

SPECIAL ISSUE 68 MAR 20 JIM SCHOFIELD

# SHAPE JOURNAL

REDEFINING PHILOSOPHY

THE WHOLE AND THE PART REVISITED / THE SCIENTIFIC METHOD / IS ECONOMIC MARXISM ENOUGH?  
THE CURRENT INCOMPREHENSIBILITY OF REALITY / EXPLANATION / OF LAWS AND CONSTANTS  
STABILITY AND ENTROPY / SUBSTRATE AND RESONANCE / WAVE PARTICLE DUALITY

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Featuring sculpture by Henry Moore and graphic design and photography by Mick Schofield

## Redefining Philosophy

Special Issue 68 / March 2020

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**SHAPE**



## Redefining Philosophy

### Preface

by

**Jim Schofield**

Welcome to Special Issue 68 of SHAPE Journal entitled Redefining Philosophy - for it certainly does need defining and redefining. Karl Marx redefined it in the mid-19th century, but the task was never finished.

You would think after two and a half millennia that a Universally-Agreed-Basis for Philosophy would by now be well established, but that is not only far from being the case, it is also inevitably so!

So, let us reveal the unavoidable trajectory of Mankind's Intellectual Development into a real perspective. Rational Thinking of any developable kind is at most 2,500 years old, in an overall hominid historical Trajectory of several million years. Man began to try to think rationally in the last 0.0005% of that time, leaving 99.9995% when they didn't, and indeed couldn't think rationally at all.

And, of course, the actually-occurring tempos of that development have certainly not been embodied in a constant upwards climb: for sometimes progress was at zero for long periods. Sometimes things went backwards.

For 2,300 years after the Greek Intellectual Revolution it was fatally damaged by an assumption that few philosophers recognise - the hidden assumption of Plurality. This assumed that all relations, properties and Laws are fixed qualitatively and separable from one another.



Only in the early 19th century did Hegel, the German Idealist Philosopher, attempt for the first time to integrate Qualitative Change into General Reasoning.

But even that was not universally accepted.

Indeed, it couldn't be, whilever Philosophy remained idealist: for the solution could not come from Thinking itself, but in the our understanding of Concrete Reality. Only with the extension and vast further development of those ideas, which Hegel termed as Dialectics, was the possibility of a breakthrough even possible.

And, when it was attempted by Marx in the limited area of Capitalist Economics, it took him the rest of his life to address that single discipline, And in doing so, he was developing the stance as much as applying it.

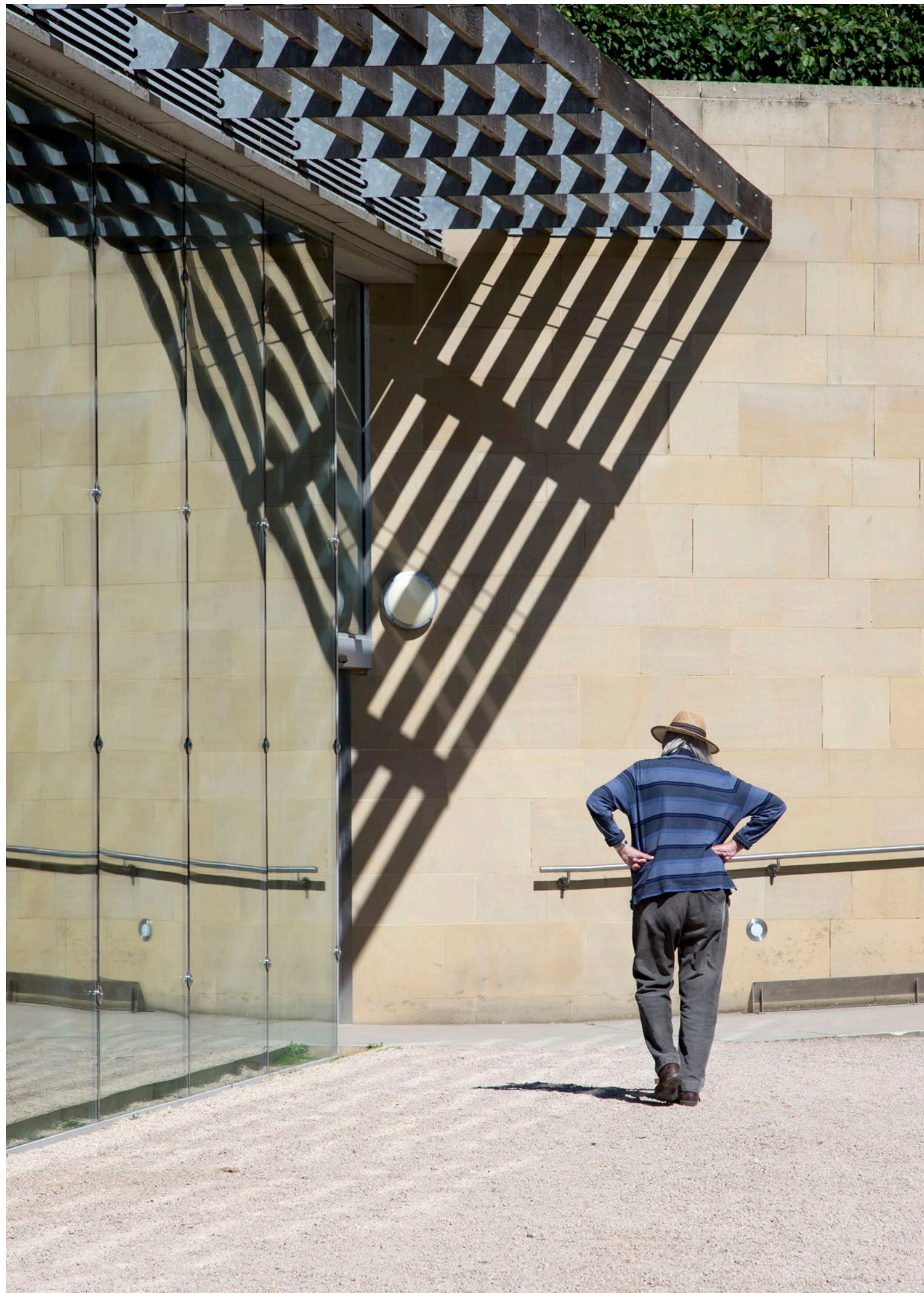
Qualitative development was in everything, and every significant area of study, such as Science, would have to not only receive the same sort of attention as Economics, but would also be as much another voyage of discovery, very much more complex and unknown than Economics had been for Marx.

And in the the 140 years since Marx's death, this task wasn't even attempted. It has taken this Theorist and Philosopher over 10 years to lay the most basic of foundations.



Philosopher and Sculptor Jim Schofield at the The Hepworth Wakefield and at Yorkshire Sculpture Park on the next page.





But they have been remarkable!

To even begin the process, a wholly new approach had to be researched which produced the wholly new. For all Qualitative Change must produce the wholly new.

In all reasoning previously established using Fixed Laws and Pluralist Logic, the rationality involved, when it could be used, produced actual results - and the same ones every time it was used, and whoever used it! But Qualitative Changes are Dialectical, produced in what used to be seen as impossible developments, for which they were termed Emergences.

To grasp what an Emergence actually is, we must compare it to one of the previous pluralistic Laws, all of which have predictable outcomes.

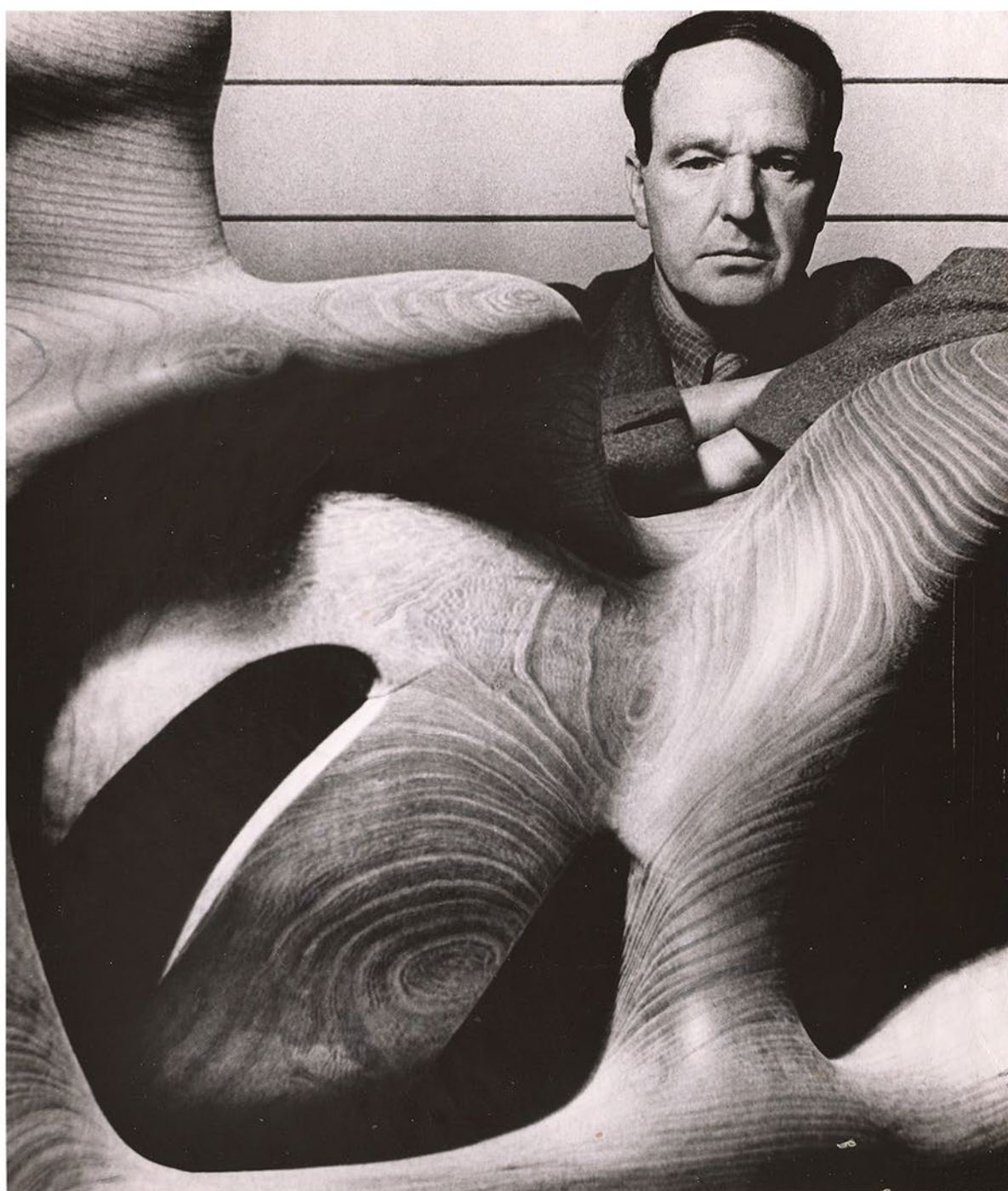
The outcome from an Emergence, on the other hand, is NEVER predictable prior to its commencement, Indeed, you have to be an exceptional Dialectician to even predict the next phase of such a transformation, and only when the final result is imminent, can the culmination of a completed Emergence be guessed at.

