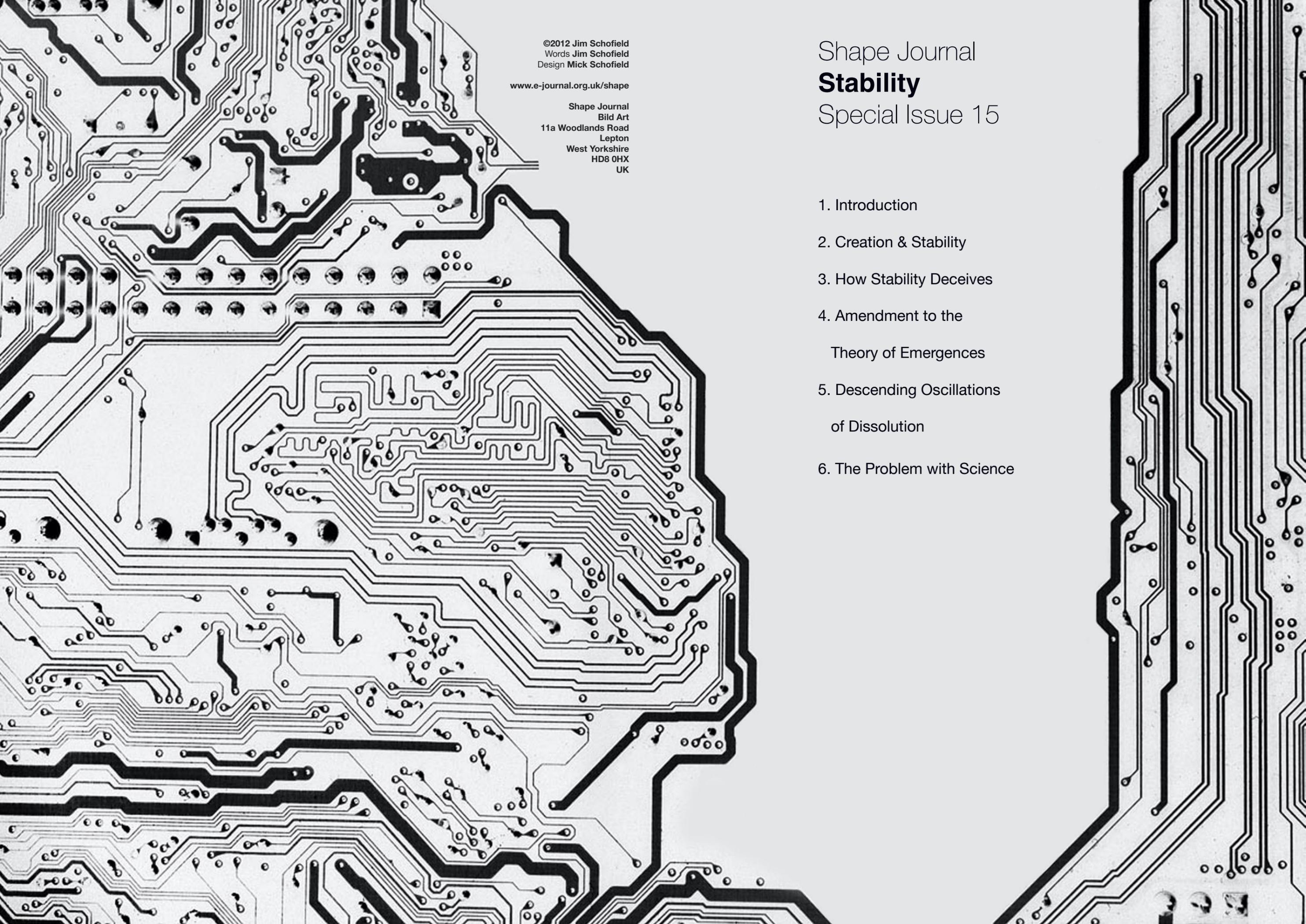


STABILITY

JIM SCHOFIELD



©2012 Jim Schofield
Words Jim Schofield
Design Mick Schofield

www.e-journal.org.uk/shape

Shape Journal
Bild Art
11a Woodlands Road
Lepton
West Yorkshire
HD8 0HX
UK

Shape Journal
Stability
Special Issue 15

1. Introduction
2. Creation & Stability
3. How Stability Deceives
4. Amendment to the
Theory of Emergences
5. Descending Oscillations
of Dissolution
6. The Problem with Science

Introduction

Stability: A Necessary Investigation

Welcome to the 15th Special Issue of the SHAPE Journal.

Previous papers on Stability, though essential, have not adequately dealt with the full Nature of, and reasons for, Stability, and why this happens is, when you think about it, very clear. For we are talking about Systems, and these are not unidirectional as are all simple processes, but indeed include many very different, and even contending processes, which nevertheless arrive at some overall system-state, in which opposites are both transcended, yet at the same time maintained.

They are neither wholly removed, nor are they cancelled out. On the contrary, they continue unabated, but only because they are contained within a higher order, overall balanced system, where they do not determine that state, but are included within it, and are part of the overall balance.

Now, such statements can seem to involve hard-to-accept contradictions, until it is realised that the new Stability is based primarily upon other things, and can maintain a balance, actively, without cancelling out its clearly directly contending components.

It is not a co-operative, all-pulling-in-the-same-direction system, but an effective compromise, which manages to deliver by working at a higher level, with all things balanced for those higher-level purposes.

NOTE: Indeed, as has been shown elsewhere, such systems must include wholly dissolutive processes as defensive or policemen processes to oppose competing systems externally, and maintain things internally.

And we must not put all such stabilities at the same level. Much work has been done on various fairly mechanistic principles such as The Second Law of Thermodynamics, and “principles of least work” and the like.

But the famous metaphor of the ball contained in a smooth valley surrounded by hills as a classic model of a classic negative feedback form of stability, implies NO possible future. It is a “full stop” kind of stability. Unless, of course, you consider processes, which either gradually, or catastrophically, alter their own context – the landscape in which they act, to undermine and even finally destroy that stability.

And, then such an approach does explain why all ideas about natural relations will, of necessity, be based entirely upon conditions within Stability. For they though such states can last considerable lengths of time, they can, and

are, ultimately and always, overthrown in Emergences, which in contrast are usually of a very short, indeed cataclysmic, nature. And this has the effect that observers will only very rarely indeed ever experience even a single such Emergence Event.

Their only experienced norm will always be based upon the seemingly eternal Stability, and hence they will never have experienced what will happen when their assumed-to-be-permanent stability is wholly dismantled.

