“The Living Cosmos: from oak trees to the ‘Big Bang’”.   
Presentation at “Science and Spiritual Practice”, Edinburgh 14-15 June 2013, by Chris Clarke

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|  | \* Addition to title – via quantum theory  Focus on spiritual practice – so start with my own  It’s not systematic or regular, but it still is a vital part of my life, and one that has grown with time. I find myself needing (or coming across) different spiritualities at different times  \* I tend to start in the same way – relaxation followed by quieting –  \* may use different ways of achieving this ... |
| This can lead on to different strands, depending on what my inner needs are (not necessarily conscious).  \* One is Listening – with the “inner ear” as well the outer  ***NB Relationship***  \* (Questing and waiting) Meeting in our house next to Southampton Common. \* Deadlocked discussion. All went onto common to follow whither they were drawn, holding a particular question. Successful outcome.  [That could equally well be described in terms of the ambience ...]  \* could involve other senses  (Other senses) (Oak tree – bones – through bodilly sensation  the copse – being absorbed by the silent Being-for-itself of the copse.  A deeper way is through silence. NOT holding a question; asking through silence and being answered through silence.  \* (b) Opening. Internal journey –  The “how” of this:  Curiously, the way in (to oneself) is also the way out (to the most all embracing context) | |
|  | on: way in = way out  Two quotations – first from Alan Wallace  \* What he describes (ālaya – analogous to Tibetan rigpa) Alan Wallace is not just describing a special subjective way of perceive, ***but a non-dual state in which the perceiver and the perceived are the same***  \* - (there is no distinct .... Separation) going into the depths of the self is the same of going into the breadth of the cosmos. Recognising that “tat tvam asi” |
| Meister Eckhart \* expressed the same thing in Christian terminology  Here it’s worth noting that, although in one sense he is talking about (traditionally Philokalia) “the beatific vision” – but there are innumerable steps on Jacob’s ladder before that.  I believe that there are foretastes, which gives the temerity to cite this myself. | |
|  | To return to my own history – how does science fit into this?  \* EPs – bringing Sci & Spi together . Spiritual practice was in part meditation, in part liturgy  \* How could one experimentally verify whether the mass had worked?  One could regard this question as merely absurd – as a crass categorical error, like “Looking for verbs in the refrigerator” (to quote another phrase I heard in connection with them) |
| But actually is was a profoundly creative move (a sort of Koan): starting from the idea that at least *some* spiritual practices could interface in some way with some aspects of science – where would you draw the line? And what exactly is it that makes one thing that makes the questions “How could ...” beyond the pale?  \* (The real problem ...) (WOK to be discussed shortly)  \* (Main obstacle | |
|  | So what do I mean by “ways of knowing”?  We are **constructed** (through evolution) so as to have two distinct main ways of knowing, based on two main subsystems of the brain / mind  SMN will know these through  \*Iain McGilchrist  But I will use the terminology of the similar  \*  a diagram of some of the processing subsystems in the brain, according to Teasdale and Barnard - based on research on cognitive processing. . |
| I am going to concentrate on the two large ones here - p and r.  p = verbal based logical reasoning - with a verbally coded memory store.  r= holistic, overall meaning processing. Direct connections with sense modalities (in contrast to p) and a memory store coded in every sensory modality - vivid and immediate. The connection with emotional response made possible by the direct connection with state of bodily arousal.  For complete processing, you need both working in close communication. Because the systems are distinct, it is possible for this communication to become overloaded or skewed in some way.  This helps to explain a lot of what goes wrong for human beings. | |
|  | How do we use this insight to enable science and spirituality to engage appropriately with each other?  \*The basic problem is the *incommensurability of the propositional and the implicational*  *\** The way round is through modelling  \* The result is the emergence of alternative logics  \* so where are we to start ...  \* consciousness |
|  | \* How not to do it: by defining conc. in such a way as to deny the existence of any way of knowing other than the propositional  Adopting the viewpoint of cog subsystems suggests consciousness as involving **being ,** and most strongly linked to the relational side, while physics involves the propositional, in a complementary manner  \*  I will concentrate here on one particular – and controversial - strand of thought which uses quantum physics to make a link between physics and consciousness  \*  \*  So what is the idea, in more detail ... ? |
|  | The sort of physics that L & B were talking about involved experiments like this one depicted here ...  If left to run, build up an “interference pattern” indicating some sort of wave process involved in the passage of the particles. The photographic film constitutes an “observation”, and it will be subsequently examined by a human **observer**  On the other hand one could have an observer who was examining what was going on particle-by particle, |
| \*  and in particular examines which slit each particle goes through. Then there is no interference:  Discussion by L & B – | |
|  | \* London and Bauer’s pamphlet  \* Observation  note terminology of observer and **“pointer”**  \* But ??knowledge?? (propositional)  Choose – yes, but how – what does it mean? (later – asserting a context)  **Mixture** – von Neumann’s idea that the apparatus does not single out a particular outcome, but produces a “mixture” of different possibilities. A further process is required to obtain a particular outcome – according to L & B, the observer  “New wave function” – changing the final outcome implicates the previous events  leading up to it- an aspect of entanglement.  \* Recognition – but what is “consciousness” – in what sense? |
|  | What does L & B’s argument look like from the relational point of view? (move towards it)  \*  Does consciousness in fact do anything?  \*  Epiphenomenalism: consciousness merely supplies a subjective gloss on top of purely mechanical processes  \* Non-action (*wu wei*) is an important principle: : partly agrees with epip, but it affirms that we do make a difference, but this is more by being (the relational) than by force (the propositional).  (the sein Sein Seyn trap ... B=verb, b=noun) |
| \*  Consciousness is about relationship – with people, with other conscious beings,  with yourself – with your own ideas - with the land, with the sea:  Consciousness is about establishing a relationship and standing within it  Relationship (I – Thou) is shared being    With this in mind, what does spiritual practice tell us about what consciousness does?  \* “Practice” is training for the real thing  \* Work – but what does that mean? Revisit Meister Eckhart  \*  \* In other words. Work and being (verb) are identical - and identical with Being (God) | |
|  | How is this to be modelled in propositional terms?  Need first to know what beings are conscious, and in order to do that need some QM  \* QM: Digression on entanglement: \* Two systems are entangled \* (As Albert remarked ... )  \* Many entanglements ... Entangled ball |
|  | \* Now return what beings ...  Speculative, in sense the (though there is a clear intellectual structure) there is no concrete evidence  Consciousness, in the sense used here, isn’t about cleverness – it’s about autonomous being – something being for itself.  So there is really no lower limit of sophistication regarding what can be conscious and what not – a principle of pan-psychism –  \*\*\*\*\* etc |
| Nesting allows us to enter into relationship – a shared being – with Oak trees  “The Big Bang”  Further consequences of “pan”: \* Overlaps - consequence is “nesting” | |
|  | Can now return to the question, what does consciousness do?  \* Conatus via “assertion” (Zeno effect)  ... That’s another story    All that’s left is to \* |