So clearly the revolution in Premises and Bases required here will be very different from the prior Pluralist Methods.

The classical Qualitative changes involved in an Emergence start with a Stability, the destruction of which originally appears to be totally impossible, but which is then threatened by a whole series of crises, which usually, but ultimately, would cascade down into a total dissolution of the Stability, towards what seemed to be impending doom, but could, and often did, begin via series of crises attempt to build towards a new, and finally achieved self-sustaining Stability!

The new philosophical approach would have to reflect all of that too, in order to deliver an understanding of Real Development.





Photograph of Henry Moore by Bill Brandt

## Explanation

First Describe Reality - then Explain it.

*To do this first  
Requires a Basis.  
To some intrinsic extent  
Both Reflecting and Revealing  
Partial and Temporary Aspects  
Of its true Nature.*

A system of Abstraction from Reality had to be developed to at least begin to make sense of something of its Nature.

But such objectives never deliver a final and sufficient foundation, for any truly comprehensive and permanently integrated System. And the Reasons for this are embodied in the most important aspect of that Nature.

For Reality is wholly self-moving, and with the advent of Life, Man and Consciousness, now also embodies the ultimate possibility of its own self-understanding. But this is only a potential outcome - nothing is a given. If, and only if, the Abstractions of Mankind can be sufficiently improved to more fully reflect Reality's true material complexity and dynamism, can we even approach that understanding.

However, this Basis could never be achieved directly: as it is not, and never has been, driven by any monist imperative - like an omnipotent, all-seeing and all-knowing GOD! This is a cop-out explanation anyway. Who made God? And where is He exactly?

Neither is it driven by a co-ordinated and consistent set of eternal Natural Laws - for where could they have come from, if not from God? And why are they eternal, when everything else seems to change?

You cannot ignore Qualitative Development! And yet much science and philosophy does just that...

Reality is indeed, self-developing, but is so without any kind of Guiding Directional Purpose. As scientists and philosophers we should be attempting to explain why this is the case, not just describing its form.

A basic explanation exists. The main engine for significant change is a purposeless Contradiction of Opposing Developments. This will always terminate every seemingly overall development, into an ultimate-and-inevitable general calamity of Total Dissociation. This, surprisingly, is also the spring-board for subsequent NEW developments in a previously totally absent directions. These Interludes generate the wholly new in natural Emergences.

Yet, nevertheless, residing within this Contradictory overall General System, there is a regular, spasmodic and temporary series of periods of predominately Rational Developments, which occur within often long-lasting interludes of what we call Stability. Some 2,500 years ago, very different advanced Societies of Mankind did come up with directly opposing descriptions of the Nature of Reality.

The Indian Spiritual Leader, The Buddha, arrived at a conception involving both cycles and constant change. While in Greece, there arose an alternative philosophical basis, built upon a unifying stance of stability, analysis and external laws. Whereas the former led to moments of extreme Wisdom about the nature of existence, the latter led to extensive control of our environment and workable technology.

So while the Buddha unified everything, at least for the individual (with the Principle of Holism) the Greek philosophers divided Reality into innumerable separate disciplines, which could be marshalled into effective productions, but never any comprehensive *Explanations* (based upon the Principle of Plurality).

Now, for literally millennia, these contradictory stances could and did co-exist, for they were used in very different areas: the Buddhists didn't tell the Technologists what to produce, and the Technologists were not concerned, focussed in their own pragmatic world, with what the Buddhists thought about the world in general.

The main tenet of technology was "If it works, it is right!" while that of the Holists would be more like "You can never step into the same river twice!"

But though both these restrictive stances did nevertheless deliver extensive regions to expand into, neither were comprehensive enough to deal effectively with what actually existed, and what their preferred stances they had generated! Whole new systems, organisations and disciplines emerged, which as with everything else, were bound to deliver many contradictions, which were irresolvable within their current philosophical and discipline stances.

Indeed, what had previously risen to be the most reliable of the Disciplines, namely Science, and particularly its most "basic" sub-division, Physics, began to display ever more contradictions produced by its lauded Rationality, and the most acute of the thinkers involved at that time - the idealist Philosopher Hegel, and his increasingly materialist follower Marx, began to address the Pluralist Basis in various Holistic ways, in order to transcend the consequently generated debilitating impasses, and via a wholly new stance in Marx's hands delivered Dialectical Materialism.

But in spite of a worldwide effect in Working Class politics, no scientist of the stature of Marx arose to implement the new stance in any of the Sciences. And,

throughout the last century and a half, absolutely NO comprehensive extension of those new approaches to the Sciences took place.

In fact, the opposite happened - a wholesale retreat into idealism precipitated in Physics and affiliated disciplines - explanation itself was abandoned as simplistic and untrustworthy.

But one young student, in his first term studying Modern Physics at the University of Leeds, immediately rejected the idealist nonsense that he was being fed by his Professors and Lecturers - they had literally no causal explanations for the phenomena their equations described. And, though clearly at that time, he was in no position to mount an affective assault upon that flawed position, he took a different path in his Education, thereafter, outwith his Physics Lectures, and upon successfully graduating, eventually left Pluralist Physics and Mathematics behind, ultimately switching to Systems Analysis in Computing. He finally got back into Universities, as a Lecturer in that very different area, and ultimately got to be the Director of Information Technology (a professorial level post) in a College of London University.

Surprisingly it was in joint approaches with other Researchers in a wide variety of diverse Disciplines, along with a lifetimes study of Philosophy, that he finally realised what had to be done in Sub Atomic Physics, to retrieve the situation, and spent the next 12 years developing a Dialectical Materialist assault upon the Copenhagen Interpretation of Quantum Theory, to produce answers to all the impasses late in 2019.

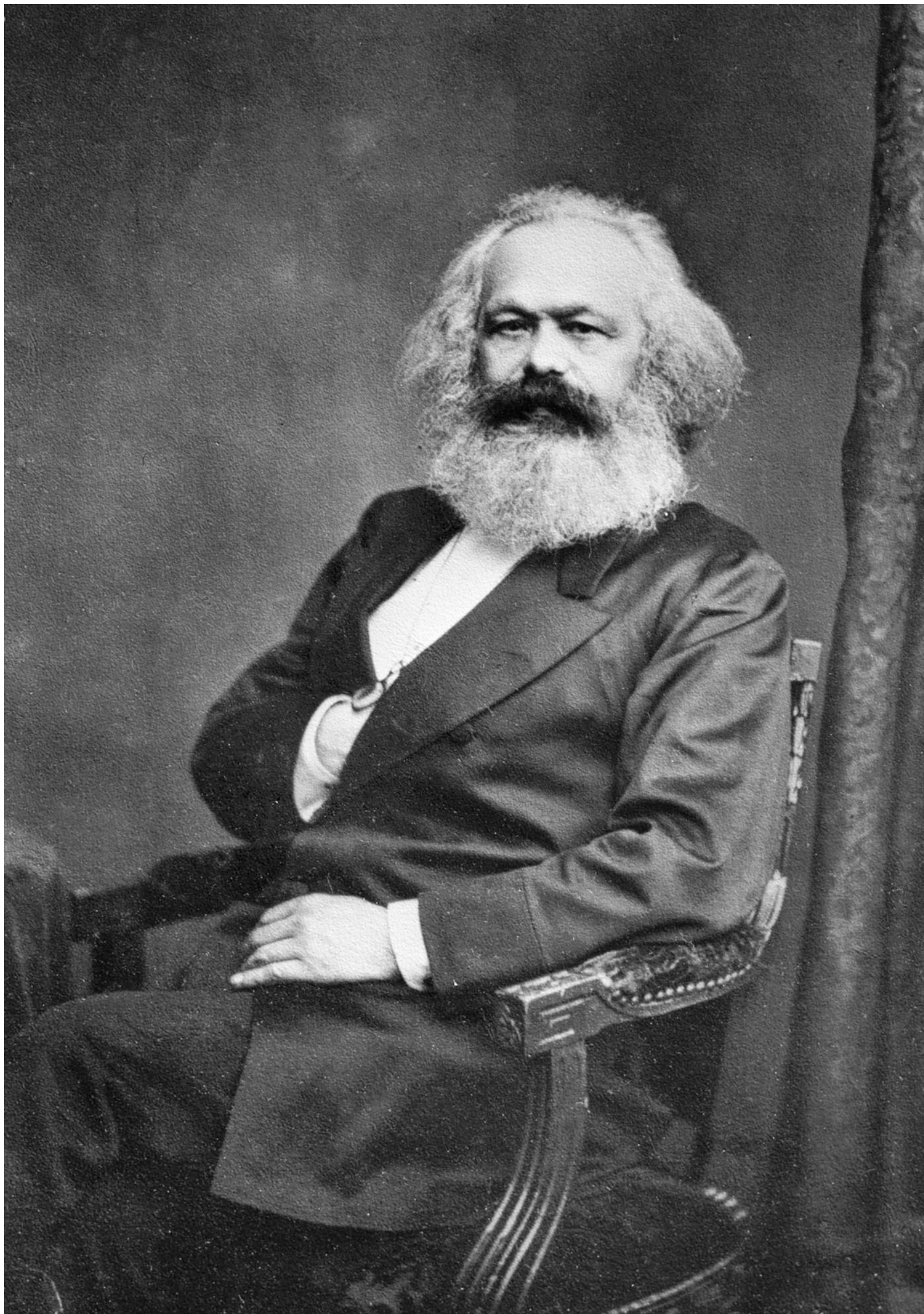
All the research and his resultant alternative explanation has been published here in this journal.



