

Seat of Education

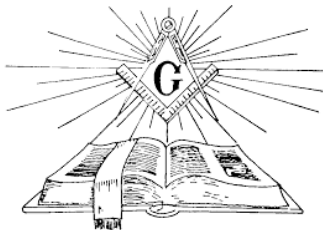
An Interesting Question

Asked of Dr. Lomas

(A Fascinating Answer)



Dr. Robert Lomas visits the Victoria Lodge



Coeur d'Alene Lodge # 20
Murray, Idaho

Robert Lomas on the Soul

In an interview I gave to fellow physicist Dr Alex Nicolin about the influence of Freemasonry on the development of modern science I was asked a question which related to the soul. Here is that section of the interview.

Alex Nicolin: Dr. Lomas, I've been discussing your interview with my colleagues and I was pleasantly surprised to see that it steered a few energetic reactions. In particular, I noticed that some scientists would like to dissect (purely) cognitively the mysteries of the world around us, leaving no place for the soul. By putting their cognitive powers above their souls (that is somehow associated with an ever-lasting and most annoying uncertainty) they never doubt their results. In the words of the operative masons, they envisage Science as a church whose construction only goes forward. What they build one day is there the next so that they can go on with their work. There is no overnight collapse, no need to tailor the project, etc. And most importantly, no need for continuous self-sacrifice! Frankly, I feel this is ridiculous: I look at Science as being one big (multiple-scales) back-and-forth process whose only certainty is that it's never-ending. At the end of the career one may find his contributions insightful with respect to one scale but the overall picture (the truly difficult problem) remains unscrutinized. Anyway, in the light of this feedback, I would like to append another question to our interview. The question is this: Dr. Lomas, as a scientist and a Freemason, how do you comment St. Paul's saying that he "dies daily"?

Robert Lomas Paul talks of his body dying and his soul continuing. If there is such a thing as the soul I think it is whatever it is which instigates the collapse of a multi-particle Schroedinger wave function (ie one which is describing entangled states). It is the thing which makes the measurement possible, or the observer which forces the haze of probability to collapse into particular particle set of positions, or momentums (depending on which it chooses to measure). As far as I can see the question of what is the human spirit, is the answer to the puzzle of what measurement means, and what this observer thing is doing which fixes the result of the measurement (or the choice of world-path if you like the prefer the Everett-Wheeler world splitting model)

As I see it the problem of measurement (in quantum mechanics) is how do the entangled states of many possibilities collapse down to just one observation and when does it happen?. Is it when the pointer on the dial moves, when the particle creates a path in the bubble chamber, when a charged particle hits the phosphor of a display screen, when the optic nerve of the observer pulses or when the self-conscious awareness of the observer registers the event has taken place? If you buy into the Everett-Wheeler proposition then collapse never

happens, instead the whole range of possibilities all continue but your consciousness only perceives one of the outcome paths and the observer that is you splits as well. This implies each version of the observer sees one of the possible outcomes that the Copenhagen interpretation assumes is created by the wave function collapse. At each split a whole infinity of world outcomes is split off from your observation. Does this mean that your self-aware spirit is the self-conscious system which traces the path of highest probability through the range of possible wave function collapses?

Whichever interpretation you favour then part of the world of possibilities dies each time you make a measurement. You either shed part of your spirit at each split or you many versions of you die and only one lives on to observe another event, when the whole process happens again.

In the third degree of Freemasonry the ritual tells you.

"The Secrets of nature and the principles of intellectual truth were unveiled before you and to the man whose mind has thus been modeled by virtue and science, nature presents one grand and useful lesson more the knowledge of yourself. She teaches you, by contemplation, to prepare for the closing hours of your existence; and when, by means of such contemplation, she has led you through the intricate windings of this, your mortal life, she finally teaches you how to die. Such, my dear Bro. are the peculiar objects of this, the 3rd Degree in Freemasonry."

Part of you, the essential self-conscious observing you, either dies or is forever exiled down another world path every time you observe something, and so collapse a mess of entangled wave functions into a fixed state. As a physicist I find this the deepest mystery in postulating a theory of quantum cosmology. Do we, the observers, have to die each time we measure or observe, and is this the mystery which if solved will reconcile relativity with quantum wave collapse? We may have to die not just every day, but every time we make an observation.

Alex Nicolin: I was expecting something "classical" related to self-sacrifice being the only way to spiritual enlightenment, a process that is never finished, etc. Your answer takes me, however, to quantum measurements. Incidentally, your way of looking at quantum measurements says a lot about your spiritual path. Most scientists I know embrace the theory of non-destructive (non-demolition) quantum measurements, i.e., they would choose a one-world one-fundamental-reality framework of QM, as to eliminate the soul from the discussion. But, your answer is very interesting, you speak about God, Order and Uncertainty and how nicely everything fits in the picture.