Indeed, until Hegel applied his ideas of Emergences to Human Thought, the Event itself had been entirely unobservable in almost every case, and was misinterpreted when it did occur. Such things were just never considered!

Hegel’s Thinking about Thought, even though it was subjective, nevertheless started a consideration of those revolutionary episodes when new ideas were conceived of. His contributions demanded a widening (and, of course, an objectivisation) of such vital Events, and the almost simultaneous occurrence of the French Revolution, compelled historians such as Michelet, and philosophers such as Marx, to reassess such things as yet more examples of these rare but crucial transformation Events, and a new strand had been born.

It, of course, immediately gelled with the discoveries of the geologists, who were soon able to present solid evidence for Orogenies (mountain-building events), and crucial changes of direction in the clear evolution of living things, as evidenced in the fossil record in the very rocks beneath our feet.

Indeed, in a very short time, the history of those layers of rock available for study, led to the division of that history into a clearly demarcated series of Geological Eras, such as the Cambrian, the Carboniferous and the Cretaceous.

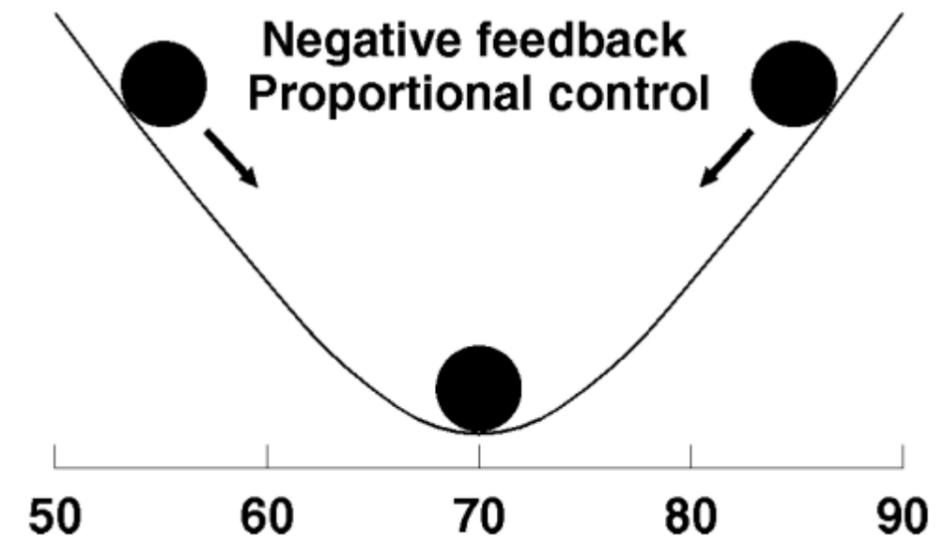
And, in Biology, with studies of the embryonic development of various animals, a remarkable set of phases were found to be common to extensive ranges of very different adult animals, which seemed to infer an evident common ancestry, but also a series of clear and irreversible bifurcations leading to separate species. The dead weight of stability-dominated Law was being incrementally removed, and, of course, Hegel’s philosophical “about turns”, had to recur in clinical studies of the Human Brain and Mind. Many life sciences could not avoid Qualitative Changes, and particularly the episodes of major re-directions.

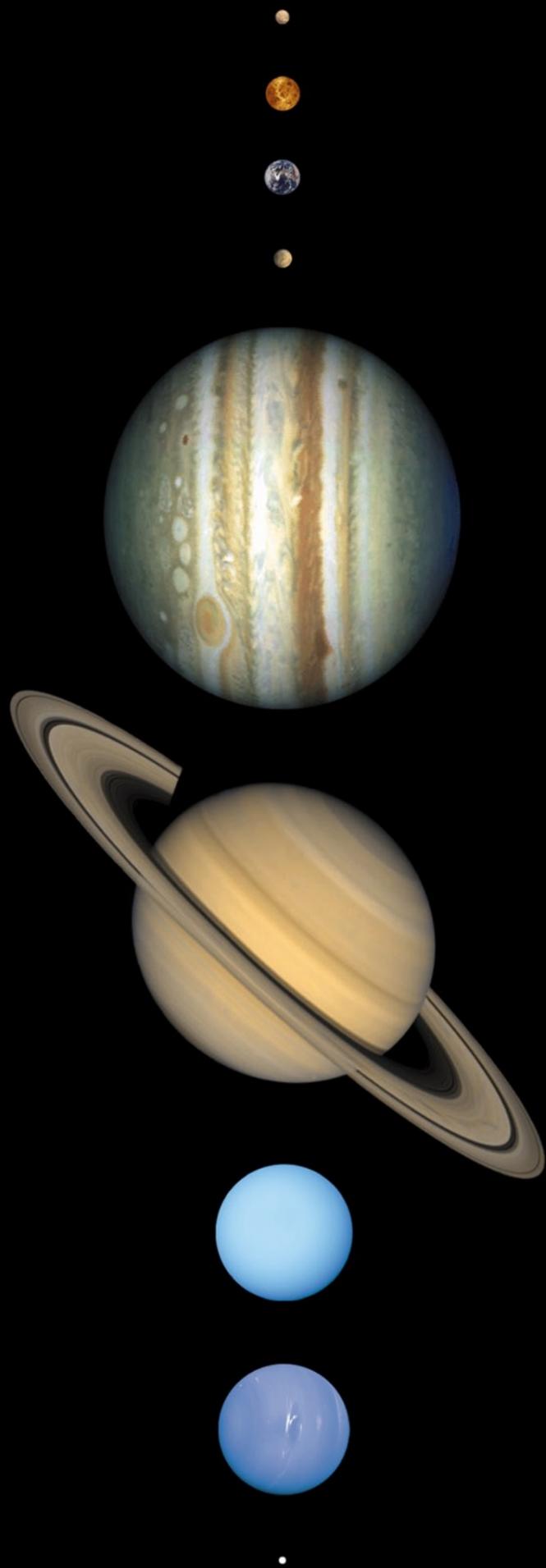
Clearly, the stability-based investigations, that had

become the norm, had to be extended to include Creative Development too. For, otherwise, Reality would have to be permanently divided into various major Stabilities, and the creative transitions, which led to each new set of regularities, shelved as unnecessary for study.

The proof of this is in the accelerating number and uniqueness of specialisms, and even academic Science Subjects such as Physics, Chemistry, Biology, Mathematics, Geology etc. etc., which are NOT always present concretely in Reality itself, but arrived at in the development of Reality via major Emergences.

Without the cornerstone of the true Nature of Reality in Development, investigators would unavoidably be severely blinkered, what was to be called “head-Down Specialisms” rather than “head-Up” views of a concrete World evolving.