## LEEDS UNIVERSITY

The Parkinson Building is not the oldest university building in Leeds, but it is the most famous





## Is Economic Marxism Enough?

As a philosophical stance, surely Dialectical Materialism could and should be applied to everything?

Outside of the academy it is not generally realised that Karl Marx was initially an able and professional philosopher in a German University. Such was the impact of his work on 20th century politics, most associate him solely with communism or his famous critique of Capital.

But Marx was an avid follower and a close supporter of the ideas of the then leading Idealist Philosopher GWF Hegel - indeed he became known as one of the Young Hegelians.

Hegel had, within his philosophical investigations into "Thinking about Thought", finally addressed the damning criticisms within Zeno of Elea's infamous Paradoxes concerning movement and Formal Logic - after 2,300 years of general and even wilful neglect.

Ever since Ancient Greek philosophy, the limitations and contradictions hidden within logic had been imported into all areas of intellectual endeavor, not least Mathematics and Science.

Now, this long-standing and significant error, not only had strong, and even reliable, antecedents in the ancient and well-established Pragmatism of Mankind, which could, even in Science, be greatly helped by the necessary application of a strict simplifying-and-maintained-control of the conditions involved, which were always carefully chosen to forcibly keep them close to such situations, which actually conformed to that Required State - which later became known as Plurality, and had as its defining tenet that "All Relations and Laws were eternal!" - they were permanently FIXED! They could neither change nor develop.

But, in contrast, at the same time, within Formal Reasoning, such a general transformation and control of all contexts was usually always impossible to arrange-for.

So, the consequent effect was to surprisingly generate a series of unavoidable Contradictions in certain situations, wherein two seemingly directly opposite, premises could both be legitimate, yet were accessible only within slightly changed circumstances.

Indeed, they became known as Dichotomous Pairs of Contradictory Concepts: and the simplest case was when two diametrically opposite concepts competed for dominance in a situation, and quite small changes there, could precipitate a flip to the opposite concept totally replacing what had previously been dominant.

The logical conclusion, which Hegel didn't fully appreciate, but Marx did, was that Reality was NOT Pluralist and Idealist at all, but actually both Holist and Materialist. And, many different pairs of contradictory factors could be simultaneously valid in the same way, and even actively, though in the easy cases, they appeared as a switching of dominance between two simultaneously-present opposites.

And, in fact, within Holism, generally, multiple simultaneous features could always still be active, but often, nevertheless, hidden, or actually overwhelmed by one, which was consequently temporarily dominant (appearing fixed). And hence, even more generally still, these simultaneous factors could all actually affect one another, and hence in certain circumstances bring about overall, combined-qualitative-changes.

Indeed Marx, who had also professionally studied Ancient History, was immediately drawn to looking at seemingly-permanent Social Stabilities, as well as the total opposites of those transformations termed Social Revolutions, as possibly being entirely explicable by these same means too.



Even more important were the as yet un-addressed similar transformations in the Evolution of Living Things, which both Darwin and Wallace realised were ever-present in the fossil record of past Life, and were too examples of similar rapid transformations in Living Things of the distant past. Things that had always been considered eternal and unquestionable were beginning to break down.

And, at that time, in the 19th century, everyone was still talking about the recent almighty French Revolution, which had demolished a long-lasting Feudal Monarchy, and replaced it, first, with a Capitalist Republic, and, thereafter, finally with a revolutionary all-conquering Empire under Napoleon!

The diverse contents and trajectories of that turbulent transformation had been captured in great detail by the brilliant French historian, Michelet, in his *History of the French Revolution*, which enabled Marx to reveal and explain that large-scale dynamic event, in a Hegelian-like Dialectical way. BUT, of course, Marx was no longer any sort of Idealist, but an avowed Materialist, so there were absolutely NO Pluralist prohibitions in his essential examination of these Qualitative Changes. To get the transitions that alone could explain the crucial changes which had taken place, they just had to be both Dialectical-and-Qualitatively-Different from the usually restricted-to Quantitative Changes, as they were the only possible kind in traditional Pluralist Thinking.

Marx found key Qualitative Changes, both produced within Human Economic Classes; but also in the ways Capitalist Economic System itself affected the Economic Lives and means of Life of its inhabitants - both of the Working Class, and of the Employing Class. Marx's primary task then became clear. In order to begin to reveal the causal Levers of Change within the Economic System, he would have to reveal not only all the factors involved, but also how they influenced and changed one another - but NO LONGER in the usual Pluralist way!

Individual single Laws, as produced by the Pluralist approach, that were assumed to be eternal, and simply summed up to deliver only ever more Complication, would never suffice in such a situation. He would primarily have to address the situations involved holistically, and begin with the wholly new approach of multiple, simultaneous factors - all affecting-one-another and producing long-term Stabilities, as well as

Interludes of cataclysmic change such as Revolutions. And contradictingly both of these could only, and would have to be explicable by what became known as Dialectical System Processes. And these usually seemed to deliver permanently Stable situations, that persisted for long periods, YET at some point, via mounting crises, could in the right circumstances, finally precipitate vast Emergent Interludes.

Now, though this was his underlying stance, he knew that the main problem was how was it, if Capitalism survived the many different Crises, without actually succumbing to Revolution. He had to explain both the Changes and Evolution within Capitalism, and its evidently strong means of self-preservation as a system, if he was ever to also be in a position to deal with Social Revolutions, when they finally occurred.

Studying social change and economic structures may actually be the most conducive tempo for change to be studied philosophically, but it was also by far the most complex area to understand, because its elements involved were not lifeless entities, but instead Living, thinking and acting Human beings - it was surely THE most difficult area to study too. Indeed, the area to start with, was most likely to be with some basic Science, such as Physics, but that was impossible currently! The only deeply involved investigators within that Science, were unavoidably from the privileged classes, with the money and time to pursue such things. A radical change in thinking was not possible there.

Neither Marx nor any of his collaborators were scientists, and the mountains necessary to be climbed, in their chosen areas, would be enormous, when viewed from a Dialectical/Holist stance, as compared with the relative simplicity and ease, of the irrevocably damaged nature of their well-loved-and-universally-used Pluralist Approach!

Marx, understandably took the Economic route, and while very successful it allowed no detailed causal structures to exist between his revealed conception of Revolution, and the everyday problems of Class Economics and Politics. The detailed nature of actual-but-currently-unknown Qualitative Changes within Capitalism, and for that matter, in the Sciences too, were consequently never addressed.

Indeed, as a physicist who was disillusioned by the general acceptance of the wholly Pluralist Copenhagen

Interpretation of Quantum Theory, I too, found NO answers either among professed Marxist, as well as among leading physicists, and have had to wait for retirement, to be able to finally have the time to attempt, via full-time, constantly on-going theoretical research, to address these questions myself, with a view to finding the stance that delivered it!

Indeed, my Dialectical/Holist Critique of the Copenhageners was only fully completed late in 2019, some 60 years after my original demands were ignored, by my lecturers, and a full 10 years of my own full time dedication to the problem.

And, the trajectory of that period of work, involved no mere amount of labour: for it had to involve many seemingly terminal Crises, and many fruitless detours, before a clearer and wiser path through the difficulties was realised: not, of course, all at once, but in stages, each of which facilitated a certain measure of progress, only to reveal yet another impass hiding behind that.

The recurring problem was always getting from a Long-standing Stability, into a major series of Qualitative Changes, initially seemingly heading for a total dissolution, and a consequent unavoidable endpoint of Random Chaos! Yet, perhaps surprisingly, always ultimately rapidly building entirely from out of that Chaos, into yet another long-standing Stability, from out of such a multitude of opposing factors to establish something with the wholly-misleading appearance of a solid Stability achieved once again.

And, the problem was always how are things involved settled down into that self-maintaining Stability, NEVER though as some sort of a Minimum Energy "Rest Situation", but, on the contrary, still containing a high enough energy, to actively self-maintain an actively balanced Stable Result, which also even when appearing to be forever fixed, by multiple self-correcting reactions to disturbances, yet in unpredictable situations precipitated into a series of Crises, finally ending-up with the total dissolution of that apparently permanent Stability!

The answers to these problems turned out to be - to do with Repetition and Cycles, wherein the multiple repetition of a given series of processes, seemed to somehow eliminate all those contributions, which couldn't find an on-going oscillation between two extremes, and hence gave up their energies to those that could, and hence, via those

alone delivered a veritable bunch composed only of those effective overall individual balances. The simplest model was of a bunch of such pairs, in which any tendency to soaring-away after one component of a pair, was always opposed, by the opposite effect elsewhere in the bunch!

The result being what I called a "Balanced Stability", but perhaps "Active Stability" would be a better term, in which any diversion from a balance in one pair was always countered by an effect in the opposite direction by a response in another.

The amazing thing was that all such situations had to be selected for within multiple recurrences of the same processes. For without that, the balance could not be achieved!

