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Formalising the Heavens – Paper II

The Ground

Now, this reactionary turn in Science has been compounded by what can only be called "formal speculation". Instead of Reality being studied to add to, and even correct, our previous Knowledge of things, the new equivalent is to study the equations ONLY, and to isolate parts of them and give them seemingly "physical" labels. The vacuum produced by the banning of scientific explanation, was then increasingly "filled" with this "formal speculation".

"Entities" were discovered there on the page, hiding in the Form, and immediately given Names. These newly "discovered" entities were then "looked for" in Reality.

Now, think about this!

They had abandoned Explanation, but had derived their formulae from data acquired from Reality. To "find" that something in Reality that had produced their equation, was **certain** to be successful, but it could only be another formalism. The hindrance of coherent explanation would not get in the way. The formalism derived from Reality would be confirmed by Reality. How profound! And yet this confirmation is rare. Some of their entities are still unconfirmed, and have regularly to be reinterpreted as they cease to fit. The massless neutrino is now no longer massless!

The new approach involved viewing things by first standing on your head, and interpreting only your **formal extraction**s to explain Reality.

It has not been successful, whatever claims they make about prediction. Real scientists are not impressed!

And Cosmology has now become an integral part of this too. Indeed, it is THE most crucial Part, as Nothing can be confirmed or denied by experiment. We can't do a bit of "Supernovaeing" in the lab can we?

Now, it must be made clear that not all scientists act as if they believe this idealist nonsense. There are many who do study Reality FIRST, and the interpenetration of Physics and Cosmology has led to quite fundmental and truly scientific Explanations of events in the Cosmos. The account of the evolution of Matter within a succession of star-forms is truly quite brilliant, and though the formalists would claim it as their own, they are NOT the authors of this narrative at all.

It is true that their equations appear throughout this explanation as markers of predictability, like currants in a cake, but you cannot make the cake using only currants and with NO understanding of baking.

The actual deliverers of these outstanding explanations were the real scientists. The embedded equations are not WRONG, they are just completely inadequate when taken alone, and have been given a wholly undeserved significance. Ask an equation merchant to actually explain a situation, and he will be struck dumb. Unless you give him writing materials and allow him to wallow in his beloved equations, he will be unable to communicate the essence of the situation to you, unless, of course, he uses the explanatory narratives of the real scientists.

NOTE: The clearest revelation of this assertion is Radio. For there you cannot use equations; you have to *explain*. And the abject failure to do so, is always beautifully revealed there. May I recommend Melvin Bragg's In our Time series on BBC Radio 4. He does not realise what a service he performs, particularly in Science debates, but it is extremely revealing.

Indeed, the whole nature of the Universe, and its meanings and causes, has been converted into one built solely out of equations. It is not that far away from Laplace's conception that if the speed and direction of all the particles were known at a particular point in time, then the future of the Universe could be accurately predicted.

The current consensus is not, of course, as crude and mechanist as Laplace, but it STILL conceives that the whole of Reality is merely the adding together of all possible extracted equations.

And such an idea is simply INCORRECT!

It, at base, assumes that the most fundamental units and equations are eternal and immutable, and everything else is merely a particular complication of these in some form or another. Its main all-embracing principle is Reductionism, which sees the task of scientists as successively cracking every single layer of all complication, so that ultimately, each and every individual phenomenon will be possible to trace back to its basic entities and equations.

NO IT CANNOT!

You may ask, "WHY?", and the answer is because Reality doesn't merely grow or complicate, it actually evolves! It is not a fixed complication, but an ever-changing thing, that produces new and entirely novel things over time, and each and every one of these will be for the first time ever.

Indeed, there are special episodic Events which produce these important advances, which are known as Emergences.

Do you want proof?

I assume that you do, and so you should!

What else was the Origin of Life on Earth but just such an Event?

What else was the first occurrence of Thinking and Thought, but another Emergence?

Was there any Thinking about in the early Universe? Was there any Life there too? The answers, you can supply for yourself. It is always, "Of course not!" Indeed, all these and very many others emerged as Reality evolved.

Now, work has been done on Emergences for over 200 years, starting with Hegel, and it is clear that Reductionism as an always applicable sequence is wrong! It is locally and temporarily true and useful, but only within a given Level of organisation and integrated existence. You cannot carry your reductionism THROUGH an Emergence. You cannot explain Life in terms of chemical reactions. You CAN isolate such things *within* Life, and then use your reductionism within limited areas of Living Matter, but you can never recreate living matter from the precursor non-living chemistry.

The idiocy of Pure Form as the only component in dealing with Reality must by now be clearly evident.

Now, this is merely a preamble to a criticism of the article *Our Special Place* in New Scientist. That offering displays ALL of the above described faults, but it does it without giving ANY of its crucial equations. It "looks" like an explanation, but it is no such thing.

It is merely a piece of "formal speculation" sitting on top of some real science.

To be continued

(1,040 words)