

1: Overall Synopsis

Thanks to Di Clift, the catalyst and heroic organiser of this amazing annual event, the SMN have been going to Frenchman's Cove near Port Antonio, Jamaica, for a study conference every year since 1996 (apart from a break in 2002-2007). The focus of this year's excuse for a trip to this magical corner of Jamaica was the Cosmic Consciousness Connection. Professor Bernard Carr was the main speaker, although being the only participant with a physics background, he made it clear from the start that he would welcome questions throughout – either to clarify or expand on material covered. The objective was to shed more light on the link between matter, mind and spirit.

Lectures were broadly divided into three parts: (i) foundations of relevant physics theory; (ii) the problem of consciousness and how to get mind into physics; and (iii) spiritual aspects with a particular focus on paranormal and mystical experiences.

The discussion of physics centred on the description and explanation of matter, focussing in particular on our understanding of ever larger and smaller scales. The Uroborus, appearing first in ancient Egyptian iconography, was used to symbolise the micro and macro forms of matter and the various connections between them. It is clear that what we call the 'universe' is continuously growing. Plato's geocentric view, with the Earth at the centre of the universe, prevailed until the 15th century, when Copernicus discovered that the Earth moves around the Sun. Subsequently, Brahe and Kepler discovered the laws of planetary motion, which Newton explained in the 17th century with his law of universal gravitation. Newton's world was 3-dimensional, with space and time being absolute. However, Einstein's work on special relativity in the early part of the 20th century made it clear that space and time are not absolute but different aspects of 4-dimensional spacetime. Furthermore, general relativity a decade later showed that spacetime is warped in the presence of matter, thereby explaining the origin of gravity.

Although the size of a human being is the geometric mean of the smallest and largest scales of the Cosmic Uroborus, so that we are central in terms of size, we seem to have become increasingly insignificant with advancing knowledge. The heavens have been stripped of their divinity and our common-sense notions of reality have been overthrown. In particular, atomic theory implies that objects are not as solid as previously believed and quantum theory implies that a microscopic system is probabilistic (i.e. described by a wave-function) until it is observed. This presents many interesting challenges for understanding the nature of reality. In particular, quantum theory shows that one cannot measure both position and velocity at the same time and that reality is fuzzy. Frustratingly, although relativity and quantum are known to be completely accurate in their respective domains, there are incompatible and resolving this problem is crucial to the search for a final theory of physics.

Attention then turned to the unification of the forces at work in nature and how this implies that additional (wrapped up) spatial dimensions may be required. In one model, the physical world is viewed as a 4-dimensional "brane" in a 5-dimensional "bulk". This unification means that it is possible to view all of nature's forces as manifestations of a single all-encompassing force. For example, electricity and magnetism are unified as part of electromagnetism. This is then unified with the weak force (associated with radioactive decay) as part of the electroweak interaction. At much higher energies this is unified with

the strong force (binding atomic nuclei together) as part of a Grand Unified Theory (GUT). The unification with gravity at still higher energies may be achieved with M-theory.

Having described the latest state of physics, Bernard turned to the problem of how to introduce mind into physics. This involved input from other disciplines, including philosophy, psychology and neuroscience. Newtonian physics is mechanistic, in that it reduces the Universe to a machine, and the Cosmic Uroborus – as it stands – makes no reference to mind. The first hint that this may be inadequate comes from the Anthropic Principle. Although humans are no longer central to the Universe, this suggests that some features of the world are explained by the requirement that life and mind should arise. In particular, the Strong Anthropic Principle says that many fine tunings are required between the coupling constants (describing the strengths of the four forces) and various cosmological parameters. Bernard gave some examples of this – for example, how the production of carbon in stars relies on a finely tuned resonance between key elements. He stressed that these tunings are unexplained by mainstream physics. However, they are not specific to humans; they are just required if the Big Bang is to lead to increasing orders of complexity, culminating in mind. This is reminiscent of the Evolution versus Intelligent Design debate, except that the existence of a Multiverse gives the Anthropic Principle a more respectable physical basis.

Bernard then reviewed different views of consciousness. Some scientists believe that this is just an excrement of the brain, probably irrelevant to physics and possibly just an illusion. Others believe that consciousness must be a fundamental part of physics and perhaps even a new state of matter. A more radical view is that the brain is a filter rather than a producer of consciousness, in which case neuroscience will never be able to account for all aspects of experience. Indeed, there is a growing volume of evidence – described in Larry Dossey's *One Mind* – that consciousness is a non-local unitary phenomenon. This gave an opportunity for participants to share some personal experiences and provide insights from their own professional fields. The different types of mental experience – subdivided into normal, paranormal and mystical – were represented in a graph of frequency (common to rare along the y-axis) versus impact (mundane to profound along the x-axis). So normal experiences (eg. sensations and memories) were at the bottom left, paranormal ones (eg. telepathy and clairvoyance) in the middle, and mystical ones (eg. creative insights, religious epiphany and oceanic feelings) at the top right.

The next lecture focused on paranormal phenomena (psi) and the attempts to explain these theoretically. There are different kinds of theories – transpersonal, psychological, neurological, biological, chemical and physical – but the last is probably the most fundamental since physics underlies all of the sciences from a reductionist perspective. Reasons for connecting physics with psi were discussed and it was noted that both psychical research and physics would benefit from this. Indeed, physics may already be sufficiently exotic to accommodate psi.