The classic case was in Electron Orbits within an atom, where the moving Electron causes a partial dissociation of the undetectable Universal Substrate, which then drove the dissociated units into a stream defined by the path of the Electron, ultimately driving those units into Vortices, all around that orbit. And getting its energy from the orbiting Electron, whose Orbit would then be reduced: but when it was, it would then receive energy back from the vortices, and a balance would be achieved which was termed a Quantized Orbit!

Dialectical Materialism applied to Physics was not only reconfiguring the assumptions of that science but redefining the philosophy itself.



## Continuity and Descreteness

### A Dialectical View of Wholes and Their Parts

I have spent the majority of the last decade working on the Theoretical Physics, intent upon a Critique of the Copenhagen Interpretation of Quantum Theory. In order to carry that task through to completion, I had found it becoming increasingly clear that it couldn't be done without a significant major investigation of certain essential Philosophical underpinnings. Untraversable impasses were traced down to incorrect premises within Science itself, which often were then the causes of wrong turnings in prior Philosophy.

I, frankly, would never have succeeded in my primary endeavour, without the remarkable range of problems encountered across many diverse disciplines, with my professional job as a System Designer for researchers across a vast range of very different disciplines, which I was presented with in three different countries, and 5 Educational establishments over the previous 14 years.

The crucial turning point occurred within a long continuing association with a top researcher in Dance Performance and Choreography, who had, what to her were insuperable problems in the use of recorded video footage for teaching complex movement in significant dance works.

Now surprisingly the problems were absolutely crucial to my later research in Physics and Philosophy, as they took things all the way back to the philosophical criticisms put forwards by Zeno of Elea, which he had detailed in his Paradoxes, and which revealed absolutely clearly the unavoidable impasses in Formal Reasoning, when the standard Pluralist Approach was applied to motion!

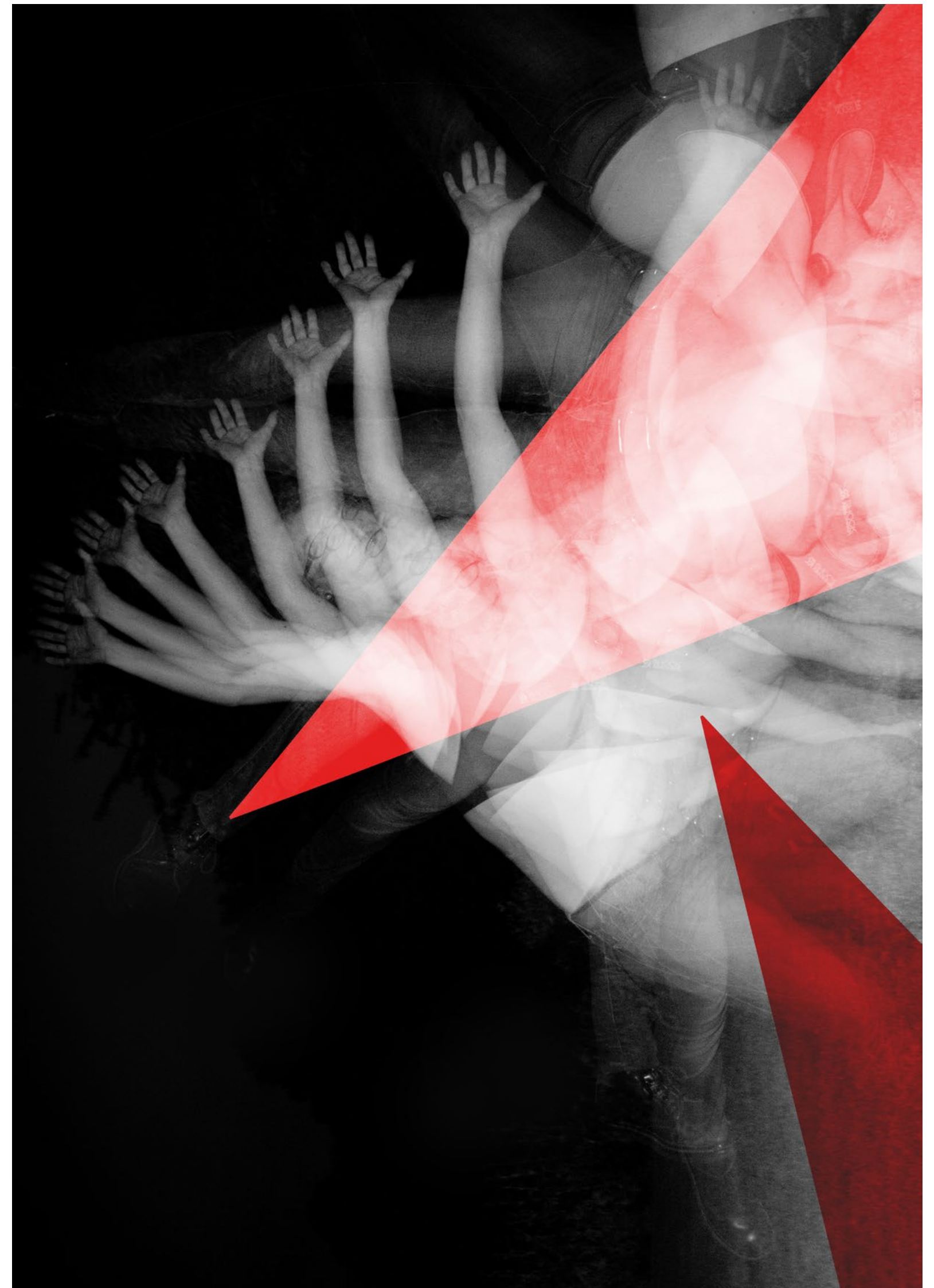
The use of the Concepts of Continuity and Descreteness as alternatives frequently led to contradictions, when different supposedly valid techniques were used: yet nowhere in the underlying premises involved could these be resolved.

Now the two forms used there were exactly the same as those imposed upon my colleague - for the two kinds of recordings available were Film (with Discrete Stills, or tiny parts of the movement) and Analogue Video (with Continuity apparently provided remarkably by the interlacing of two fields). An understandable and reproducible interpretation was impossible from either of these media alone - one gave accuracy, the other dynamism, but never together. But I was able, by using both in a combined way (a synthesis of sorts), to deliver what was needed in studying the movement.

That unrelated research enabled a resolving critique of Pluralist methods more generally - that dividing dynamic wholes into static parts does not work - that we have to look at matter in motion holistically, even as we analyse it in terms of components or elements.

Indeed, as it emerged something similar to the width and depth undertaken by Marx in his mammoth study of Capitalist Economics, but here applied to Movement! But, in this task greatly complicated by the multiple pragmatic divisions into wholly separate Sciences, and even within-a-single-Science specialisms.

For, all those separations were implemented at situations wherein the Contradictions and even Logical Impasses were generated where two areas came together, and were unavoidably irresolvable due to such impasses, and later similar separations even between what became known as totally different specialisms within a single Science, but also incompatible, even with closely connected phenomena, across the divide.







## Stability and Entropy

...or how the Greeks have irrevocably skewed our conception of Reality

While watching an “educational” YouTube video upon the nature of so-called Entropy, I realised how the most basic premises established by the Ancient Greeks in the 5th century BC actually irreparably skewed Mankind’s subsequent conceptions. They became mistakenly based upon a final and terminal Foundation of Stability, which was therefore defined as the natural resolution of all energetic motions, to a minimum energy state that was hung upon the inverted idea of Entropy, which rose as energy declined!

Now, such an inevitable final result (sometime in the far distant future) would be to reach maximum Entropy (minimum Energy) as the irreversible End-of-Everything! Now, where in everyday experiences could such a conclusion come from?

Death and decay are obvious sources of such ideas, but its roots lie in a misconception of Stability: based upon Greek Philosophy’s assumption of Plurality. For, in what came to be called the Greek Intellectual Revolution, some 2,500 years ago, their great thinkers, in attempting to develop a Rational Discipline of Form, finally arrived at Simplifying Relational Abstractions, which, for the first time ever, enabled such a construction to be validly achieved, and led first to Euclian Geometry, and thereafter, to all of Mathematics - a consistent and developable Discipline enabling the effective relating of all possible (Pure) Forms!

The power it immediately endowed was in the steadfast reliability of the consequent system’s integral Rationality: so that via Theorems and Proofs, such a Discipline could be extensively constructed, and, thereafter be legitimately manipulated, to generate seemingly infinite extensions and developments to the System.

But, it was enabled ONLY by those New Abstractions, and they unavoidably imposed a limitation upon the

System, to which it was to be applied. The relations involved could not change Qualitatively, in any way! This should be fine when dealing only with abstracted Forms - so Mathematics was certainly legitimate.

However, the use of such Mathematics in Science complicates this tremendously - as does Formal Logic within General Reasoning.

What had been defined by this System of Rationality, was one in which the kind of Stability, in which it could be used was NOT the same as that in the Reality in which we lived! But, nevertheless, particular instances of it did occur in Reality too, but for very different reasons than those embodied in the arguments for Entropy!

While Plurality defines a Mathematical view of Reality, an alternative philosophical stance certainly exists - we can find it embodied in the many sayings of the great spiritual Leader The Buddha. His alternative view of the Universe had not only everything in it always varying, but also all things affecting one another to varying degrees, and whose most important “laws” were about Qualitative Change, all of which was embodied in the tenet called The Principle of Holism.

BUT neither of these philosophical viewpoints encompassed the whole Truth! Holism delivered Qualitative Change and a wider view of Reality, but NO analysis or Production to speak of, while Plurality certainly delivered Production, but NO understanding of natural Qualitative Change.

This contradiction of viewpoints is akin to the Dichotomous Pairs of Contradictory Concepts employed by Hegel in his Dialectics, and relates directly to his use of the paradoxes by Zeno of Elea, where discreteness can be seen as Pluralist and continuity as Holist.



