to what extent mind consciousness are purely the electrochemical gurglings of the brain. That is, my daydream is only brain neurons flashing like a trillion spark plugs - mind and brain are one. This is called monism. The opposite of this position is: the brain is an incredibly responsive processor of consciousness - which swims outside and through the brain. Mind and brain are separate but may interact. This view is known as dualism and it is closest to Hindu thinking.

The room bursts into laughter as John Searle, a cognitive scientist and philosopher, jokes about the fuzziness of mental and physical properties. "There are things that fall in between. Take interest rates. They're neither mental nor physical yet they act casually [cause events in real world!]. Or itemized deductions. Are they physical or mental? Try putting that to the Internal Revenue Service. [US tax bureau]."

CAN BRAIN STUDY MIND?

But his point is serious. "How is it possible that in those disciplines officially dedicated to the study of the mind, the most essential feature of the mind [consciousness] should be regarded as out of bounds, not a suitable subject for investigation?" His question is posed to the majority of scientists who follow monism - brain is the mind. As Searle is explaining, historically, science banished consciousness from its investigations. Matter was Real. Materialism was the only legitimate yardstick of reality.

Searle wants consciousness back in the ball game. The only problem is how do you

play with something you can't see or touch? And, oddly enough, the invisible mind changes as you change the brain. Mountains of data exist on this. In the 1890's a 25-year-old entrepreneur miner had a spike driven into his frontal cortex in an explosion. He survived, but his personality had altered from outgoing, witty and cultured into bitter moroseness. He became a drunken lecher. His friends didn't know him. In a vast variety of brain-altering cases - damage or impairment, drugs (including coffee, alcohol, and most of what you eat), body manipulation such as posture, exercise, acupuncture, pranayama, hatha yoga - the mind of the individual is affected both positively and negatively by the changes to the brain's cells. Note that these are all "outside" effects. To dualist thinkers - including Hindus - this shows two-way traffic, a natural state of brain/mind interaction. As to "inside" effects - abstract thought and conceptualization, emotion, intuition, dreams, deep sleep, meditation, visions, samadhi - the materialist brain mappers are lost in a wilderness. They face this dilemma: can the intellect focusing only on the human brain understand the greater mind and consciousness itself?

Dr. Searle is jumping all over materialist science in his talk, "If science is a systematic study of reality, and I don't know a better definition than that, then part of that reality has to be acknowledged to include consciousness."

DEATH OF A PIZZA

Searle, though anti-materialist, is a functionalist: life evolved into its highest expression, the brain. Consciousness arose as brain-dependent but also as a transcendent entity, mentalness that is manifoldly greater than the sum of the wet cells of the brain. But to Searle, when the brain dies, the mind self probably goes too. The most often posed question by the audience is "Does consciousness survive after death?" Searle quipped, "I'm not optimistic. I can't prove it but consciousness surviving the disintegration of the brain has about as much chance as digesting pizza and beer has of surviving the disintegration of the stomach."

And on that indigestible note I am looking forward to upcoming speaker Sir John Eccles, who will chew up Searle's consciousness-dies-with-brain functionalism.

John Eccles is the Lao Tsu (Chinese Taoist sage) of mind science. A big bald head, big grin and oversized glasses says this man thinks as large as his homeland of

Australia. In 1963 he won the Nobel in medicine for his work on synapses, the millionth-of-an-inch wide gap between brain cells. So important are the synapses - where a drug store of so-called neurotransmitters molecularly pass or block or alter the cell's messages - that the higher functions of the brain are called "God in the synapses."

Eccles comes out blasting against brain monism (also known as identity - brain and consciousness are identical), "The identity theory is superstition. The brain only processes information and conveys it to the mind. You're not living with your brain. You're living with your mind." His present study is dendrites, the smallest branches of the "input" side of the neuron, the individual brain cell. He calls this "the fundamental unit for perception in the cerebral cortex." And it is a twilight zone of complexity.

We are talking in the order of 100-1000 trillion synaptic connections. Nobody knows how many there really are. 100 trillion "o's" of the size in this sentence, set side-by-side, would cover 120 million miles - "more than enough room for the soul" as one neuroscientist put it. The dendrites wrap like cables into dendrons. Here, at dendron-level, Eccles perceives psychons, psychic units of perception, one for each experiential quality. "The mind is there to interpret the information taken from the optical nerve, for instance, to the dendrons to the psychons and "may go on to give you immortality. I cannot believe that the wonderful gift of a conscious existence has no further future, no possibility of another existence under some other unimaginable conditions."

