

## Fractal Unreality? – Paper III

In his own preface to his description of Tim Palmer and his work, Buchanan feels he must explain why someone not working in this field of Physics is making a significant contribution. He explains that Palmer was a close contemporary of Stephen Hawking in their time as advanced students in Oxford, and that he has been mathematically modelling climate ever since. Though Buchanan is establishing Palmer's credentials, he is, for me, also setting him within the consensus in Physics since his youth, and ever since he has continued to be embedded in an approach that uses mathematical formulae and threshold switches to attempt to model the weather. No one could be more central to a maths-led orientation in Science. And for Palmer to dedicate most of his life since his student days to attempting to stuff our unchallenged-ably holistic climate into pluralistic formulae puts the dilemma of all consensus physicists in the same frame.

Returning to Buchanan's narrative, it is clear that you have to be on your toes to not be sucked in as an interested (not engaged) physicist, to avoid any sleights-of-hand, which are an essential part of this approach. We are told of the descriptive success of the Theory. But to call it a successful description, surely only means that they can use words to describe accurately what actually occurs! But that is a very early step in Science! So, I expect that he means that they can successfully **predict** behaviour in given circumstances. (though I am not convinced that being able to give accurate probabilities IS accurate prediction.

"There is a 30% chance of the particle being in this position", does not gel with the usual ideas of precision. It only becomes precise cumulatively surely, when totals and averages and the rest of statistical physics is brought to bear. [Laughlin, the Nobel Laureate, has addressed such questions in detail, so I will not presume to replicate his excellent arguments here]

But, anyway every scientist knows that such prediction as is lauded here is still NOT an Explanation of why things are the way that they are, but merely a successful "finding and fitting" of a ready-made set of mathematical Forms.

But, that claim was only the first part of a sentence in the article, which went on with, "you should abandon...concepts, such as the idea that objects have definite properties when no-one is there to measure them"

Let us be clear, such is a credo for, "Give up Explanation, deal only in measurement and prediction. Cease your attempts to understand, ONLY pragmatically predict and then use!"

And that is certainly a very long way from Explanatory Science, is it not?

Now, Buchanan does see that Einstein's position was the well established previous approach, which expected all the incongruities of Quantum Theory to be cleared up by further and deeper research. "We don't know enough yet, but we will!" could be said to epitomise his attitude. He could not stomach the total abandonment of explanation. And he was right in that, but wrong in expecting the traditional methods of science to heal the wounds of Quantum Theory. His avowed subscription to Reductionism was incorrect!

He too was mistaken, as it is clear to me that an Emergence separates the sub-atomic "quantum theory realm" from the macro world which has been the Whole of Physics since its inception. And if this is true, all the entities, relations, processes and laws of that macro world CANNOT be simply and directly reduced to those of the Quantum Level. The Quantum physicists are separated from the macro-initiated concepts of particles, waves etc. which they see as "below" their realm of study, and the similarly treated macro world "above it". They cannot square the circle with concepts and entities from (prior(?)) and subsequent Levels because they **do not persist through an Emergence** And as scientists have always done they use averages, probabilities and the like to describe events which they cannot explain.

They limit themselves to effective USE, and abandon explanation.

Now, these may seem drastic conclusions, but they are in fact common.

Mankind discovers new areas of study that are the result of the Emergent establishment of a new amenable Level of Stability **beyond** its creating Emergence. Life is the best example!

What is Biology but the study of Life? There can be no Science of Biology without Life can there?  
And many similar partitions hide the necessary creations of new Levels by addressing ONLY within-Level entities, properties, processes and indeed laws. Consciousness in Mankind and many others get a very similar treatment. Our methods work *within* stable Levels, but are totally incapable of transcending any qualitative change of itself.

Now these necessary and seemingly long-winded explanations give an alternative ground from which to judge Palmer's Synthesis.

He prefers Black Holes and Fractals as "concepts" unavailable to the founding fathers of Quantum Theory. So that just as you are expecting his new synthesis with extra explanatory elements, he slips into another totally unannounced mode!

