

Order out of Chaos – Paper II

II. What are the Elements of Change

The very fact that we have on every occasion found it impossible to explain any Emergent transition from the very factors that were determining and dominant in the previous Level, drives us to look elsewhere. Clearly, these transforming factors did NOT fall from the sky (though some actually believe even this), so they MUST have been present within the old Level, at least in some form or another. It seems very likely that before the cataclysm, these factors must have been present but perhaps invisible. They must have been either small, or indeed completely unknown.

When our pluralists set up their constrained experiments, throwing away or nailing to the floor, all non-dominant factors, and eliminating by averaging all mutually contending, small-scale contributions, we must on the contrary avoid such throwing out the baby with the bathwater, and indeed find diverse ways of revealing ALL of these ignored or removed factors. It must be the case that some of these will undoubtedly play, during the inner processes of an Emergence, a significant contribution.

Now, before I attempt to address this crucial task, I must emphasize another less obvious requirement to addressing these questions.

We must **dump** the idealist position which sees Reality as being due to abstract laws. Let us be clear abstract laws are due to Reality. They cannot “drive” the physical world for they are immaterial abstractions. Abstractions are the invention of Mankind in attempting to come to grips with Reality. They DO NOT exist independently as such as the movers of all things.

We must similarly **dump** Plurality, which sees Reality as entirely built out of a hierarchy of component Parts. It is no such thing! Once more ALL Parts are inventions of Mankind as their means of dealing with Reality.

We will continue to employ these things in solving our many practical and necessary problems, BUT we must NOT invert these pragmatic methodologies into a Philosophy of existence. Our approach must be materialist and holistic TO THE CORE.

Only then, will we be able to make “explanatory sense” out of everything we determine must be involved in things such as Emergent Change.

Now, returning to the required comprehensive study of Reality, as a pre-requisite to tackling the causalities of Emergence, we must devise many different experiments, *in the same area*, with a view to revealing as many contributions as possible.

For example, when scientists first isolated, extracted and abstracted the Gas Law $PV = C$, they were only allowing pressure (P) and volume (V) to vary. The rest were held in a vice-like grip. When temperature (T) was considered and handled in two different ways, we got both $PV^{\gamma} = C$ (for cases involving adiabatic expansion), and then $PV/T = C$, where temperature was also allowed to vary under complementary sets of conditions.

Now, these experiments must point the way to revealing the crucial hidden contributions to any given situation. All factors must be revealed and investigated. Their properties must be discovered and their own relations with other contributors established.

But here we must insist on another prohibition.

We must also abandon the methodology of what I call “additive complexity”, wherein we frig up equations combined from separate experiments into a composite whole, constructed so that terms represent the separate contributions. Indeed, we must indeed go even further and also abandon our dependence on all the methods of Plurality, and instead consider just how and why these previously ignored, controlled or unknown contributions could affect things if they could become increasingly important.

An “old fashioned”, holistic Explanation would be necessary, just as they did in Victorian times. But, of course, using all we know now to reveal rather than hide all possible relevant factors.

As I regularly affirm, holistic Explanation is Real Science. The narrative that can “sew together” the Phase Changes from solid, through liquid to a gas, is the closest we get to the overall processes involved in that Reality. NO straight-through formulae legitimize that narrative, but it nevertheless encapsulates the real situation. We must not abandon such powerful Science at the behest of mathematicians – what do they know of Reality? Their Whole World is a perfectly **ideal** construct FROM Reality, yet entirely divorced from Reality, losing ALL its necessity, and retaining FORM alone.

We must not be undermined by our attempts at Explanation. Of course, they will be wrong and require constant updates and improvements. Mathematics does not demand any such “improvements” for its formulae – for they are “perfect” from the start! It’s just that they don’t reflect Reality – only Pure Form!

But the constant amendments required in Science are what make it THE means of understanding. Science earns this status because in every theory there is ALWAYS **objective content**. It is the coherence of the theories which reflect the coherence of Reality itself, and therefore involve the Taste of True Essence.

No such thing can be said of a purely mathematical “description” of anything.

Now, I must admit, my self-imposed remit is still incomplete.

The best that I have been able to suggest seems hopeful, rather than revolutionary, but two elements will lead through to new horizons.

First, the insistence on revealing ALL factors in any situation and attempting to weave Explanations from them of phenomena. And, second, the insistence that THE crucial area of study has to be Emergence – Revolutionary Change

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