Creation and Stability

In a recent TV documentary about the Solar System, the planets were “visited” in turn, and each one delivered surprising differences, while all displayed a remarkable stability. No matter where they now were, and how complex and numerable were their contributing factors, they all, somehow had attained an extremely stable overall state. And just in case the conclusion was that these had deteriorated into a much simplified condition, which may explain this universal stability, the fact that the Earth was one of these, and was just as stable, in spite of its evident complexity and high level of development, could only torpedo that idea.

NOTE: It is this problem, which causes many theorists to search around for the import of necessary (and even causal) resources via comets and meteorites etc. for otherwise they have to tackle “creative” development” in isolation, and that they cannot do.

All of these planets were very different, yet all in some sort of long-standing and self-maintained stability. It was clear, therefore, that no easy explanations of their common stability were going to be available. All were, in spite of differences, both complex and active systems – real holist mixes of diverse and even contending processes, yet each had clearly undergone overall processes, which had taken it to its own current stability.

NOTE: And as more detailed information (from robotic visitors to some of them) became available, it was also clear that there had been prior episodes of stability, of very different kinds, which had ended. Indeed planets such as Mars definitely delivered copious evidence of a very different and more earth-like earlier state.

Yet still we have the conundrum of the Earth! In this tour it shone out like a jewel in a seemingly dead system of planets. There could be no clear lowest common denominator to explain these divergences. Our love affair with the Second Law of Thermodynamics might well be mapped onto the rest of the planets, but any attempt to make it the overall determinant of Earth would be clearly and totally inadequate.

It was, on the contrary, surely a system at a peak of invention and development, for it alone, and very recently indeed, had given rise to Consciousness. Not only was the whole planet saturated with diverse forms of Life (which as yet have been detected nowhere else), but a single magnificent species had not only vastly increased in numbers, but had become something entirely new.

Yet, this rapidly developing planet was stable like the others. The question has to be, “Why?”

This major conundrum has been occasionally addressed, but in a remarkable way.

There was, it seems, a “Goldilocks Zone” in all such planetary systems everywhere across the entire Universe, where the potential was the greatest for development. But Chance could intervene even there and a glorious youth (as is indicated for Mars, for example) could so easily slip downwards (in classic Second Law ways) towards a common and ultimate Chaos for all such systems. A suggested early period of seas and a rich atmosphere had gradually and inevitably subsided into what was now an effectively dead planet, with NO prospects of any subsequent upward movement – only further deterioration.

Yet next door there clearly exists that jewel of maximal development. Why?

Well, maybe you have already guessed it. It is also put down to luck! In spite of the clearly ridiculous odds against this particular outcome (so much so that it was totally impossible by chance), it is still the only general principle that is at present conceived of to explain such wonders.

Early Man had a great deal more common sense than that, and required a reason, even for the limited extent of his then “known World”. Without Knowledge or even the means to investigate, he could only posit such richness into the Mind of a Super Human entity: an all-powerful God. But such causes fell away as Mankind began to uncover bit-by-bit a built-in causality in sections of his World.

At the end of a great many millennia development, he envisaged a basic set of natural laws, which made the World what it had become all by itself.

Yet why only here? To begin with (before space exploration) Mankind peopled everywhere else with its own similar developments and even Life, but the increasing number of space rockets exploring the Solar System delivered none of these parallel developments. Earth was, at least in this part of the Universe, unique, and the question, “Why?”, still resonated

The main problems were first, the amazing complexity of many clearly stable systems – such as Life, for example. And second there was most definitely an evident general Law of Dissociation – The Second Law of Thermodynamics, which everywhere seemed to pull all

situations downwards towards totally unorganised Chaos. And this was accompanied by a galaxy of multiple, clearly contending processes, pulling in quite different directions.

It was possible (in fact it was very easy) to construct a scenario, which could return everything back to that inevitable Chaos, as the only possible final outcome. But, here at least, that had not happened, yet!

Indeed, on the contrary, over the History of this planet, a regular series of developments have apparently occurred, which not only ultimately delivered Life, but even more miraculous, Human Consciousness.

You have to ask, “How, and even Where and When, did these developments take place?” The usual rubbish about monkeys, typewriters and the complete works of Shakespeare, is simply not good enough! It actually terminates any real discussion and investigation on this vital question. Somehow, and somewhere, there has to be an opposite of the Second Law! Otherwise, where did all this development come from? Yet, Mankind found it impossible to find the tiniest localities where this was currently happening – while always uncovering innumerable examples of its very opposite.

Let us re-iterate what the problem really is!

In the midst of clear evidence for general dissolution, there must also be (or at least have been) an opposing tendency to increasing Order, and these new super-systems must be endowed with wholly new qualities – totally unpredictable from their precursor state, and producing a higher Level with much greater potentialities. Yet we couldn't find any happening now! Let's face it, there weren't any!

In the Stability we are in, these certainly do not happen, and try as we might we will never find them. We were (and still are) looking in the wrong places, with the wrong timescale, and with the wrong expectations!

In fact, we had blinkered ourselves into only seeking and finding particular, and wholly separated processes. We had actually imposed Plurality upon our World. And this meant that every Whole was composed of constituent Parts, which could, in turn, be further analysed in the very same way, and step-by-step we could dig ever deeper into that Reality of separable components, until finally we would arrive at the basis for everything. And, entirely consequent upon that standpoint was an appropriate and restricted approach.

We had learned to isolate and constrain specific localities to most easily reveal particular sought-for relations so that we could indeed extract them, and match them to ideal forms. And because of the precedence of this in our History (Euclidian Geometry for example), we learned how to convert such extracted relations into general abstract

forms as Equations. And, as long as we used them within their correct, man-devised and constructed Domains of Applicability, they would deliver accurate predictions, and therefore allow the successful production of intended outcomes.

But, with such a very successful conceptuality and means of using those gains, it could not but change our view of the World we live in, IF we considered that what we had extracted and used was really a separable component of Reality-as-is. And such isn't a really naturally existing component: it has been distorted by our whole methodology. Indeed, we had straightjacketed a piece of that Reality and then changed it to deliver what we then extracted.

Everything was considered to be available for such investigation and exportability. We had learned to conquer the World by building solid dependable roads through it: and is NOT the same an understanding the World as it actually is! It had to be a very blinkered approach: it could never answer overall questions. It was a head-down dead-meat-on-the-table methodology (for a butcher, and not a surgeon).

Now, at about the same time as such pluralist conceptions were appearing in Greece, a very different view emerged in a far older civilisation – in India. It was formulated by the Buddha, a religious philosopher of great wisdom, who centred his thinking upon Mankind itself, indeed, upon the individual Man and how he should live.