Zeno had found that the mathematical type of Reasoning failed when applied to Movement. But, it was only when Hegel realised that the Rationality in Formal Logic involved allowed absolutely NO Qualitative Change whatsoever, that the possibility of a defineable and very different alternative became possible.

While Dialectics opened up the possibility of a Logic of Change it was severely limited by Idealism. Even when Marx transported these ideas to Materialism it was never developed into a new Philosophy of Science. Indeed, it took another 140 years for this crucial undertaking to be addressed, and it has thereafter taken a further 12 years to finally process a Dialectical Alternative to the wholly Pluralist Copenhagen Interpretation of Quantum Theory.

And significantly, the few sentences on Pluralist Theory along with the one dimensional explanations of Entropy, have left every so-called account of it with the single, inevitable descent to the fits-all Heat Death of final oblivion. Meanwhile any investigator adequately-equipped with the actual development of Reality in literally any area, finds the exact opposite case - with Reality moving onward and upwards to as many constructive as destructive developments - like the Emergence of Life and Consciousness for example, while the so called experts are doggedly logging unavoidable and inevitable decline at all levels!

The central concept of Stability couldn't be more different in these totally opposing approaches! For, in order to reveal what Stability and Qualitative Change really are, it has been necessary to concentrate study upon areas where the tempo of Qualitative Change is available for a living researcher to both effectively Access and Study: but most of the Emergent Interludes of significant Qualitative Change are always at either tempos or sizes, to make the whole-of-them partly, or even completely, inaccessible for observation.

So, the first investigator, Karl Marx (who was a historian as well as a philosopher) correctly chose to study Social Revolutions, and, in particular, the French Revolution, that had, in Marx's time only recently happened. AND had been recorded in tremendous detail by Michelet.

Now today, we also have the detailed account of a leading participant in The Russian Revolution of 1917, in his History of the Russian Revolution by Leon Trotsky;

so though such Marxist Economists were equipped to record the actual trajectories of these Revolutions, it has taken another's lifetime (the writer of this paper) to, in the last 12 years, deliver a General Theory of the Trajectory of an Emergence, and, thereby, start to apply that Revealed Dynamic Form, not only to Whole Economic Systems and Societies, but also applicable to all sorts of Levels and discipline areas well below the social, and thereby begin to apply those crucial findings elsewhere - and most significantly in an extensive and damning Critique of Pluralist Physics.

For the pluralist limitation to allow only fixed qualitative relations and Laws, has, along with many other areas involving similar deeper investigations, also unavoidably revealed consequent inevitable contradictions within the pluralist theories involved, which have the effect of blaming their causality rather than their damagingly limited conceptions, and strongly pressing the scientists involved, to totally dispense with Explanatory Theories, and instead depend upon always-legitimately-pluralist mathematical forms, even though their extension to a totally non-pluralist Reality was actually inadmissible.

And, of course, such unavoidable FREEZING of all used relations and laws, also distorted our view of development into a mere variety of summations of fixed and already stable contributions, rather than the producing of truly novel systems via Emergent Transformation.

Consequently, all such summed re-arrangements, when compared, would only lead theorists to arrive at an inevitable termination. They could only ever arrive at the current conception of Entropy - what else could such a limited set of outcomes reduce to?

The range of possibilities delivered by mere summations of fixed components, will if in any way self-organising only stop at the minimum energy... The more the consequences of Plurality are traced through to final steady forms, the more they will conform to the Second Law of Thermodynamics: it is the only Law possible in a Pluralistic system - a system incapable of natural development, via either evolution or revolution.

A system of fixed components is not only incapable of change, it is incapable of keeping itself stable.



Looking for Lenin by Neil Ackermann, 2016



## The Scientific Method

as demonstrated by the scientist Robert Millikan

We have closely examined the internal contradictions and fixity of Science and its unspoken assumption of Plurality. We have looked at the role Mathematics plays in creating this artificially unchanging world and something of the history and philosophical roots of this dominant way of thinking.

What we haven't examined yet here is the effect this has on practices of Science and the sorts of experiments that scientists do.

Under the watchful eye of Mathematics Science sought ONLY eternal Natural Laws, which also, if they occurred simultaneously with others, were always only added together to have NO qualitative effects upon one another: they were assumed to merely SUM quantifiably - like the Rules in a Game (no wonder Game Theories have played such an important role in Mathematics: THEY were legitimate areas of application - whereas Science-as-is was certainly NOT!)

Indeed thereafter, the most successful such "Science" was only conducted in very rigidly-controlled situations, that could always be accurately replicated, especially in productive USE - what was actually being investigated, greatly-changed and effectively used as Technology, and certainly not as real Science.

Now, such fairly abstract discussions don't usually, by themselves, convince anybody, as the bases for most people's beliefs are never the result of detailed abstract considerations, but, on the contrary, are implicit in almost everything normally surrounding them, and, as it most commonly existed, literally alone solely informing their conceptions of it. So, any such wholly-intellectual-argument as my initial one above, usually leaves everybody totally unconvinced. I have exhaustively made the full, intellectual arguments elsewhere, so I have here decided upon a different approach to establish

my described alternative, by tackling a particularly Laudatory Video intended to extol the historical virtues of a famous Experimental success, which ultimately won a Nobel Prize in Physics, for the American Physicist Robert Millikan, which I believe does my required job adequately, when accompanied by a seemingly common-sense critique.

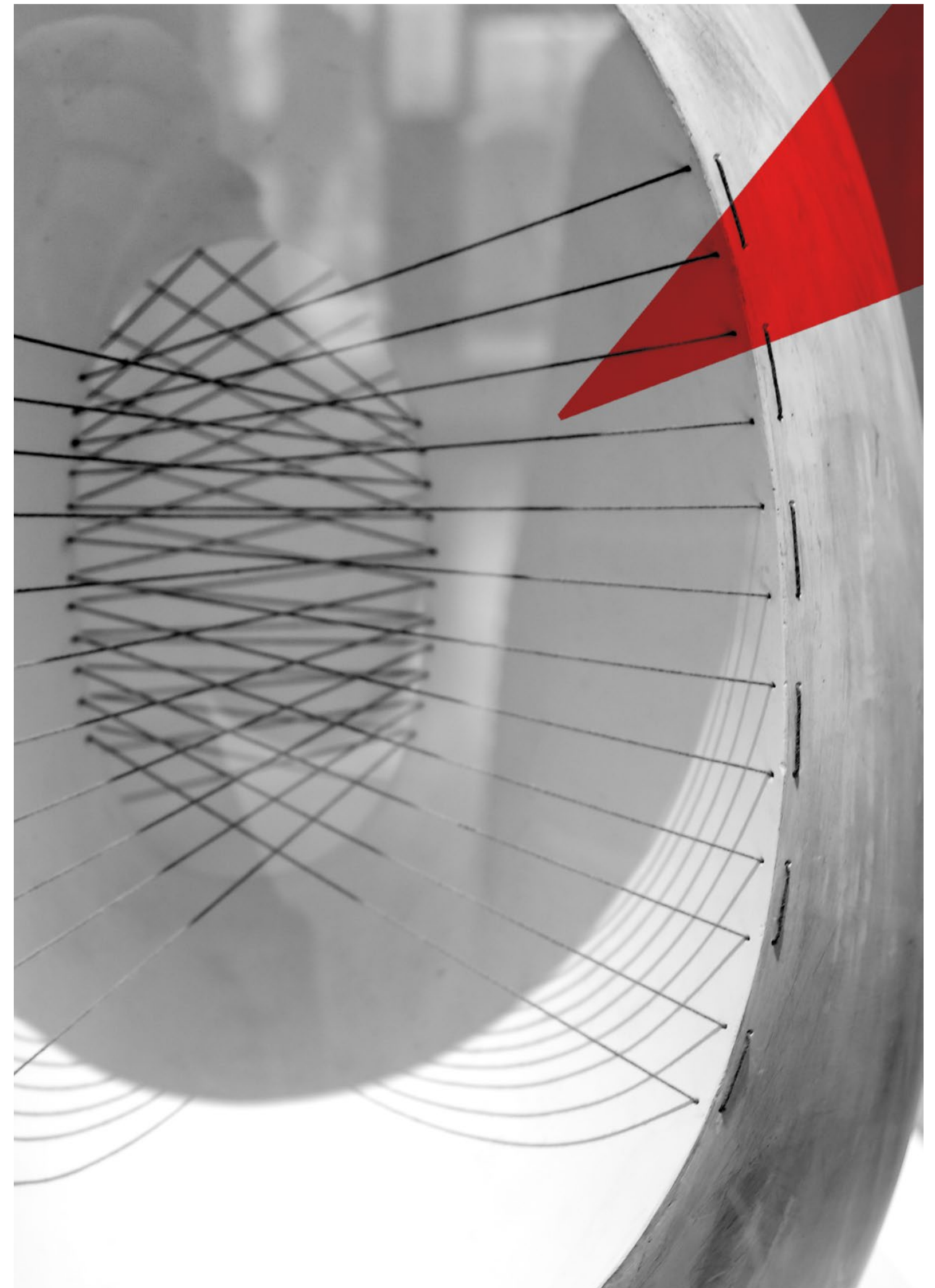
From J. J. Thompson's original approximate evaluation of the Charge upon an Electron, to Millikan's long and difficult struggle to deliver a finally sufficiently accurate value of the same thing, to be both accepted and indeed celebrated worldwide, revealed a trajectory of many absolutely necessary *constraining* steps - to so limit the containing environment to effectively impose an almost perfect, if totally unnatural, pluralist context for Millikan's Experiment to be successfully achieved, by the then Universally Standard Experimental Method!

And, only then able to celebrate the eternal Natural Value of the Electrical Charge upon an Electron, in spite of the fact that the conditions that delivered it, were not only NEVER naturally possible in Reality-as-is, yet the obtained Value would, thereafter, be applicable in any, and all, situations subsequently encountered!

