

## Formalising the Heavens – Paper V

### *Philosophical Consequences & Opportunities*

Though I have touched upon the ground for the theories in the *Our Special Place* article in New Scientist via my previous papers in this series, I have so far omitted any elaboration on the most important philosophical assumption of both the author of the article and the contributors to the theories laid out there, and it should be made clear, of most other Cosmology and Science. That assumption is, of course, Plurality.

Now, though in analysis that means the basic assumptions involved in breaking everything up into its constituent Parts, and then going on to repeat that process time and again, at every level down to fundamental units and laws, its corollary is also very important.

That attempts to see all phenomena as having been *produced* by a sequential and complicating build up of such Parts. **Reductionism** is thus seen as going both ways.

Now, the major flaws in all of this are concerned with just how the various layers of phenomena are produced. One feature of this approach sees a continuous set of causes and linkages throughout all these “complications”, and implies that these are automatic consequences of what was started with initially. It is these aspects which turn out to be not only unsubstantiated, but also not even demonstrable. Such straight through sequences are NOT possible. The richness of what is produced was not inherent from the start. Indeed, the evolution of Reality is a creative process, and not an automatic mechanism. Indeed, its most significant interludes are those which we term Emergences, wherein the dependabilities of a current Level begin to be completely undermined, and the Level decomposes into chaos. Only via this breakdown, and the actual loss of many depended upon entities, can some new stability be erected, and this is no simple process. It seems to involve avalanche after avalanche of changes, out of which new inter-relationships begin to emerge as organizers of a new stability.

Doesn't look much like the pluralist alternative, does it?

Nonetheless, it is also true that in many things we have little choice but to follow a pluralist approach, as within the extensive periods of stability (as long as sufficient control can be established) plurality **can** deliver the goods.

The pluralist approach, for use within stable situations is an adequate and pragmatic method, and can be “used” with confidence. BUT, we cannot use it as an accurate picture of the way the World is, and has developed. When that is done the difficulties start and indeed multiply. Plurality is a very clever invention of Mankind to enable him to make use of certain features of the World. It is the philosophy of the Doer, not the philosophy of the Thinker.

In such a discussion as this, I am regularly drawn to the parable of Baal in the Bible, where the children of Israel erect a giant God-like Image, and then proceed to worship it. It is a strong parable, because it is a regular feature of how Mankind's increasing power and ability to control things transforms his view of the world. He falls for his own creations, and the tail wags the dog.

This is exactly what Plurality is in the Thinking of Mankind, particularly in the current era of worldwide capitalist exploitation.

Now in the content of Cosmology, the pressure towards a pluralist approach seems at first to be unassailable. The elements in the heavens are so far apart, that not only is a pluralist method successful, it is close to delivering the complete Truth. The first really sound predictions in the history of Man were to do with the Heavens. So, in fact, Plurality is much older than Science. But, its simplifying, though completely acceptable for most productions in Astronomy, threw away its alternative, Holism, at its birth.

The complete connectedness of everything with everything else, and the crucial top-down and side-to-side determinations were totally ignored for a strict bottom-up pluralistic view.

And, for most of the time, it worked! For most of what happened in the *viewable* heavens was basically mechanistic. But, as the observations gradually became a Science, Plurality became more and more of a

liability. When galaxies, then novae and supernovae were discovered, mechanism was **dumb** in explaining them.

Lord Kelvin's estimate of the age of the Earth was based on pluralist assumptions about the simple cooling down of the Earth since its creation, and this was totally demolished by an approach to Matter which accepted its natural transformation from one element to another via radioactivity. Instead of a few millions of years, the Earth was soon confidently proved to be billions of years old.

And the same sort of things kept arising until they became a clamour for Change.

The seat of all this chaos was, of course, the revelations of what was happening at the Sub Atomic Level, and its surprising resolution by pluralist scientists was truly remarkable.

The physicists involved insisted upon a "philosophical revolution", in which scientific explanation was banned as self-kid, and Science, at their Level at least, was to be limited ONLY to equations.

In making this change these scientists effectively **kept** the prediction and use elements of Science, while dumping its attempts to understand the World.

And, lo and behold, this had to be the area of Physics that held many of the answers to the development of the Universe. The Copenhagen Mob moved in, fully tooled up, and solved the early history of the Universe, using only their magnificent equations. And these covered not only the "first three minutes", which were mapped out in detail, but the whole history of the stars, their sequences of modes, expansions and collapses, and ultimately their final destruction, were all delivered as a bag of the appropriate equations tied up with a pink ribbon. Such a present was, of course, irresistible and enabled the woo-er to seduce the infatuated maiden, and he soon became the master of the house.

Now, all of this was unavoidable at the time. And many of these imports were of great and even profound merit, but Cosmology had been transformed by the marriage into an adjunct of Sub Atomic Physics. From that time on Cosmologists were Sub Atomic Physicists ONLY!

Now, Mankind cannot choose the trajectory of its understanding. It certainly cannot be a clear path from the outset. Indeed, it must initially be first steps into an unknown Land, and only in its exploration and in interacting with it in diverse ways could it be gradually understood. The actual trajectory is by no means a minimized and direct path towards the Truth. Indeed, it is almost always the exact reverse, in that the most significant progress is made in surprising areas, and has to react back into the main body of ideas to reform it, and remedy some of its misunderstandings.

Criticisms of the trajectory of understanding in Cosmology also cannot be undertaken from some absolute standpoint of perfect Truth either.

But, the currently emerging islands of new truths are certainly to do with Change, Development and Evolution, and along with a holist view of the interconnectedness of all things, those ideas have to radically alter the many pluralist concepts from the past, not least in this most exciting area of Cosmology

(1,221 words)