

The Nature of the Primary Cataclysmic Event *(The initial phases of the Big Bang?)*

Recent musing on Empty Photons and their now extinct, but presumed, primaeval parent forms, not to mention the ubiquitous present day forms (the Filled Photons), pose questions about the origins and evolution of such entities.

If, as is universally assumed, the Start of Everything was The Big Bang, then something prior to, and causative of, that Event must then have endowed the situation with certain properties.

[But the full considerations of that pre Big Bang scenario is another major question, and cannot be pursued to any extent here.

Nevertheless; a few assumptions will, doubtless, become necessary]

So let us draw some conclusions about the nature of the Big Bang itself!

Such an Event is without any doubt whatsoever the most prodigious Qualitative Change in the History of the Universe, so it cannot be dealt with by employing a couple of unfounded assumptions.

It could NOT, as is now the consensus position, have emanated from absolutely NOTHING!

Nor could it stream through a supposed Wormhole in the fabric of Space to allow the channelling through of Pure Energy from another Universe!

The ONLY reasonable assumption that we can make about such an Event is that it is a special Cosmological version of an **Emergence**. And from our knowledge of Emergences that have occurred since that time, we can assume that, as with them, a prior balance of processes which were integrated into a self-maintaining Stability, was finally tipped beyond its threshold of sustainable balance, and precipitated a wholesale avalanche of positive feedback, and hence a self-increasing dissolution of all the processes which delivered that Stability (as is always the case in all Emergences).

Whatever was that prior Stability would be totally destroyed by such an initiating phase of the Event. Thus, instead of the current total absence of any reasons for the Big Bang, we would instead be seeing it in terms of something we do know about, though clearly in this case it would indeed be an extreme case (appearing nowhere else)! For everything that has occurred since is presumed to **Start** with this Event!

NOTE: To those unfamiliar with it, we must explain that all of these ideas are derived from the **General Theory of Emergences** (by this author), which was developed from all sorts of Emergences brought together in an attempt to deliver the most general description of what features must be involved in such Revolutions.

There, for the first time, the sequence of Phases, which seem to be essential to such an Event, have been both described and explained, and must relate in some way to this – the biggest such Qualitative Change in the History of Everything.

So, in spite of its gigantic size and stupendous effects, as always in any Emergence, **something** must have survived the initial cataclysm.

Indeed, such Phases are NOT dissociations of everything that existed prior to the breakdown. They are mostly to do with the **Dismantling of Order** and this is selective (very **Second Law** in Nature) in that it is precisely those processes, which defend the Stability via self-maintenance and countering alternative systems so that they actually bite the dust. It is a kind of **Structural Filleting**, largely leaving basic individual productive processes alone, but totally removing their skeletal systems of control and defence.

Thus, such an Event does NOT dismantle all processing, but crucially the stability in which they all function together in a coordinated way. The “detritus” left will **still** be rich in these processes, but they will **not** be ordered into a generally coherent overall system.

This “**Return to Chaos**” is NOT a return to a primaeval basic condition at all. In fact it produces **the richest uncoordinated situation**, packed full of creative possibilities – very different to the usual conception of Chaos.

The question is, “What would it be that, surviving the greatest calamity in the History of our Universe, survived to form the basis for all future developments?”

So, once again drawing upon the Theory of Emergences, the Big Bang cannot merely be a big bang.

It must start with an initial cataclysm, and then, via a period of alternating creations and dissociations, finally arrive at a self-maintaining Stability, which both *proliferates* its Forms prodigiously, but is also highly **conservative**. The Early Universe would stay-the-same for a long period of Stability before that Level is compromised and precipitates yet another Emergence. We cannot be dealing with a sequential hierarchy of mere complication, but a sequence of structural and **new content** Revolutions. The new qualities of the Universe are built by Emergences.

Now, some clues are evident!

Certainly **Energy** must have come through the cataclysm. And as the prior state was some sort of balance, it would have had to have had some entities with their inter-relating forces. The clues as to what could have been can only be found within vestigial (primaeval) Energy. For even Pure, disembodied energy (radiation) has both electrostatic and magnetic elements within it, and itself exists as a “*kind of balance*”.

For NO oscillation can occur without a balance of forces resulting in a stable “**zero**” or “**Rest State**”, so that energy pumped into the system merely causes oscillations about that rest position at greater and greater amplitudes as more and more energy is included.

But, what could possibly *contain* such a microcosm of Reality? What is involved?

We are told it is Energy and Energy alone, but that is almost impossible to conceive of, when NOT involved in some physical material containing system.

Our commonest vehicle for energy is Mass in one form or another, but apart from this there is only (as far as we know) Radiation – and that is said to be an oscillation about NOTHING, propagated by NOTHING, yet capable of transferring energy with certain qualities across the whole Universe.

Not much there for us to work on, is there?

Now, the usual problem with such impasses in Mankind’s attempts to understand Reality, occur because his assumptions (though initially fruitful and leading to important gains) inevitably run out of steam, and crudely display their inadequacies.

The reason we are stumped is that we have shot ourselves in the foot, and can get no further, using our set of premises: that they are inadequate to the necessary task!

Our assumptions, as usual, are by no means the Full Story, but only a temporary **construct** containing vital *objective content* (and hence valuable thus far), but have finally betrayed their inadequacies.

Our musing on the Early Universe is clearly predicated upon what we have extracted from the present State and Level of our Universe, and **cannot** be true for its earliest Phases.

