



Brain, Mind and Cosmos

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Part of my title is taken from the important recent book of Thomas Nagel, *Mind and Cosmos*, which suggests that “the materialist neo-Darwinian conception of nature is almost certainly false” and that dimensions of life such as consciousness, reason, morality and subjectivity cannot be reduced to or explained in terms of its material dimensions. This may be welcome news to members of the SMN but not to most establishment philosophers, dominated as they are by a materialist outlook. Indeed, as described in an essay entitled ‘A Darwinist mob goes after a serious philosopher’ by Leon Wieseltier, his book has sparked one of the most exciting philosophical disputes in years since whether materialism is true or false is one of the crucial questions of our age. Oddly, I wrote an article with almost the same title as Nagel’s book and on a rather similar theme for *Science, Consciousness and Ultimate Reality*, a volume edited by David Lorimer in 2004. However, it was much less deep and had much less impact – fortunately for me perhaps since at least I avoided the attention of the Darwinist mob!

It should be stressed that Nagel is not a theist or advocate of intelligent design. Indeed, in an earlier book he argued that “there is really no reason to assume that the only alternative to an evolutionary explanation of everything is a religious one”. As Wieseltier eloquently puts it, “He thinks strictly but not imperiously, and in grateful view of the full tremendousness of existence; and he denies matter nothing except the subjection of minds; and he speaks, by example, for the soulfulness of reason.” However, for atheists of the materialist brigade – who cannot tolerate “any cosmic order of which mind is an irreducible and non-accidental part” – that is a step too far. So Nagel, eminent philosopher as he is, must be denounced as a heretic. Of course, the SMN is fully aware of establishment intolerance of the heretic and has provided a platform for several of them. Indeed, my editorial in Spring 2011 was on this very theme.

An interesting recent example of the heresy wars is the controversy surrounding Rupert Sheldrake’s TEDx talk on his book *The Science Delusion*. This was removed from the regular TEDx platform and relegated to a ‘Naughty Corner’ of the internet, along with Graham Hancock’s talk on consciousness and psychedelics, after objections from militant atheist bloggers. This caused a storm of protest, with TED trying to justify their actions with a statement from their anonymous Science Board. Fortunately, following a conversation between Sheldrake and Chris Anderson (the head of TED), the Science Board’s statement was deleted and Sheldrake’s response published. The debate generated more comments than any previous TEDx talk and was reported extensively in the press, most of the coverage being critical of TED’s stance. For example, Deepak Chopra and 19 consciousness researchers wrote in support of Sheldrake in the *Huffington Post*, so at least some good came out of this.

Returning to the problem of mind, while my own inclination to a non-reductionist view originally came from cosmological and parapsychological considerations, what makes the debate so pressing today is developments

in neuroscience. This has taken centre-stage recently with the announcement that researchers at the National Institutes of Health are mapping all 100 trillion neural connections between the 100 billion neurons in the human brain. Indeed, President Obama has just announced a \$100 million Brain Research Through Advancing Innovative Neurotechnologies Initiative that will study all those networks in action. But will this really explain mind? While most neuroscientists may harbour this hope, several others (even of the materialist persuasion) are open to the idea that consciousness is more than mere brain function.

Prominent among these is the neurologist Robert Burton, whose new book, *A Skeptic’s Guide to the Mind*, is a scathing attack on reductionism. His views are clear from a recent interview with Jonathon Keats. While the NIH project is likely to produce abundant new data about electrical brain activity, Burton believes that expecting brain wiring to reveal the nature of consciousness is like predicting what sound will come out of a speaker by looking at a wiring diagram of its components. We can study brain function and perhaps arrive at a satisfactory model of how the brain works but the scientific method cannot be applied to subjective experience itself. So what is needed is some intellectual innovation that goes beyond technology. Neuroscience is different from other sciences because the mind is both the subject and instrument of its own investigation.