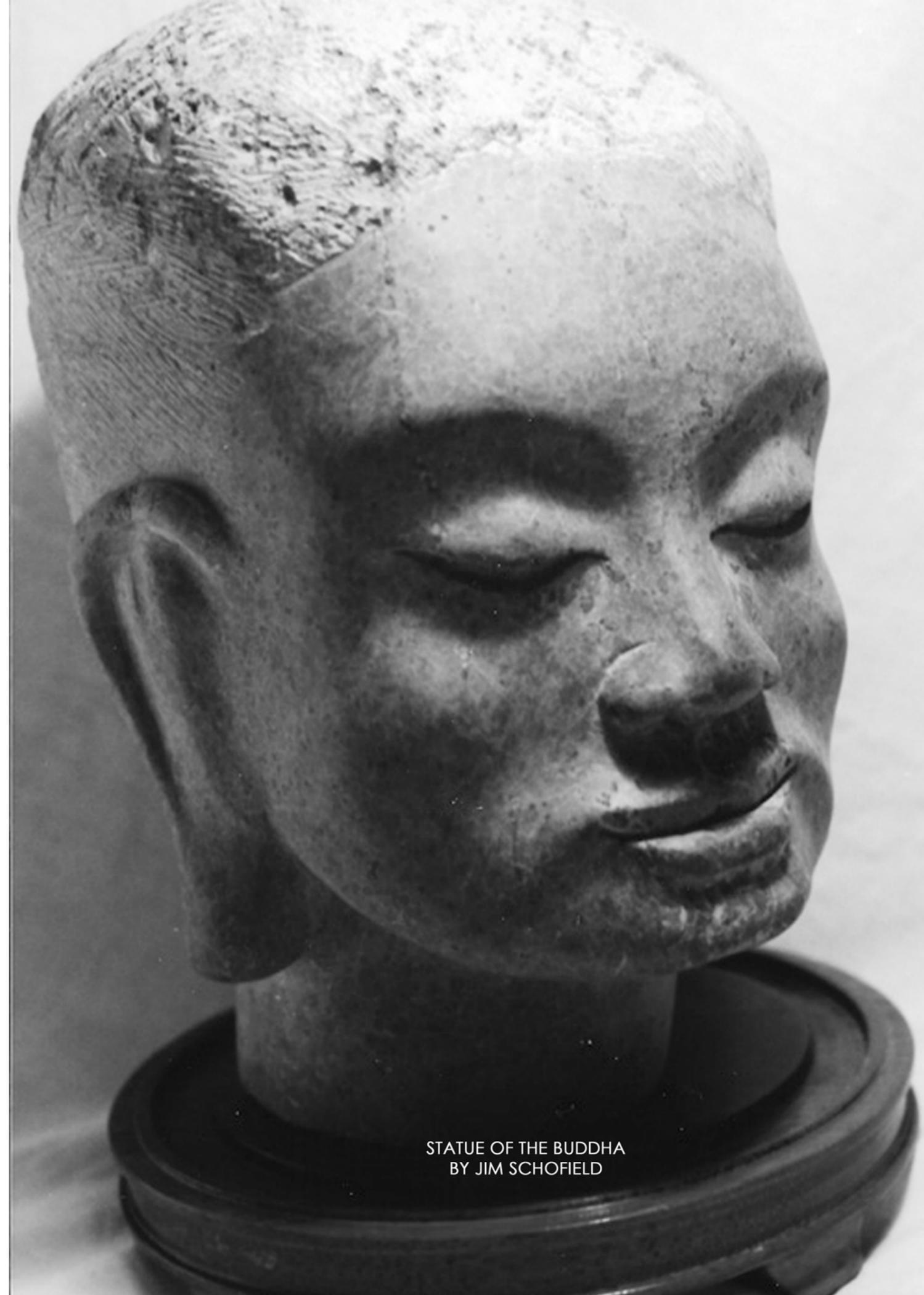
In a sense, it was like the considerations of Hegel, some two and a half millennia later, and who with similar aims decided to base his philosophy upon the Thinking of individual men, or more accurately on an individual man – Himself.

Both were easily condemned by those who saw such approaches as entirely subjective, and hence unlikely to be generally applicable. And, in one sense, of course, they were right. But, in another, they were quite wrong.

Man and his Thoughts, as a prime subject of investigation, could not but reveal Qualitative Change at every turn, while the alternative pluralist standpoint made it impossible for such things to ever be addressed.

Though, certainly, too particular, Hegel's approach was without doubt a real window on the possibilities of qualitative changes and development in Thought, and hence a valid area for study.

While the scientists could confidently motor on into some understanding and a great deal of useable technology, the holist approach of philosophers like the Buddha and Hegel would allow the only possible revelation of the constructive and developmental sides of Reality in qualitative change.



STATUE OF THE BUDDHA
BY JIM SCHOFIELD

Their studies and certainly those of Hegel were into Qualitative Change in general. And it certainly worked!

In spite of the wholesale rejection of Hegel's Idealism, his study of Qualitative Changes led to contributions such as Darwin's ideas on the Origin of Species, which the pluralist approach condemned as impossible, for those of their persuasion considered that species were permanent and immutable. But, there had always been a tendency, even in Science, to see their discoveries and methods as a means to explain phenomena in addition to encapsulating them in pluralist laws. And such scientists could not but be holists. They delivered explanatory narratives, which accompanied the equations, which together allowed not only Technology, but also Science – the attempt to understand the World.

And, for a time, these unlikely bedfellows delivered a surprising amalgam that (via a division of labour) covered all the necessary requirements. But, of course, it couldn't last!

They were very different views of Reality, and for them to mesh in any way caused both to be both deformed and re-directed. Instead of a set of pragmatic forms and techniques (which is what equations actually were), they were turned into supposedly pre-existing, natural Laws, and the search for the ultimate basis of all of these became the new purpose of Science.

While the need to articulate with the pluralists meant that theories were themselves distorted, and became more and more particular, so that the two contributions could be forced to mesh maximally.

The trouble was that such meshings were in fact impossible, and the inevitable, temporary and partial nature of all explanatory theories were diverted into states where they simply no longer (even partially) mapped onto Reality. They were coherent and deliverable, but nevertheless blatantly wrong!

The famed Ultra Violet Catastrophe in the late nineteenth century was the final denouement – of what thereafter came to be called Classical Science.

It simply failed to match Reality in a very important area. It was, without any doubt at all, clearly incorrect! The equation-loving side of Science had never liked the holism of the integrating theorists, and took that clear evidence to state that all Explanatory Theory was bunk, and only equations could be hereafter relied upon.