Three types of physical theory were discussed: transmission models (where psi is due to some form of signal); quantum models (where non-local quantum entanglement is invoked); and higher dimensional models (going beyond 4-dimensional spacetime). The first seems implausible (because psi does not weaken with distance) and the second seems unsatisfactory because – while quantum theory is undoubtedly relevant to psi – nobody understands this anyway, so it does not give a complete explanation. He therefore

turned to the third possibility, emphasising that one needs some form of communal non-physical space and extra dimensions of time (corresponding to different species presents) to accommodate the full range of mental experiences.

Bernard closed by presenting his own unified model of matter, mind and spirit, stressing that there is a need for some revision of what is meant by these terms. His model invokes extra dimensions of space and time as part of what he calls a "Universal Structure". Although there are many historical precedents for this approach (notably, Abbott's "Flatland" and Zollner's "Transcendental Physics" in the 19th century), it has become more popular in recent years because particle physicists now also invoke extra dimensions, so he relates these two ideas. Regardless of whether this particular paradigm is correct, one needs a form of science that goes beyond the one-level materialist paradigm. This supports the view that one needs some type of Post-Materialist Science

Eve Hicks

2: Jan Arriens Thoughts

In the first place, Bernard's presentations were a tour de force. His observations covered not just contemporary physics but also philosophy, psychology and religion, with music and humour thrown in, to provide a marvellous overview. Taking us as far as he could with regard to standard physics, Bernard then embarked on the conclusions he had reached as to how consciousness, parapsychology and spiritual experiences might all be incorporated into a single model. So far, he has not felt able to do so professionally, as so much of his thinking is not just speculative but also highly controversial. Bernard freely admitted that his model could be incorrect, but at the very least it is a brave attempt to find a place for consciousness. His model may also force the scientific community to sit up and take notice – at best acting as a bridge between conventional science and those who are currently derided.

How far has or will Bernard Carr get? Repeatedly I was struck by the similarities between his references to One Mind and interconnection, etc., with the Upanishads. "Brahman is the only truth, the world is unreal, and there is ultimately no difference between Brahman and Atman, individual self." Or: "That which cannot be apprehended by the mind, but by which the mind is apprehended – that alone know as Brahman."

I think that what Bernard says about the need to bring in mind and extra dimensions of time and space makes every sense when it comes to accommodating paranormal and mystical experience, and indeed completing a Grand Unifying Theory. The problem I am left with concerns how this is done. Once one posits mind as the missing factor everything slots into place, but I think the reductionists will ask how this has been achieved. We are unable to define consciousness satisfactorily, let alone (I presume) put it into a mathematical formula other than as a symbol, or a kind of "balancing item". So I feel there was a jump from *needing* mind to incorporating it. But then ultimately an element of mystery will remain, if only because we trying to look at consciousness from the inside.

And consciousness is the one thing that we can only look at from the inside; everything else we observe and analyse from the outside. Perhaps that is why it is so elusive and perhaps ultimately indefinable. But in the same way, we can only look at the universe, or

the cosmic consciousness, from within. It may therefore be that we can never apprehend the entire Truth. At Frenchman's Cove we were like seekers climbing a mountain, some by the scientific path, others coming from a philosophical viewpoint and others again guided by personal experience of a mystical nature. All of these are valid in their own way. Bernard took us just about as far up the scientific path as possible. When I found the atmosphere getting rather rarefied, I took comfort from the fact that the authors of the Vedic writings of over two thousand years ago had come to essentially the same conclusions. These they had arrived at intuitively, with a feeling of rightness that is, I imagine, identical to that felt by the mathematician or physicist when things fall into place, at times seemingly in the absence of any agency of their own. I hope Bernard will feel emboldened to take his bold analysis into the public domain.

Jan Arriens

3: Music, writings and film clips used

MACROPHYSICS - MICROPHYSICS – CONNECTIONS

- The Galaxy Song (Monty Python)
<https://www.youtube.com/watch?v=buqtdpuZxvk>
- Beethoven Pastoral Symphony (5th movement)
<https://www.youtube.com/watch?v=EM8RICZP0KQ>
- Powers of Ten <https://www.youtube.com/watch?v=0fKBhvDjuj>

ANTHROPIC PRINCIPLE - ROLE OF MIND – [LIFE IN UNIVERSE]

- Across the Universe (The Beatles)
<https://www.youtube.com/watch?v=kKP82AZ9zmE>
- Proxima B and the Search for Life beyond the Solar System (Guillem Anglada-Escude)*

CONSCIOUSNESS - PSYCHICAL AND SPIRITUAL EXPERIENCE – SURVIVAL

- Ticket to the Moon (Electric Light Orchestra)
<https://www.youtube.com/watch?v=ZXBIPY8wDT0>
- Little Star (Calista Kazuko)
<https://soundcloud.com/calistakazuko/little-star?in=calistakazuko/sets/calista-kazuko>

THEORIES OF MIND AND PSI - SPACE FOR MIND - TIME FOR MIND

- Trip the Light <https://www.youtube.com/embed/Pwe-pA6TaZk?rel=0>
- Dining Room Tea (Rupert Brooke) *

HIGHER DIMENSIONS - SCIENCE AND SPIRIT - POST-MATERIALIST SCIENCE

- Dr Quantum Flatland <https://www.youtube.com/watch?v=BWyTxCsIXE4>
- Alien Wisdom (Nancy Abrams) *
- The Queen's Spook (Adrian Parker) *
- My Back Pages (Bob Dylan)
<https://www.theguardian.com/music/video/2014/feb/12/bob-dylan-performs-my-back-pages-30th-anniversary-concert-video>
- A Crack in Everything is How the Light Gets in (Leonard Cohen)
<https://www.youtube.com/watch?v=6wRYjtvIYK0>

* See pdf or mp3 on conference website