One of Burton’s arguments is that nature provides many examples of organisms (such as termites) with a ‘collective mind’ exhibiting group behaviour which does not arise from the individuals. Since humans are members of the animal kingdom, we should therefore anticipate some aspects of our minds extending beyond our individual brains. Studying the roots of empathy by imaging single subjects in an MRI scanner seems as hopeless as trying to figure out how termites build mounds from observing just one of them.

In recent years there has been much interest in ‘spiritual neuroscience’ and the question of what neurological and biochemical changes accompany spiritual states. Researchers have demonstrated such changes not only in ‘pathological’ states like OBEs and NDEs but also in ‘positive’ states like prayer and meditation. However, even if it is true that every spiritual experience has some correlate in the brain, that does not necessarily preclude it reflecting some external reality. Doubtless part of my brain lights up when I eat apple pie but that does not mean the apple pie is not real. So the implication of all these studies for the reductionist view of mind remains ambiguous, with powerful advocates lined up on both sides.

On the non-reductionist side – along with such SMN luminaries as Peter Fenwick, Pim van Lommel and Sam Parnia – is neurosurgeon Eben Alexander, whose best-seller, *Proof of Heaven: A Neurosurgeon’s Journey into the Afterlife*, recounts his own NDE as a result of a meningitis-induced coma. On the reductionist side is psychiatrist Oliver Sacks, who tries to debunk these claims in his article ‘Seeing God in the third millennium’ on the grounds that all Alexander’s experiences

may have occurred in the 20-30 second period when his brain was recovering, even though it seemed much longer. Indeed, Sacks takes the view that all NDEs and OBEs can be explained as a by-product of trauma and manipulation of the brain by experimenters.

He also comments on another best-seller, Tanya Luhrmann’s *When God talks back: Understanding the American Relationship with God*. This was based on her experiences with an Evangelical Christian sect and concluded that a personal relationship with God arises through constant practice and prayer; the striving to hear God’s voice eventually pays off and faith becomes immovable. In Sacks’s view such practices inevitably activate the perceptual systems of the brain which generate hallucinations, so that the yearned-for voices and visions appear to be real. Another debunking book is Kevin Nelson’s *The Spiritual Doorway in the Brain: A Neurologist’s Search for the God Experience*.

One neuroscientific finding, reported by Thomas Sheridan in an article on Obsessive Debunking Disorder, has a curious twist. It seems that debunkers and hardcore sceptics may be just as prone to brain pathology as mystics. This stems from the (probably oversimplistic) view of the lateralization of brain function. While the left hemisphere is analytic and concerned with quantitative evaluation and specific tasks (e.g. the domain of the debunker), the right hemisphere is associated with insight, intuition and noetic experiences (e.g. the domain of the artist). The left brain is also narcissistic and has an inflated sense of its own worth, so – in a reflection of what happens in society at large – it tries to turn off and bully the right hemisphere. But all the great eureka moments are supposed to come from the right hemisphere, so this state of right-nullification also creates a loss of cognitive functioning.

Our last Mystics and Scientists meeting featured a fascinating presentation about the neuroscientific aspects of creativity by Robert Turner. On a similar theme, a recent BBC Horizon programme *The Creative Brain: How Insight Works*, described the result of MRI studies which indicate that the neuronal wiring is different in the left and right hemispheres of the brain. The left has short connections, while the right has long connections which spread throughout the brain. Creative people apparently have less white matter (the central wiring system of the brain) than usual, resulting in cognitive slowdown but greater access to wider connections.

I lack the expertise to assess these ideas but such speculations about the relationship between brain function and unusual states of mind are certainly intriguing, even if they don’t resolve the problem of consciousness itself. Indeed, I find the parallels between the ‘outer network’ (society as a whole and the SMN in particular) and the ‘inner network’ (our brains) curiously reassuring. For if all the battles between the heretics and debunkers in the outside world merely reflect what goes on within our heads, it is somehow easier to bear. It is certainly curious to contemplate that the bridge some of us are attempting to build between science and spirituality may just be an externalisation of the corpus callosum which joins the hemispheres in our brains!