All such explanations were considered to be pure self-kid. They turned their backs on Reality and instead plumped for the dependability of abstracted Form. A new era led by Bohr and Heisenberg conquered Modern Sub Atomic Physics.

So clearly, they were hopelessly equipped to raise their lowered heads from their intensely controlled and studied particulars, and the constant demand for real explanation meant that they had to, somehow, supply such acceptable things from their equations alone. And that would always be a totally impossible task; so two original components arose, which hadn't been used before.

The first was the apportionment of "entity status" to certain parts of equations, and "particles" with inexplicable "properties" were attached to these, and "explanatory" scenarios developed. These were very different from the old theories, as their sole source was in formal equations.

The second development (which had existed before in certain areas) was to apportion many features of Reality to Chance!

The basic Theory of Probabilities, originally developed for things like dice and playing cards, was carried over to everything where many possibilities were evident within this subatomic field. The "equally-likely" properties of the above man-made entities were applied to all these new entities too, so if there was a complex situation with 1379 different recorded outcomes, the chance of any one of them occurring was immediately pronounced as 1 in 1379. But this could only be true if all outcomes were equally likely, and the happening of any one of them didn't in any way change the situation.

Of course, in most real situations, outcomes always have an effect on context to a greater or lesser extent, and so such probabilistic ideas were certainly inappropriate. But, if it could be demonstrated (in isolation, of course) that a certain outcome was possible then the usual way of deriving its probability would be applied. The idea of "monkeys with typewriters" did not take account of their inevitable fights and the progressive destruction of any equipment, and was of course ridiculous!

Yet, a new conception of random chance, coupled with a selective law (as had been suggested by Darwin) took hold and, paradoxically, was used to support pluralistic "explanations" and give some credence to the amazing "laws" of sub atomic Physics.

NOTE: The reference in this week's New Scientist to Steven Weinberg's "solution" to the Observer Effect in sub atomic physics used (can you guess?) Random Chance to explain the so-called "collapse" of the probability function when an observer (with many possible sources of disturbance) entered the situation.

[By the way, Weinberg had been previously awarded the Nobel Prize in Physics, so he is a prestigious member of the community]

Now, the alternative to this now universally accepted approach is a holistic one, but all conceptual and investigative procedures are now saturated with the dominant Plurality, so the maverick outsider stands totally inadequately equipped to offer any sort of comprehensive alternative. In fact the situation has deteriorated rapidly due to the "use-imperative", which automatically and correctly selects the pluralist approach, with its equations, prediction of promise of successful use (in technology).

The dominance, in our Society, of such imperatives puts explanation a very poor second, while History has seen Mankind put most of its eggs in that basket, while increasingly ignoring that which only explains.

So, the requirements imposed upon our alternative scientists are indeed prodigious! They have to do more than explain: they have to tackle the areas which are impossible for pluralists to ever correctly address – the creative, developmental areas of Reality, and, perhaps even more demanding, devise appropriate techniques to use in such investigations.

Now, a start has been made, but paradoxically, it had to be in a "formal" study of Emergence and Stability. There had to be some idea of the trajectory (shape) of an Emergent Event, which described the phases over the duration, and which always resulted in its actual apparent negation – the establishment of a New Stability.

Now clearly, these kinds of investigation bear the same stamp as the early stages in pluralist Science – they are both formal and descriptive. They do NOT deliver causes! But, as with that early phase, you cannot deliver anything meaningful until you have recognised, named and revealed what is actually involved.

A theory of Emergences will initially describe its sequence of phases, and it will be as "universally true" as are pluralist equations, but it will NOT be pluralistically analytic and assume wholly separable components.

It will be holistic. And slowly the new Science will develop its necessary procedures for experiment and the development of Holist Theories.

Now, the reader may wonder where all this is leading. And the answer is, "to establish where this author's current efforts are directed". First he has recently published his Theory Of Emergences, and a Non Copenhagen Theory of the Double Slit with Electrons, and the most recent publications have been extensively on Alternative Cosmologies.

All these are contributions to the establishment of the new Holistic Science, on which a book is already at an advanced stage and will be published in 2013.



How Stability Deceives!

The Horizon TV programme on BBC today (10.11.2011), which seemed to be talking about Science and God, was, perhaps, the poorest and weakest ever.

It contrasted Science (with a capital “S”) with Religion based upon an all-powerful God, and significantly managed to do this without recourse to Philosophy at all. It very superficially addressed the story of Galileo in the early 17th century, the Evolution controversy in the 19th century and even the “Creative Design” standpoint of many religious Americans today, but it was a typical “anthology programme”, substituting quotes from past Horizon programmes for any serious investigation.

For, it isn’t today a question of Religion or Science, for these were necessary historical stages in Mankind’s never-ending effort to deal with himself and Reality.

For those who declare Religion as an answer are still locked within a past and long-finished stage, while those who do the same for present day Science, are merely backing a later, more advanced stage, which is now approaching crisis points on most fronts.

It, therefore, can never be a question of which past stage to back, but surely the continuation of the search for an ever-better approach.

Indeed, the programme was a travesty of a documentary and its evident superficiality and piecing together from other programme makers work was by no means “made whole” by some overall transcending and indeed integrating new standpoint. And the incessant and inappropriate use of music throughout, and the annoying, incessantly used and very fast short cuts between movie clips, was quite evidently the compilers placeholder for any really comprehensive view.

With my memories of wise and knowledgeable presenters such as Bronowski and Attenborough, this seemingly very young man with his ineffectual “links” and absence of any personal view, made it impossible to even imagine his motivation for being involved in such a programme. [Or was it some producer attempting to get the most out of the BBC’s precious archive, without doing any real, and probably expensive new work?]

From the opposition to Darwin to the modern “Creative Design” of religionists in the USA today, all such topics were merely the usual clichés, and his culmination with modern Sub Atomic Physics and Cosmology was desperately poor.

Now, the reader may wonder why I am so harsh in my criticisms of this programme, and my reasons are twofold.

First, with such a poor offering, I considered it to be an insult to the wonderful tradition of this programme series in the past, when many truly magnificent and informing offerings had become almost the norm. But, somehow, this effort I could only see as some kind of final full stop, or even “Give up now, you’ll never do it!”, to maintaining that prior excellence.

And secondly, the interesting sociological role of Religion in the History of Mankind was not even mentioned, and it was Science v. Religion as a kind of argument between two alternative reasons for everything, that were supposedly being weighed in the balance.