Throughout Millikan's arrangements, all his assessments, manipulations and calculations were ONLY achieved using Equations, extracted as eternally Natural Laws - themselves only achieved from experimental data ONLY EVER obtained from artificially pluralised environments.

Now such criticisms are unavoidably crucial!

For both the pluralistically arranged-for evidence, and the exclusively idealistically generated Forms, not only absolutely guarantee that all of these elements can only ever be legitimate, if solely within appropriately and profoundly changed situations, well away from







pluralistically-fixed version of Reality, which is actually exclusively relevant ONLY in such strictly Pluralist, and hence non-natural situations, and instead carried out in what we term as Reality-as-is! And, the subsequent use of those Equations, in what amount to strictly pluralist manipulations, that are allowed ONLY within Mathematics (as the study of Pure Forms), and certainly NOT when relating things in Reality-as-is, totally undermines such processes as only being applicable in discussing Forms-as-such, and never via their illegitimate transfer into both Science and its only-allowable Rationality.

Now, once again, this undeniable truth, is regularly undermined due to the occurrences of what appear to be permanent Stabilities within Reality-as-is, though they are always temporary, enabling a rigidly-controlled use - *Technology*. Yet, absolutely NEVER allowing legitimate manipulations resulting in supposedly underlying Laws. For every Law extracted in such a way is never the absolute Truth: but, at best a rule entirely restricted to the conditions which delivered it. It isn't *universally* true! And it certainly MUST be if used in the construction of a Universally applicable Discipline, such as Science.

Indeed, to totally omit Qualitative Changes as Plurality always does, clearly ignores all development. Plurality constructs only an artificial, qualitatively unchanging, and hence static single shot of Reality! And consequently can never explain any aspect of how that Reality came to be, or what might happen to it next.

For, to do that a real Discipline of Science, would include all such changes, NOT as coming from without, but, on the contrary, intrinsic to the very Nature of Reality-as-is! Now, if all that is being undertaken is the production of some entity for subsequent *use*, then the whole process is first investigated to find what necessary steps will be involved, and the devising of a Productive Process, composed of several separate procedures - each one simplified to be easily replicated to produce a single step via a single Pluralist Law!

Whereas any attempt to replicate a complex process involving several simultaneous resources and laws, and one overall Dialectical Law, would never be possible via Pluralist Means.

It would require some Holist joint law!



## The Current Incomprehensibility of Reality

We cannot currently comprehend Reality.

We should not be surprised by this revelation!

Mankind only began to effectively *Think* very recently indeed, and the main contribution to their overall development - Darwinian Evolution - has selected solely for survival and efficient reproduction. There was no biological mechanism for the development of Thinking - as the prior 99% of human development emphatically reveals.

Indeed, development was dead-slow until the Neolithic Revolution, which finally allowed Mankind to live together in larger Social Groups, and begin to develop socially - that is involving Language and Ideas, which proves that explanation is undoubtedly true! As archaeologist V, Gordon Childe always insisted - "Man Makes Himself!"

And, the means to do that, didn't come easily or even commulatively - on the contrary, almost every gain also had, in the long run, debilitating flaws embedded within them, and many wrong and misleading paths were exhaustively traversed, before they were in any way corrected, and then only ever partially.

Dont get me wrong, it was a truly magnificent trajectory!

But, we are NOT Gods: neither were we consciously designed in an omnipotent God's Own Image. We are a particular and exceptional animal, who has spasmodically, temporarily and occasionally yet also magnificently transcended its own limited capabilities, to begin to revealingly explore and even glimpse the wonders of their World and indeed themselves!

Humanity's major innovation was Abstraction: which is not, as is often supposed, the extraction of some

natural Essence, but on the contrary, a valuable and developable form of Simplification. Reality was (and is) extraordinarily complex and we had to simplify everything in order to do anything.

The Ancient Greeks, when studying Shapes and Forms, hit upon *Simplifying Relatable Abstractions*.

These couldn't exist alone, but only in relating other elements.

This was a major breakthrough in allowing the construction of the very first Intellectual Discipline, Mathematics, but also contained the limitation that the elements and relations involved had to have fixed definitions for it to be possible. In Geometry and general Mathematics, this wasn't a problem at all, but it certainly wasn't true of literally everything else in Reality! Our advanced systems of Abstraction were Pluralist in nature, but this was not reflective of the material Universe, which acted holistically and was in constant flux.

But many things in that Universe appeared relatively stable, even eternal, and Mankind became adept at farming the situations that weren't - in suitably-constrained conditions, Reality, though considerably modified in order to achieve it, also can "conform" to Plurality.

In discovering this the Greeks incorrectly extended Plurality to all their currently emerging Disciplines: so both Formal Reasoning, and even the first findings of Science, were thereafter treated as wholly pluralist disciplines. Indeed, for the last 2000 years of "Science", it has maintained, to this day, that fiction, and actually achieved many things with its carefully maintained static Realities - whilst rarely understanding totally unfettered Reality-as-is!





Indeed until Hegel, even Formal Logic was completely hogtied by Plurality's limitations - and still is for the most part, as Hegel's Idealist Philosophy only addressed Human Thinking. He never applied Dialectics to material Reality.

Karl Marx realised its importance to History, and found that a non-Pluralist approach made possible, for the first time, a real narrative of historically developing events, and in particular Social Revolutions. His analysis of Michelet's account of the French Revolution began to equip him to apply it to the current Economic System of Capitalism. This became the main focus of his work, via his 3 volume masterpiece Das Kapital. But he never managed to extend his philosophical research to other disciplines.

Now, this is necessarily a very-curtailed account of Dialectical Materialism, but it is, I hope, sufficient to justify my purpose in this paper, namely, that we are still considerably under-equipped to reveal the Truth of Reality.

And, even what we usually count upon as banker achievements are never actually that, but in fact, misdirections that have to be made overt, if further progress is to be made.

My own research into Dialectical Materialism investigates these achievements, assumptions and misdirections in Physics - an area of Reality I argue we know little or nothing about.

I'm currently investigating the incomprehensibility of Electromagnetic Radiation in particular, and Electricity and Magnetism in general: along with doubts about all notions of Disembodied Energy, the Nature of Charge, and even that of Matter, and several other "Deep Basics".

The paper is once again about Abstraction - Mankind's main means of attempting to achieve an Understanding of Reality, via Simplified Means that nevertheless does still deliver sufficient Objective Content, for progress to continue to be made, though admittedly-and-purposely only by forms that unavoidably also mislead as well as inform! It is my contention that no direct access to Absolute Truth currently exists anywhere, and most certainly NOT within the current conceptions in Mankind - as that development still has a very long way to go!

Yet, nevertheless, real progress can and indeed has been and will be made. The trouble is that because of a total lack of understanding, of the capabilities, and the limitations, of our current means, we have, over literally millennia, built up a body of both ideas and methods, which will have to be totally demolished-and-re-built very differently, to overcome our present self-made problems.

I have extensively tackled the Crisis in Physics, and developed an alternative to both the Copenhagen Interpretation of Quantum Theory, and even the consequent developments in Quantum Mechanics. But here, I am being forced to address much older, more basic, and well-entrenched diversions, conceptions and even means, which will be much harder to defeat.

Let us begin!

For as long as I can remember, I have always had a problem with the Propagation of Electromagnetic Radiation, which only got worse with the effects of the Michelson-Morley Experiment, that apparently totally-and-terminally dispensed with an older theory about reality - the Aether - the previously suggested Universal Substrate occupying an otherwise totally Empty Space.

For, what exactly is it that is actually propagated, and how is it achieved? By what means is it so delivered across absolutely colossal distances of totally Empty Space?

The usual physical description of an Electromagnetic Wave surely seems to be wholly insupportable in such a context! For, it consists of two sinusoidally oscillating transverse waves at right angles to one another - one Electrical and the other Magnetic. But, in the usual supposed propagation, they have absolutely NO affected Substrate, to handle such a structure in the usual way, so they can only be totally disembodied oscillations, that maintain their characteristic Frequency and related Energy content - more or less indefinitely undiminished. And, ultimately delivering their "contained" energy and frequency to some distant receiver, also totally undiminished!

Not only does the description of what is happening seem far-fetched, the model of a wholly disembodied Wave explains absolutely nothing about such a propagation.

It cannot be right!

Now, its original source is usually described as coming from a promoted electron orbit within an atom, which is then thereafter delivered by the partial Demotion of that orbit, to a lower energy level within the Atom - and thereby releasing the energy difference as an Electromagnetic Wave of a specific determined Frequency. Now, already, we have other problems! Its original existence within the atom requires that it be a complicated receptacle, consisting of a positively-charged nucleus, attractively maintaining a captured negatively-charged Electron within an orbit, by means of the balance between the electrical attraction inwards and the original speed of the electron now opposing that outwards.

Obviously, the radius of the orbit must determine everything!

A smaller radius will mean a smaller energy: and as it will also determine any associated frequency too, the difference between prior and demoted orbits will determine both the energy and the Frequency of the emitted Wave!

But, what will be the exact mapping between the Atom, before-and-after, and the "consequently emitted Wave"? It begs the question of some kind of recipient for the emission! After all it doesn't just sit there but careers off, at the Speed of Light into supposedly Empty Space.....

Why?

And, without any kind of Substrate, it seems to be merely a disembodied gobblet of Energy - encapsulated as a pure energy form known as a photon - yet somehow maintaining the delivered frequency as the mode of its existence!

Will it only comprise a single disembodied cycle, or a finite short string of such cycles?

And, will it then be spread out in space, or restricted to a localised oscillation, also moving along as an individual entity?

Or, will it be some kind of discrete Photon, with no material basis, yet maintaining the said contents literally perpetually once released as such?

And, in Empty Space, what could these physically consist of?

So many unanswered questions.

It sounds as if each merely consists of a gobblet of pure energy somehow oscillating at a given frequency and containing a precise amount of that disembodied Energy, while moving (at the Speed of Light?) forever! Is that even possible? It doesn't sound OK to me! How could it even be contemplated?

