

## **Explanation via Chaos – PAPER VII**

### *The Inexplicable Nature of Crisis*

At this point in the narrative – REMEMBER we are talking about the TV programme on Chaos? – Malone asks the question, “Were these effects due to complication, such that, in the future, we might be in a position to explain them, or were they entirely due to “sensitivity to initial conditions, so that we never would?”

The above contributions by the author of this paper may be taken as an alternative view in any subsequent answering this question.

Malone goes on with asking just how chaotic can we assume the Natural World to be.

By the late 1960s these seemed to be very pertinent questions. Malone’s narrative continues by telling us that by 1968 Ruelle, through a combination of experiments in Mathematics (what?), proved that it was caused by the mathematics’ sensitivity to initial conditions.

It must be emphasized here that the many frequent historical reminders that were constantly brought in were to synchronise these events in the ideas of Chaos with actual chaos in the social world. 1968 was the time of the barricades in Paris, and the Renault workers come out to join the students on the streets.

We are told that the language of Chaos was beginning to enter our vocabulary.

NOTE: I cannot resist commenting here! I was around in 1968 (aged 28) and I actually KNEW Krivine and others of the student leaders, and such a vocabulary was non-existent among them. Of course it might have been rampant among the establishment? The “we” mentioned by our “historians of Chaos” certainly wasn’t “us”, it was for those that needed a natural disaster explanation for the frightening events – Students PLUS workers? How wiltingly horrific that seemed to a certain class of people! For they needed to be reassured that such was natural and would subside just as easily as it arrived. Nothing permanent was involved!

Indeed, this very TV programme at this precise moment in time, is clearly meant to have the very same effect, and for the benefit of the same sector of society, don’t you think?

I could let the royal “we” go unchallenged. They meant themselves, not US!

Omerod, at this stage, asserts that the laws being overturned were never really Natural Laws anyway. They were statistical relationships that happened to hold for a relatively long time, but NOT for eternity!

Ruelle found that even simple systems such as pendulums could give rise to complex Chaotic behaviours.

NOTE: But, it must be mentioned that the systems illustrated on screen were in fact real physical systems, and these are never simple. No comprehensive control of conditions were evident, so they were obviously open to each and every minor disturbance. In the real, unconstrained holistic Worlds EVERYTHING is always like this, and any such cyclic system would tend to get more and more out of step with other connected parts as small changes accumulated and were made evident by the changes in the cycles.

Remember that when Ruelle was said to have carried out “experiments in Mathematics”, he was doing very different things. He almost certainly was using a computer and using the usual methods as explained above.

Such constant jumping from one basis to another without the necessary qualifications reminds me of “yes, but...” arguing, wherein NO coherent argument is developed, but a constant stream of “there exists a....” anecdotes are pumped out instead. I’m afraid you can’t do that!

Malone proceeds with “They found out that the more inter-linked and connected systems became, the more Chaotic they were, and the more you “pumped up” the system – the faster you ran it – the more Chaotic it became.

NOTE: But this was simply the holistic World showing itself.

It is NOT ONLY Chaos!

It is the holistic Nature of Reality. Indeed, a serious study of Development generally (not by mathematicians of course, but by real scientists) attempting to explain the processes of development phenomena have over the last 200 years developed the concept of the **Emergence**.

The Origin of Life on Earth was an Emergence, as was the initial appearance of Consciousness in Man. And such “cataclysms” were not primarily catastrophes. Indeed, can we characterise the two mentioned as such? And these Emergences have displayed themselves at every Level. Even on society we have Social Revolution! Of course, if you are a big investor, you may consider these as calamities, and may well decide to “top” yourself, but as far as Mankind’s development is concerned, they have been significant Events, which have changed the World. These Emergences are the results of a thorough-going breakdown in the status quo, and they take Reality to ever higher and richer Levels. And if Social Revolution will never convince you, please demolish the Origin of Life as just such a creative Event. You can’t, of course!

In this TV programme, a particular feature of such Emergences is concentrated on from the position of the status quo and ANTI Change.

The problem is to **overcome** such situations – return to the norm –re-establish the usual means of getting rich. Indeed, such things are brought out either as an excuse – “It’s not our fault! The World is made that way!”, or, it is to galvanise the forces to remedy the situation – what in Social Revolution would be called Reaction – attempts to defeat the changes to re-establish the status quo.

But, it has to be admitted that each past “remedy” has never solved the problems, ever new “South Sea Bubbles” must be devised to hoodwink the greedy, and to keep a very deflated balloon afloat, but the crises return with increasing severity. Remember that the “boom” of the 1980s was more like an admission that they could NOT decode the necessity involved, and the new “mantra” was “leave it to the markets, they will sort it out”, if all constraints and regulations are removed” But clearly the this approach allowed the massive acceleration of all forces in the World Economy. It was allowed to reach unheard of tempos, all built on confidence and credit. The more you push things, the more “non linear” the systems involved become, and the more certain that they will become Chaotic.

Ruelle also stated that the insistence on high growth rates for ever was unsustainable. It will merely drive the systems into chaotic directions – towards breakdown. He also mentions an interesting thought, that the non mathematicians among the viewers would be perplexed by. He says “Exponential growth is a linear feature, but non linear situations will not be like that, they will end it ALL!”

Malone insists that Chaos does not deliver, it only takes away.

Not a subscriber to Emergences then!

**Series concluded!**

(1,116 words)