At the same time the crucial major crisis in Science, from the Ultra Violet Catastrophe of the late 19th century, through the significant Copenhagen Retreat in its philosophical stance in response to the contradictions constantly emerging due to Quantum Theory, and currently on to the Large Hadron Collider, had precisely nothing profound to say at all.

Every word had been said before, and now, just as then, these contributions had totally missed the point.

Science is not a finished methodology! Nor, is it yet possessing of a sound philosophical basis. And clearly, it is NOT an alternative to Religion. For our current version will increasingly fail, particularly in its presently chosen “heart” – Sub Atomic Physics, if it continues with its present standpoint and methodology. It will certainly fail catastrophically in this key area, and when it does, it will undoubtedly precipitate a resurgence of Religion in one form or another.

Indeed, Science has always had to be recast, or even quite drastically changed in its extracted Laws, and is, at present, in a truly tremendous crisis.

A whole series of unavoidable assumptions and consequent errors have, in the past, carried it along on quite inadequate paths, equipped with both inadequate means and methods So, to pose THE question as being between God and Science at this time is almost a reprehensible and even a wilful avoidance of what must be currently and urgently addressed. Let us finish that false discussion now! There is no God!

But, the real questions that must be addressed are to do with the philosophical standpoint of present day Science,

and its mistaken banker assumptions.

Anyone who seriously addresses the Philosophy of Science as a crucial part of Philosophy in general, knows that concepts such as Continuity and Discreteness, and the primacy of Law or Matter, along with a whole raft of basic “beliefs” such as Plurality, Reductionism and eternal Laws supposedly driving Reality (Idealism) are the problems that have misled Science into what is now the most profound crisis for many centuries.

The real question is the same as it always was, even if it does change “phase” from time to time. It is about this particular conscious part of Reality – Mankind, attempting to understand both Reality in general and its own part within it. That is termed Epistemology! And pre-echoes of the next required Phase have already been heard, and indeed picked up by giants such as Hegel, Darwin and Marx.

The “New Science” (if it still has to bear that label) must finally address Qualitative Change, as epitomised in the creative episodes in the alternation between ultra-conservative Stability and the rapid, Revolutionary Events, which occur in all spheres termed Emergences.

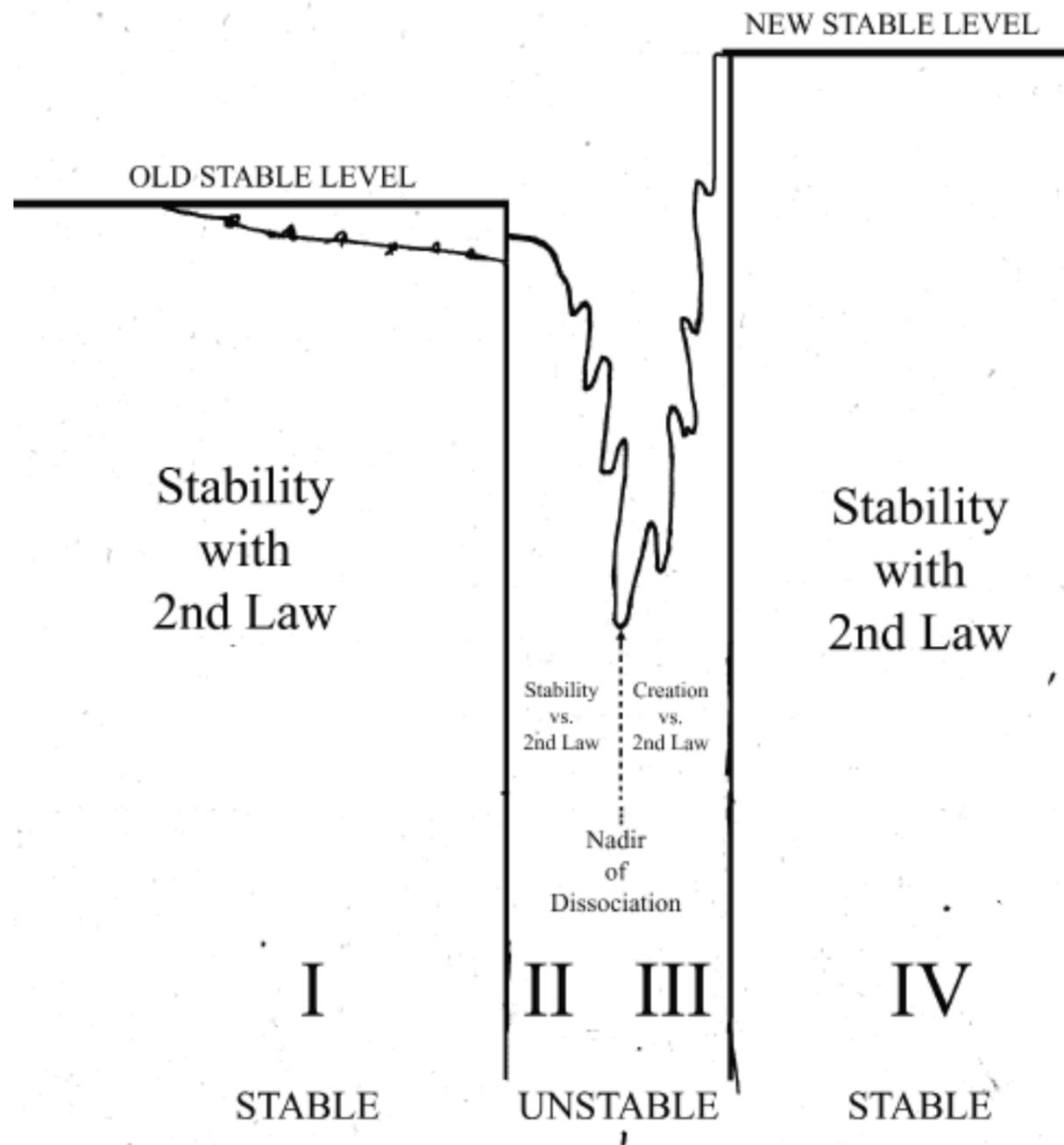
The new standpoint and methodology will be very different from what have been the main planks of Science heretofore (which is most accurately described as Formalism and Technology), for it will be overtly and firmly holistic (taking Reality-as-it-is and on-the-fly), as distinct from the current entirely pluralist approach (nailing it down in order to more easily extract simplified versions of its so-called “essences”). The situation does not have to be a dead end, but to those who are indissolubly wedded to the old standpoint and methods, it can only appear that way.

Just observe current politicians and even “technocrats” attempting to solve the fiction of present day Capitalism. Do you really think they will?