Let me attempt to clarify this with an example.

Once we have atoms with nuclei and “orbiting” electrons, we also have **Energy Levels** for these electrons. They can be promoted UP to higher Levels, and can be demoted DOWN to lower Levels with both directions involving transfers of Pure Energy into, and out of, the atom.

Now this energy, when *separate* from the atom, must be in the form of **Radiation**, and must bear the *stamp* of its origin within the atom.

The energy levels will have determined the frequency of that radiation

It is, after all, how we determine the content of distant stars! We investigate their spectra of emitted radiation and match it to know Elements from experiments on Earth.

BUT, we **don’t** find energy *without* this stamp!

It dominates all observable energy!

No other kinds seem to exist!

But we may be misinterpreting complex mixes of radiant energy as being entirely composed of these atom-sourced types, when some of it, is not that at all, but **remnant primaeval energy**.

Yet our theories say that there must have been a time when there were NO Atoms, and hence no electron orbits and no energy levels. What would this primaeval energy look like, and what would be its source?

Remnant Primaeval Energy is most likely to be found in positions where it would not have the chance to become something else in subsequent Emergent Events. For example, the absolute furthest extent of our Universe, is likely to be just such a place. Long investigations by this author into answering the question, “**Can We See The Edge?**” were certainly fuelled by the realisation that such boundaries must be crucial in understanding the Universe and its Creation.

Now I could replicate this type of reasoning many, many times. And the reason is that the Universe is NOT composed of eternal entities obeying eternal laws! That is the usual assumption, but it is, in fact, incorrect!

It actually **evolves!**

And that will include the creation of the wholly NEW. Is not Life here to prove the case, and Human Consciousness too?

So, when dealing with the Early Universe we cannot merely extrapolate backwards from what pertains today, assuming a continuous strand of causality throughout. Our usual assumption of Reductionism is neither eternal nor universal. It is invariably **local**, and applies only within the localities of a given Level.

Now, this does make the Science of the Early Universe somewhat different! So, confronted with such an unknown situation, what do the physicists do?

They do what they simply have to do, and make assumptions about what might pertain at that un-investigatable time. And, as you might guess, they can only come up with a single candidate, which made the period what it was, and that is **Primaeval Energy**.

Now, as to any properties of that “source of everything”, the only difference they can conceive of from present day Energy is merely its **Size** and its **concentration** into a much smaller volume! Everything else about it is assumed to be the same as now! There has to be sufficient Energy to create everything that exists today in our Universe, including, of course, **all the Matter** too. Such amounts of Energy when considered in this way are almost inconceivable. If a 2 cm. piece of Matter can, in a Nuclear bomb, produce such a vast outpouring of energy as was evident from their use in Japan and since that time, the amounts of required energy as the source of all Matter, simply zooms off any conceivable scale.

Now, they certainly need to know more about this colossal amount of Primaeval Energy, so they decide to **make some!**

They design a whole escalating series of **Particle Accelerators**, and use them to smash particles together, but thus far the energies involved have been far too small.

So they finally design and build the **Large Hadron Collider**, which is so powerful that they actually expect to **create Matter** from Energy (in the form of the **Higg’s Boson**) actually within their machine.

Do you think they will succeed?

So all of their experimental design is not only based upon present day common entities and forms of energy, but somehow they expect to use these to re-create the Early Universe (in miniature).

Their idea is somewhat like using modern living thing to re-create the earliest organisms as they first appeared on Earth.

Clearly, they simply cannot succeed!

The Universe is NOT all of a single uniform nature throughout. On the contrary, it contains, and always has contained, different **Levels**, which are added to with each and every new **Emergence**. The Universe can ONLY be conceived of as an **evolving entity**, and then NOT achieved by a continuous series of incremental developments, but ONLY via tumultuous Events termed Emergences – the ONLY situations in which the NEW are ever created, to appear in the consequent resultant Levels that Emergences always produce.

And these are not only self-maintaining, but also and necessarily prohibitive of any potential rival systems in embryo.

Life itself is the reason why new Life cannot separately appear from non-living Matter. And whenever these Levels continue to exist as such, no further developments are ever possible. They have to begin to be significantly undermined and then dismantled for the NEW to emerge.

Yet, **such** is the impossibility that these scientists hope to overcome.

Using only what they can – presently existing things, they hope to smash their way back to the Origins of Everything,

Can anybody tell me why this is considered to be “a magnificent undertaking”?

By smashing entities together at the most incredible energies, they are hoping to actually *create* in microcosm, not only the conditions of that Early Universe, but they then expect this to be sufficient for the necessary Emergences to happen *under their hands* to tell them all they need to know about the creation of Matter.

You would expect that, with such objectives, vast researches will have already been undertaken into gaining as much Knowledge as possible about Emergences and Revolutions, which we know have happened much closer to our time.

But that is **not** the case!

They don't believe in Emergences!

Life occurred (according to them) *smoothly* and *naturally* directly out of the “right conditions”, as indeed did Human Consciousness.

They do believe in Plurality and Reductionism, which “gives” them a causal chain all the way back to the original fundamental entities. Indeed, their previous smashing adventures have delivered much detritus from the collisions, within which they are certain that they observe fragments from the earliest times in the Big Bang. All they need (they assure us) is the **Higg's Boson**, and the path to the first Matter will be crackable.

I wonder if they will take a bet?

(2,234 words)