WILL, CALLING ALL SMA'S

Eccles believes mind is a God-based reality, a manifestation of the soul. But his insights came by way of a biological pointer to will, intent or volition. Back to the cortex, he reviewed a series of experiments in the region called supplementary motor area (SMA). Milliseconds before we do a voluntary act - like getting up for a snack - the SMA's 50 million neurons light up, prepping all the little signals that must go out to put your body into motion - a fantastic feat if you think about it. Even if we don't actually head for the kitchen, the SMA switches on. The question is: who or what is telling the SMA to fire? Eccles says it is the mind's will, the surrounding presence of purely mental intent that jump-starts the SMA.

My mind is telling the brain SMA to get my body to lunch, a beautiful vegetarian fare. Among the munching and murmuring is there an undercurrent of spiritual interest? To a degree. I overhear a conversation between a man and woman: he a neurophysiologist, she a clinical psychologist. He says he is a scientist first and mystic second. But he goes on to remark that he doesn't believe in gurus having any more power than he has and doesn't accept the paranormal that can't be explained in science terms. I think to myself: with that kind of attitude, where is there room for mysticism? The lady says she believes there is more to it than science cares to admit. It is interesting to note that her openness - a soft ego - does create the very special natural brain conditions necessary for beyond-brain mystic experience.

Back in the hall Ravi Gomatam, a computer scientist and secretary of Bhaktivedanta Institute, gives a refreshing talk based in a Vaishnava school of Hindu thought. He sees consciousness as a hierarchical structure, "the working senses are superior to dump matter. Mind is higher than structured matter, and intelligence is still higher than mind, while the conscious self is higher than intelligence." To illustrate the point that consciousness moves the mind he turned to the Katha Upanishad: "Individual consciousness is the passenger in the chariot of the material body, and intelligence is the driver. Mind is the guiding instrument and the senses are the horses."

PEAR & EMPIRICAL YOGA

By the end of the day, when the speakers were whisked away to a private dinner hosted by the Indian Consulate General, we'd taken journeys into holographic brain/universes (a topic for a future HT article) and seen split-second time shift data that showed, "The voluntary act began unconsciously before the subject became aware of wanting to do the act," a fascinating aside to Eccles' insight into will. One of them most promising presentations came from Dr. Robert Jahn, a Princeton University dean of engineering and aerospace professor. Jahn also likes his jokes, and in a play on Eccles' psychon said he hoped his talk wasn't a bore-on. It wasn't. He leads up a program with the whimsical name of PEAR, Princeton Engineering Anomalies Research. It is seeking demonstrations of mind over matter through studying the interaction of human consciousness with physical devices. He tells us the machines are predictable, the operators' influence over them is not. The results show measurable, repeatable control of mind over machine.

Into the second day we are pondering some consciousness insights that incorporated God. Dr. Robert Thompson, a mathematician from Cornell University, observes "Consciousness is matter as seen from the inside," and adds that within the laws of classical physics there can be interaction between the conscious self and the physical reality. "A global, all-pervasive consciousness of God fits into the model of that interaction."

Philosophy professor David Long chaired the final session and in response to the attendees' wish for more data from all sources commented, "Yoga produces an amazing inner empiricism. The scientific study of consciousness must be multi-level and include psychology, philosophy and phenomenology."

Texas-based physicist Dr. E.C.G. Sudarshan, who gave a fine talk on the intelligent ordering and patterning of nature, voiced the conference's closing wisdom, "While studying the new let's not forget the old. Yoga begins, Patanjali tells us, with the end of the chattering of the mind. This is the last and best frontier of man."

It was the perfect ending to a remarkably potent meeting of minds. Did this new frontier of science answer the questions we posed at this article's outset? Only partially. It has a long way to go to attain the yoga that begins where the intellect ceases. Bhaktivedanta Institute is planning such a gathering every two years.

Like a brain's normally used 10%, our story only covered 10% of this mind territory. Look for future articles focusing on the Hindu dissection of brain, mind and consciousness.

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