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## Paths to Chaos, or Paths to Glory? - Paper I

What is the natural trajectory of development in unrestrained Reality?

Once there exists some natural process of Change underway, will it inevitably wind-down, like an unattended clock, to inaction, then rust, and finally disperse into oblivion? Or will the opposite be the case: will it just as inevitably perpetually generate ever new forms, and go on to fill all the interstices of possibilities to the utmost?

All man-made devices certainly take the former course, but they all have a very unnatural character and nature, and require constant maintenance. Man is not a cosmic gardener of **Reality-as-is**, but an engineer of found and contained relations. There can be NO inherent, natural potentiality in the physical works of his hand, only inevitable deterioration. When we glory in our dominance of the World, we forget what stupendous resources we commit to its maintenance: what rape of the stored energy of past life we find imperative to fuel our continued dominance (and even survival).

So, reference to these latter things will only mislead us in addressing that initial question (as it has throughout our history). To get any sort of answer we must turn to Reality beyond the reach of Man. We must investigate Reality without Man.

NOTE: But this is almost incomprehensible to us.

Our whole approach is based upon what is termed Plurality, where we divide Reality into Parts, and these into further Parts, to attempt to both use them and understand them. And such an approach is, and was for most of our history, impossible without Control. Our method is to totally control an area of Reality, such that most of the elements involved are "nailed to the floor", leaving only our precious "Part" standing proud and maintained as such. Our consequent methodology obviously involves our rigid and continuing control, and what we extract from the situation is entirely dependant upon that control. If we try to USE any extracted relation in Reality at large without this control, it will, always and inevitably, FAIL. In order to use our "truths" we have to reconstruct our "controlled area" exactly as we made it for our investigations. Only then do our "truths" behave as we want them to.

Clearly to investigate Realing beyond the reach of Man is something very different.

Now, when (and if) we go beyond the reach of Man: that is we DO NOT control any part of Reality, but take it as it is, the second possibility outlined above does dominate what confronts us. Instead of turning the natural "clay" to bricks and constructing edifices out of this unnaturally "fixed" unit, we are confronted with a slowly, but constantly changing world, where, for example our "clay" can be the result of millions, and even billions of years of Change, wherein our final product was once the hardest of igneous rocks, but has been metamorphosed many times, and finally decomposed to release that part which can transforms our pottery into "china". And all this was produced by natural processes as is, with their own purposes and trajectories.

Left to itself, Reality changes and, I will go further – it *develops*.

Now, though it is absolutely correct to use the word, "develops", to Mankind it smacks of his own activities and purposes. It "contains" a plan or target, usually with some human advantage in mind.

But "develop" doesn't have to be endowed with such planned orchestration. When a plant grows until it has to move into a new stage, dedicated to propagation, it isn't showing the Hand of a homocentric God, or indeed ANY OTHER PURPOSE at all. It is displaying a behaviour that was **selected for** by the twin contributions of variety and success. Of a myriad of actual tiny changes in such living matter, survival and the maintenance of characteristics in future generations, that was merely **selected for**, as against less effective or even deleterious alternative changes in similar organisms, which were also struggling to persist.

No divine Hand or purpose drove such a "development", only efficacy in a World of differences and **contention**.

As long as such diversity and contention were the norm, change would be selected for, and in living matter where the generations pass on characteristics, there NATURALLY occurs an accelerated version of a more general process. So, even before Life such Selection would STILL pertain, though the tempo would be dead slow in comparison to the related processes in the Evolution of Life. So, there seems to be a natural trajectory of development in Reality (without Man), but, of course, it implies both Change and Contention, and it also suggests Invention in there too.

The conundrum of Cosmology is its trajectory of development from some very simple(?), basic material to the Universe that exists today.

NOTE: though I seem to question this process, I don't. I am only echoing what is a general opposition to such developments, but I can see no alternative.

As once there were NO stars, and still much later NO Life, and very much later still NO Mankind, I can only see a self-moving **development** having produced these amazing landmark changes. They were certainly not always about, so they must have "emerged" naturally!

Yet any assumed original components of the initial Universe seem incapable of Change as there would ne NO variety and NO contention involved!

Of course, it must be emphasized that our conception of the nature of the early Universe is pure speculation, allied with backwards extrapolation of **current** relations and laws, all the way back to some sort of a **beginning**.

Obviously, our Big Bang is a delicious recipe for delivering all that would be needed to supply a possibly developing situation. It is a wish-list of possibilities based on **what we know of NOW** the situation some 14 ½ billion years later. But, whatever was the situation, it was certainly different then than it is now, and no-one could characterise what currently exists as being always and for ever "exactly like that".

Clearly natural changes have taken place.

The evidence of significant Change can be observed, if only in the novae and supernovae, which which have been seen, and in the results which have also been identified – the Crab Nebula is certainly the remnants of a Supernona observed in Ancient China.

So we can be absolutely certain that Change has been a factor, and there must have been a natural trajectory from whatever was originally available to what we have now.

We can imagine a situation without stars, for we already have some sort of life sequence for various sizes of Stars, and not only some model for their origination, but also a clear idea of how they may well die. And assuming that the Universe once had NO stars, we can imagine what it would be like if the beacons of light and heat which illuminate and drive their environs of inert matter with their energy, were removed.

Without such energy we see the Universe as dark, cold and unlikely to DO anything!

And yet somehow, from just such a situation, something did happen!

Modern Science revealed that Matter itself possesses force – Gravity. It attracts other matter!

And, if this was always so, the tiniest fragments would react to other matter, and, as Newton discovered, experiencing a force results in an acceleration, and more force will produce more acceleration. So with ONLY Gravity, there will be movement and hence an energy of motion – Kinetic Energy

Now, the last paragraph or so has not been the beginning of my personal speculation on the course of the development of the Universe, but has been my attempt to consider the minimal conditions for such a development to commence. Even without the powerhouses of energy production - the stars, something as simple as Gravity could give rise to Change and also could accumulate such things as Energy (if associated with Matter).

## To be continued

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