And, the stock answer is very revealing! If we stop thinking physically, and instead encapsulate everything within mathematical formulae, we can construct a formal system that fits with what we can detect...

And, the problems of the concrete World will no longer be present!

It also can be used to predict outcomes, and even enable required events to be made to happen. Forget Physical Explanation: we can just use Mathematics!

Of course, there is a crucial philosophic consequence of this decision! First, we end up abandoning Understanding as impossible and turn to solely Pragmatic Use.

AND

Second, we assume that concrete Reality is determined by such formal relations, entirely-and-exclusively, within the Forms delivered by Mathematics. And that most certainly cannot be right!

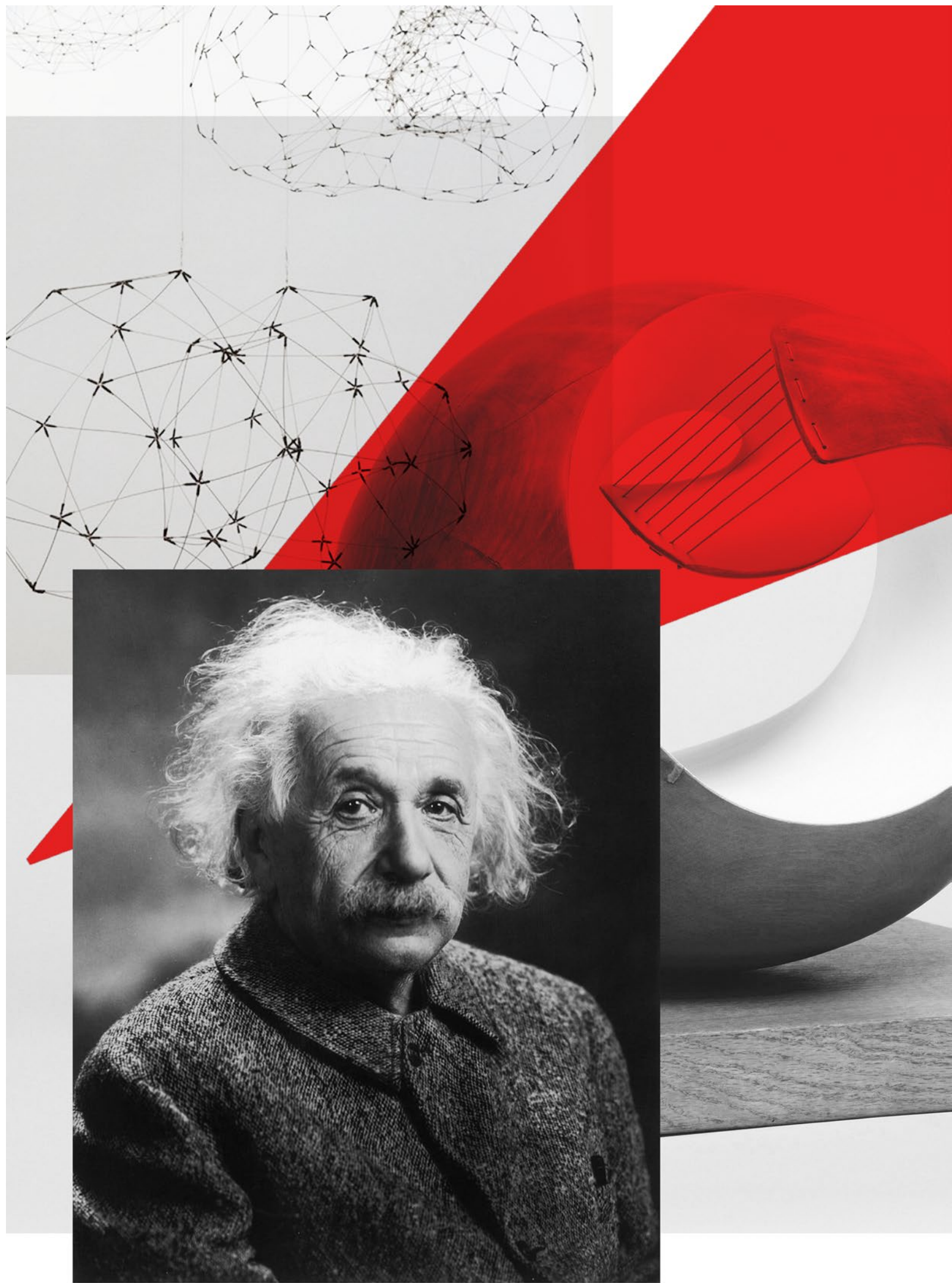
Mathematics is an exclusively Pluralist discipline built from formal abstractions - some of which are incredibly abstract. This abstraction breaks the link to evolving reality and results in the contemplation of qualitatively fixed things, and hence though incompletely mirroring some aspects of Reality, only actually exists as such within Ideality - the World of Pure Forms alone.

Mathematics can only ever be Idealist because it sees these abstract forms as primary rather than simplified formal shadows of materially existing things.

A THOUGHT EXPERIMENT:

Some years ago, struggling with all the anomalies of the ill-famed Double Slit Experiments, I decided to attempt a theoretical-physical explanation, aided only by the assumed existence of a currently undetectable, but materially-constructed Universal Substrate.





The detected Waves would then occur within that Substrate, and were caused there, in the case of the electron fired at the slits, by disturbances set up within that Substrate, due to the energetic passage of that Particle.

And, every single anomaly was explained-away by this model, and Wave/Particle Duality proved to be a purely invented and wholly formal construct.

Yet, all I had done was make an effecting and affected existing Substrate currently undetectable!

Why can't we assume we don't know everything, and speculate that some crucial piece of the jigsaw might be missing? Obviously there is an element of guesswork in this, but if your hypothesis seems to solve many intractable problems, is it not worth investigating further?

My theoretical findings encouraged an all-out-assault upon Copenhagen, which was consequently also ultimately successful too. And, necessarily, this was underscored by a comprehensive philosophical demolition of The Principle of Plurality, underlying Mathematics, as totally illegitimate when used in Physics. Indeed, you can see why physical Explanation was abandoned - The New Approach fitted very well with Mathematics, as both were increasingly abstract and wholly pluralistic!

And, in addition, as Mathematics is also totally idealist, it resides only within the literally infinite extensions of Ideality! Sub Atomic Physics had theoretically been transferred to being a subdivision of Mathematics and has ceased to be philosophically materialist.

But all the questions about Propagation of Electromagnetic Radiation, as well as the similar problems of extended Electrical and Magnetic fields, within Empty Space, were also solved by Substrate Theory. The assumed undetectable Universal Substrate started to take shape, composed entirely out of mutually-orbiting Pairs of effectively self-cancelling Leptons.

For, in this synthesis, the propagations was NO LONGER as Waves either (as in a classical substrate) or in Empty Space, but instead propagated Bucket-Brigade fashion between the internal orbits of such adjacent Substrate Units - on a very similar basis to

Atom-to-Atom transfers. And, in addition, Electrical and Magnetic fields also merely became properties of Magneton Universal Substrate Units, which could deliver both Electroical Fields and Magnetic Lines of Force via different structural modes of those Units, in response to appropriate initiators, for these Units also involved the mutual-orbiting of opposing Lepton Pairs, so the fields could also supply the energy for Field Effects too.

NOTE: The anomalies which troubled me, clearly also troubled those supporting the consensus position within Sub Atomic Physics: for they too had to abandon "Totally Empty Space" for what they deemed to be "everywhere present" Quantum Fluctuations, which, because they "added up, overall, to a zero energy content", were said to be composed of "Virtual particles or Photons", and, which could only be the case if involving negative as well as positive Energies.

Their incredibly formal workarounds were beginning to echo my materialist theories!

Of course, if Mathematics is your "Common Coin", all this nonsense is considered legitimate! And perhaps the Action at a Distance Anomaly delivers a final blow to the usual consensus assumptions about the Nature of Empty Space.

Now, clearly, Einstein's Spacetime Continuum, which though emphatically non-material, is said to be both affected by the presence of Matter occurring within it, while, in turn, also determining the consequent motions of material objects passing through it! But, of course, Einstein's Stance is inevitably undermined by its major allegiance to Mathematics, as the common Rationale - for all The Theory's means are embodied in mathematical forms, and even the supposed abstract reference system has been modified to become part of the once always only physical components within the phenomena to be addressed.

Clearly though, the new Continuum has more in common with an undetectable-yet-material Universal Substrate, than with a totally unaffected, Man-defined Reference System.

Of course, the problem is a repetition of such assumptions throughout the History of Mankind's attempts to grapple with Reality, A reference System was yet another Simplifying Relating Abstraction, but this time even



## Wave Particle Dichotomy

more removed from the concrete, as none of it physically existed at all, but it enabled a system of measurements to be established and then related its uses to one another.

But, though a brilliant invention, in its time, and extremely useful for millennia, Einstein plumbed its relativistic difficulties, which he seemed to have solved by his extensions to the capabilities of the Reference System, by giving it certain disembodied properties of Matter, while working out the consequences of his invention, rather than treating it as a formal analogistic reflection of something actually concrete in the Real World!

Einstein's creation was in the tradition of the Positivists like Henri Poincare and Ernst Mach, with their amalgam of Mathematics and Physics, which they termed Empirio Criticism (criticised by Lenin in his book on the subject). But that was a century ago, and no really conclusive treatment of such anomalies was undertaken by Marxists on this area, until the current work by the author of this paper in the last decade.

The major contribution by this theorist has been the theoretical work achieved in defining exactly what kind of Universal Substrate could possibly remove all these anomalies.

Now, though the current Theory may not be "The Last Word", it has to be seen as playing a similar role to that of James Clerk Maxwell's definition of the Aether, which he always considered it as an analogistic Model for the Real Substrate, and accurate enough for him to develop his Electromagnetic Theories and Equations using it as his basis.