Amendment to the Theory of Emergences

A Revised Trajectory



Phase I - Old Level Stability II - Dissociating Instability
Phase III - Creative Instability IV - New Level Stability

Stability is most certainly the self-evident norm in our World and appears to persist indefinitely, but that is certainly not the case. That Stability is constantly under attack from contending processes of many kinds, which are usually subsumed into Mankind's conception of a Second Law of Thermodynamics, which will always intervene in a dissociating way wherever some aspect of the integrated, overall system weakens or approaches failure. This contending force is described best by the saying "Rust never sleeps!".

But, these ever-present attacks do not usually compromise the current Stability. They only cause it to totter before reasserting its hegemony, and this is due to the inclusion in any such system of essential coercive sub processes, which I am inclined to call "policemen Processes" that both attack any nascent alternative proto-systems (and indeed totally prevent their growth to any state of being able to rival the prevailing Stability), and also act against any Second Law processes by repair, replacement and reproduction cycles, which always outweigh (for the most part) those persistent, destructive inroads, so that they are seemingly relegated to only demolishing decrepit or failed sub-systems, and, in a sense, clean situations up by disposing of its "dead wood".

But, as a system grows old, and effectively runs out of potentiality, as its accompanying minor alternatives develop (if only marginally), it crucially becomes increasingly less able to contend with the (also increasing) members of the Second Law alliance, so that their dissolutions increase in success and the System's precious Stability is increasingly undermined. Finally, some threshold is surpassed at which veritable avalanches of dissociation temporarily start to dismantle the overall System. The various policemen processes increase their activities, and indeed "change mode", in response to restore the situation, but they succeed only partially and temporarily. The weakened Stability is thus ever more prone to other similar attacks and consequent avalanches of dissociation in many different areas of the overall structure, and the Second Law forces begin to win in various different localities. Once again the defensive forces again attempt to stem the dissolution and again only partially succeed in rebuilding the situation. But, in each crisis the rebuilding is never up to the previous level, and so an increasingly frequent succession of avalanches become inevitable, and these, in concert, finally bring about a complete demise of the old Level.

Chaos seems to be the inevitable outcome! But all this defeat of the "Policemen Processes" also releases the total inhibition of the always-appearing alternative proto systems, from their prior repression, and they all begin to grow apace!

Naturally, the independent parasitic processes of the Second Law Alliance respond to those also, and to an

extent stem the various mounting growths, and dismantle them to some extent. But these are NOT the elements of the old System, and the Second Law Processes are not yet attuned to combating these new collections of processes. So, on the whole, the new creative forces begin to increase, though competition between them also has both negative and positive effects too.

And, as you have probably already guessed, some "Second Law poachers" turn into effective policemen, and the new system begins to integrate their own policemen processes into their organisations.

A kind of mirror image of the previous declining oscillation sets in, but here the overall trend is not downwards but upwards – towards a possible wholly new Stability!

Though which proto system will survive and dominate is not clear in this period, it is evident that the forces of the entirely new will, in the end, win out. The fight between the new proto systems and the forces of the Second Law is gradually being won by the former, as well as a clear dominance of the most organised systems at the expense of the weaker ones. Each upwards swing gets a little higher, and each downwards retrenchment does not drop as far as the last one.

Ultimately the final swing upward is sufficient to reach another threshold which comprehensively defeats the actions of the Second Law forces, and relegates them to a background dismantler of the less effective parts, and a wholly new Stability, with novel entities, properties and processes, not to mention strong policemen forces is established.

Now, these very general considerations will always happen: they are about Stability, Dissolution and Creation and the Phases described here will occur in very special dramatic episodes of Qualitative Change, which we term Emergences, when an old Stability is vanquished in a particular situation, and a wholly Higher Stability is achieved.

It happens in Society as Revolutions, as well as in Ideas happening within Human Thought.

It happened in non-living processes in a World totally devoid of Life, and finally produced the very First Living Things.

And it occurred in the Cosmos when inactive Matter finally erupted into the First Energy Emitting Star.

This is clearly not the type of Science such as usually occurs in Physics and the other Sciences of Stability.

It is about Qualitative Changes, which can only occur in these short period episodes of significant creation that we term Emergences.



The Descending Oscillations of Dissolution

Though the nature of the general dissolution of Stability has been variously described to some extent, by many different observers and the more evident factors involved have been identified, the actual comprehension of the transformation from a seemingly totally resilient Stability, into that often precipitous decline, is by no means complete, and certainly requires a great deal of further investigation.

NOTE: Indeed, very recently a paper amending one of this author's theories has proved necessary under the title of Amendment to The Theory of Emergences.

Clearly, the onset of such a swoop to dissolution shows itself as the commencement and increasing amplitude of an oscillation between diametrically opposite, yet temporarily-dominant, sets of processes, and the crucial question demanded by any full explanations must be why this doesn't happen all the time.

Why, for example, is Stability, itself, entirely lacking these oscillations, yet when it is critically threatened, they invariably jump from nowhere into devastating prominence?

In even the simplest conceptions of Stability, we obviously commence with an unavoidable diversity of processes, many of them quite evidently opposing one another, and the simplest conception is that these are ultimately completely balanced (or maybe in some way transcended as an irreconcilable contradiction). But the actual nature of such a "resolution" cannot be simply put down to any mere "cancelling out"!

It must involve many different processes – some contending, while others are actually supportive of one another, some are actually coercive and controlling of other processes, And all these together, as some kind of totally interconnected System, manage via sequences, cycles and proportional responses to produce an "overall" multi-stranded system that is both all-embracing, yet self-correcting and majorly resilient as an interacting Set.

Such Stability is actually very common indeed. It is the seemingly ever-present norm!

The only real model that can be pointed at to give some overall conception of what is happening, is surely the set that we term **Metabolic Pathways**, which delivers an amazingly universal set of biochemical processes that occur at the heart of all living things.

Now, a detailed study of those kinds of processes may well enable researchers to generalise what occurs there,

in order to apply them to many much wider situations. So, we might be in a position to explain-by-analogy all sorts of very different cases of Stability much more accurately.

But, even then, it will only be a first attempt, for it will still not explain the trajectories of the actual transitions involved, both into Stability when it is established, and into Instability when that in its appropriate time also emerges. For in the latter cases the evident wild oscillations that always occur as instability begins to persistently threaten. For, such oscillations not only prove the obvious presence of opposing sub systems, but, very importantly, the alternating failure and success of the processes elicited to act against a certain strong development, so that alternating successes could only lead to an ongoing series of major oscillations.

It is very clear that some forms of Negative Feedback must always be involved in these behaviours, wherein the increasing effects of dissolution always elicit a countering via necessarily strengthened restorative processes, and for a time, at least, they undoubtedly start to win, and move significantly back towards a restoration of the prior stable system.