He states that gravity is the only fundamental physical force capable of *destroying information!*

What? What information is that? I always thought that information was something we abstracted and stored inside our heads or in books, what is HIS information?

He explains....within a star there are vast amounts of... wait for it...**Information** locked into the modes of existence (he means physical states) of all the components involved. He then informs us that when all of this matter is sucked into a black Hole almost ALL of this information *vanishes*, and the complete Black Hole can be very simply described. Whooa! Whooa!

Does he realise what he is actually saying here?

This is NOT information, it is structure, and more even than that it is the dissolution of ALL LEVELS. It is the equivalence of Death to Life.

If all his "information" vanishes and everything is covered by a simple equation, he is saying that his Black Hole dismantles and destroys all Levels down to some very basic remaining features. Of course, to a **Reductionist**, that is nothing remarkable. Indeed, it is what they always insisted would even be possible conceptually by Mankind. It is the assumption of Reductionism made "concrete"!

But, of course, "Forgive them Lord, for they know not what they do!". Their reductionist assumptions steam roller through all and everything "in their heads", and though there certainly CAN be such destructions – imagine the effect of the Earth being absorbed by its expanded Red Giant Sun, so there CAN be other scenarios. The rush to basics embodied in the concept of the Black Hole, is obvious if you are a reductionist. But are there other scenarios more in line with the history of the Universe and its Emergences. The ultimate Black Hole as an extrapolation of these reductionist ideas is the End of our Universe, whereas the rich History of cataclysmic Cosmological Events is that they terminate one Phase and make possible an entirely new one. Without turning a hair, our reductionist scientists announce to all that WE are made of star-dust: that without supernovae there would be no sun like ours, no planet like Earth and no Life like there exists there. Such "Emergentist" ideas are mere side dishes to their monolithic pluralist reductionism. They do not even see any contradiction.

But I can see only contradiction and confusion in their idea of a Black Hole. In order to make it even "float", they soon have to indulge in Parallel Universes and other twaddle! Black holes may well involve a cataclysm, but NOT ending in the vanishing of the whole Universe into a Physical Singularity, leaving absolutely nothing behind. On the contrary, such an Event will obviously be an Emergence and will carry over into an explosion. Even the famed Big Bang, which we are told came from a very similar Physical Singularity – indeed from "absolutely NOTHING", must actually have been the result of an Emergence wherein the previous circumstances finally precipitated such a fantastic result. I cannot, of course, explain what it was, but anything is better than a whole Universe emanating from absolutely NOTHING!

But, let us redescend this staircase, back down to where Palmer is still standing.

He postulates that such transitions cannot lose information below a certain level (he actually slips in the adjective "mathematical" in association with this minimal set, which he calls the "invariant set"

You could almost interpret his "invariant set" in terms of the underlying and most basic properties of Reality. His invariant set is inevitably CONSTANT. Once again he is well within his reductionist beliefs with all this.

And you should be expecting the next statement.

**The invariant set is the unchanging set which is the ONLY Reality"**

God help us from mathematicians!

Sorry, I muse!

Are you still with all this?

Is he describing Reality, or is he describing the area of Pure Form – of the mathematics that we daily use?

Is he really purporting that such Forms **make** Reality what it is? For, if he is, he has abandoned Materialism for Idealism. He is ascribing Cause to formal ideas alone!

He goes on, “once a state lies in this subset ( the invarisnt set), it stays in it forever!” Wow!!

Let us be clear, some physical state can ultimately reach a kind of minimum information situation, which means that thereafter NO CHANGES are ever possible? It seems to be defining the ultimate death of Change, or am I misinterpreting?

The mind set necessary for following mathematical physics theorists is indeed its own acquired “invariant set” of amazing ideas. Until you descend downwards into that necessary groove you will never understand their evident certainty.

After all this I hope you are prepared for his coup de grace!

**To be continued**

(1,634 words)