Now, these are certainly not exactly the same situation as was everywhere solidly entrenched within that prior Stability: it is certainly different in at least two important ways.

First, something different must have grown within its contributions to actually cumulatively undermine the overall stability, and thus precipitate avalanches of dissolution.

And secondly, there must also be elicited by, and in proportion to, these dissolutions increasingly strong countering processes, which can begin to turn the situation around again, if only for a time.

These cannot be just put down to the usual processes of Stability, for in that state, the various affecting forces are acting within an already widely balanced situation. Whereas, during the onset of major instability, the necessary counters must be much more vigorous and widely affecting, to rebuild what had already been significantly dismantled.

In Social Revolutions, for example, these forces involve the use of military forces to act internally upon ordinary citizens of the realm – forces that are not part of the control within a balanced stable state, but are generally employed outwards to other competing systems (National States).

So, there is a major transformation of existing forces to act in a very different way – against the citizenry of the State who are in actual revolt against their rulers. And, of course, such switches over can succeed and put down a revolution – a “kind” of Stability can be restored, but permanently damaged, and constantly requiring the switched-to repressive means of control. This is precisely what occurred in 1905 in Russia. While in other circumstances these forces can simply dissolve away as with Kornilov’s march on Petrograd in 1917.

Clearly, the oscillating decline Phase of a Stability-under-threat is neither obvious nor simple!

Indeed, as always, current revolutionary situations indicate what kind of different processes come to the fore. We must certainly not forget the essential “policeman processes”, which play a major role in the establishment of any new and continuing Stability. For they, in particular, suppress any alternative contending proto-systems, which can rival the main dominating and entrenched System. All such alternatives are usually effectively suppressed, but when instability begins this control will surely be somewhat weaker, and usually suppressed elements may gain in strength.

In Syria, currently, (June 2012) the continuing and deepening instability is bringing all shades of opposition “out of the woodwork” from both the left and the right, and the response of the “policemen processes” becomes ever more like armies aimed internally – a civil war.

And also happening at the present time, are the threats to the Earth’s Climatic System. Increasing evidence of swings in the weather away from what is considered normal, are certainly indicators of an ensuing (if early) instability, and a major changeover may be an increasingly close possibility.

One known aspect of this (that has happened before) is that as Global Warming proceeds, the increasing melting of the Greenland Glaciers could inundate the North Atlantic Ocean with totally fresh, unsalted waters, and this could cause the descent & return phase of the Gulf Stream/North Atlantic Drift to actually cease, with global consequences. What would be occurring then is the loss of a crucial part of the prior stability – yet another element in the dissolution process.

Now these last couple of examples in very different systems make it clear that these dissolatory phases are not simple, but on the contrary, highly complex and lead to major changes. And to come up with a general explanation of such a phase will require evidence from many very different areas in crisis.

For example the birth of a Human Baby must surely be a case of a prior stable system (Pregnancy) with the

embryo child within the mother’s womb) being finally compromised, and all sorts of sub systems comprising that stability begin the break down. Remember in a very short time period the baby has to cease getting sustenance and even Oxygen from its mother’s blood stream directly into its own, to actually breathe air and require “food by mouth”, which then has to be digested for the first time ever in its short life.

That is certainly a revolutionary episode (or Emergence), but must include the same dissolatory phase in any transformation from one level of stability to another. Every time we address another of these crucial Events, more kinds of necessary changes become evident and must be seen as expressions of the common Emergence Events of them all.

Finally, the most dramatic evidence at the current time literally worldwide is the daily oscillations of the Stock Market indices. From highly encouraging rises on one day, to dramatic and frightening falls in the next, and a regular short time base oscillation, which can only be evidence of a global crisis in Capitalism. Yet all the experts and commentators insist upon this particular version or that set of contingent events. Confidence goes up and down like a yo-yo, and no one mentions the real reason why.





The Problem with Science

A Critique of the Consensus Scientific Method

Mankind has long attempted to penetrate the Reality in which it exists, but for the vast majority of that time achieved a very limited amount of success.

Paradoxically, an incorrect basic assumption revealed a new way of bringing aspects of the world under Mankind's control in a way that certainly allowed real progress to be made.

It arose out of the realisation of Stability within Reality, and its significant simplification of a usually incoherent, holistic natural state, into something much easier to handle.

The new approach involved an attempt to impose a form of Stability upon limited localities (known as Domains of Applicability), in which dominant relations could not only be much more clearly revealed, but also extracted and formulated into equations, which enabled reliable predictions over extensive ranges of the parameters involved. Such equations then allowed Mankind to use both them and the necessary Domains to certain projected ends (such as the creation of our own stable systems - Technology).

Clearly the gains achieved by these discoveries and inventions cannot be underestimated. Yet, though for centuries these methods have quite definitely led to great progress in our dealing with Reality, the very same assumptions and methods have severely damaged Mankind's efforts to actually *undertand* the world.

These approaches have pragmatically and technologically been a brilliant success, but theoretically and philosophically, they have been a tragedy.

Shape Journal commissioned this issue on Stability to help clarify these questions, along with a new film by Michael Coldwell - **The Problem with Science** - to aid in revealing these crucial assumptions and how they have distorted our view of Reality-as-is.

These key assumptions are that of *Plurality* and the conception of *Purely Incremental Progress*.

The Problem with Science contains two animations to help illustrate these assumptions, and how they have helped us build and create the awesome systems and stable structures that dominate our modern world - and also how they have led to a complete cul-de-sac in our ability to truly understand the natural world around us, and how it has evolved.

Considering Plurality

Now elsewhere, and at great length, this author has produced an extended series of papers on the assumption of *Plurality*, and for the most comprehensive account of this concept, it will be necessary to access these. But just the mention of such an abstract category doesn't seem so relevant on initially hearing about it. So, SHAPE decided to commission a new animation to simply demonstrate what is involved. It starts with three different, unfettered (natural) situations, in which we have caught brief glimpses of an evident relation, but which in all three cases cannot be reliably extracted when addressing them as they actually are. We begin (as is now the universally accepted method in scientific studies) to modify the situations in attempts to more easily display our objective - the 'common' relation. But what is lost in this modification?

The Changing Face of Progress

The assumption that all progression is incremental has led to an inability to scientifically explain the Emergence of the wholly new. This animation illustrates how dramatic qualitative changes occur in short interval Events, and how these are often hidden when we look into the past.

You can watch **The Problem with Science** on Youtube by following this link:

The Problem with Science (Video)



S H A P E JOURNAL **E**

www.e-journal.org.uk