Of course, in my case, I was attempting to demolish the Copenhagen Interpretation of Quantum Theory, and have recently completed that endeavour. But, along with

those objectives, a much more general set of even older anomalies were addressed too, such as the propagation of light and magnetic fields in space. The New Universal Substrate involves undetectable, though material, joint units of the substrate including three different types the Magnetron, Neutrons and Gravitons of very different sizes and properties, but all as paired mutually-orbiting Leptons, and both undetectable either individually or over local populations, and crucially all capable of delivering energy via the promotion of their internal orbits.

And, in addition forming very different constructed Phases from Random Gas forms, and even Streams and Vortices, and remarkably also delivering Electrical and Gravitational Fields, and even Magnetic Lines of Force as sole properties of the Substrate.

Indeed, for the first time, it was possible to conceive of various populations of Different Substrate Units at effectively different Levels of organisation, but occupying the same physical Space.

As a first year student at University I studied the infamous Double Slit Experiment - in that case when it was subjected to a stream of particles. However hard I studied and thought about the subject I could not see how the Copenhagenists could impose the Wave/Particle interpretations upon the results received upon its final screen.

Indeed, such re-interpretations involved a dramatic re-definition of both Waves and of Particles, which were usually so mutually incompatible with each other, as to previously necessarily only be rejected as due to wrongly-employed premises.

In the previous century, a closely-similar rejection of what were termed Dichotomous Pairs of Contradictory Concepts, had also confounded philosophers, and the whole set of them had begun to be addressed by Hegel.

He had found it absolutely essential to finally include Qualitative Change and Contradictions within All Reasoning, things which had always been banned from Formal Logic. Hegel realised that such a limitation restricted everything involved to only eternally fixed qualities and relations, and that couldn't possibly be true, if actual Development was to also be addressed and understood.

So, both the top theorists (and this poorly informed, but mathematically-competent student) all then attempted to re-define all such Particles as a collection of waves of different frequency, (as a possible solution) that had to be such as to deliver in their summation a discrete gush of Waves - a so-called Wave Packet, no longer infinite in extent, but now having clear terminations at both ends of the produced tiny Discrete Wave Packet, to clearly approximate to a Particle(?).

But though, an image of such an entity did appear to be a discrete entity, how it could nevertheless, physically deliver properties indistinguishable, on the one hand from a solid material Particle, yet, upon the other, mutually self-interacting to give results like those caused by the interference of waves - merely in or out of phase with one another, seemed wholly impossible!

And frankly with everything always still rigidly limited to the generally-agreed assumption of Plurality, universally-conformed-with absolutely everywhere else in the Sciences, it made such ideas wholly impossible.

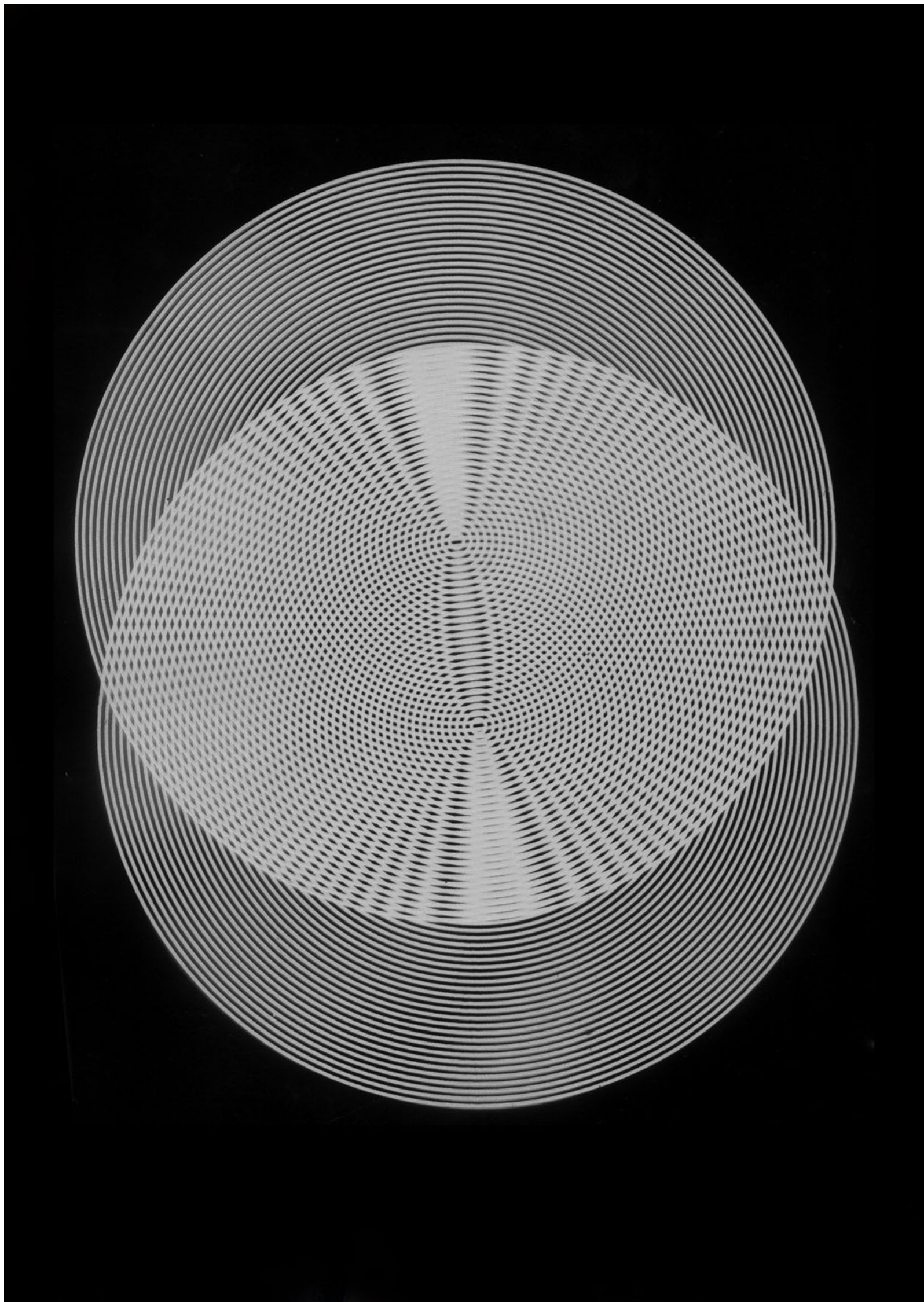
[Now, as Mathematics, as the Study of Pure Forms alone, is legitimately Pluralistic, and also, as long as the relations are fixed, they DO NOT also have to be present in Concrete Reality: indeed, as long as they conform to the Rules of Mathematics, they can be non-existing abstractions too: and a literal infinity of Forms that do not exist in Reality can be brought in to get around the unresolved contradictions - it becomes obvious why the Causal Explanations of Physics (which are certainly NOT pluralistic) are constantly being replaced by Mathematical forms, which ARE!]

Yet remarkably, the two sets of properties are perfectly possible to both describe and hence fully explain both required sets of phenomena, but never by a *single* entity! There would just have to be an intermediary.

Indeed, the properties of a Particle are delivered by its usually agreed definition, while those associated with a Wave are fully delivered by the properties of a Substrate or hidden Medium.

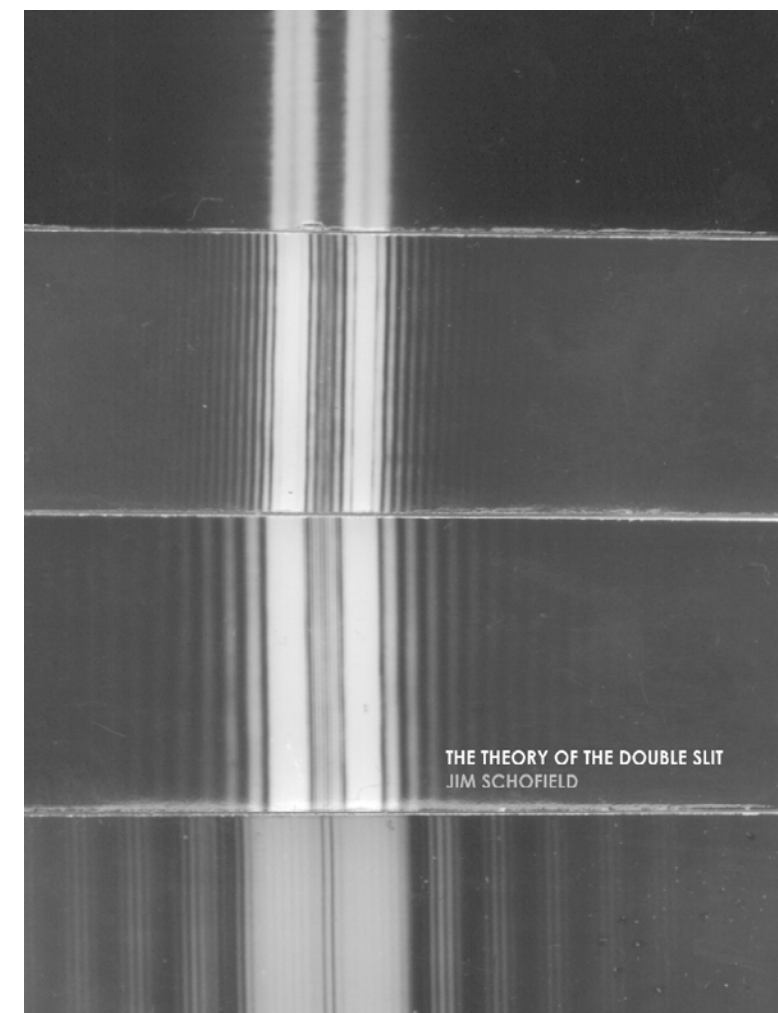
So, if the premise of a Totally Empty Space, with completely unaffected particles passing through it,





is instead REPLACED by an undetectable Universal Substrate, that is present absolutely everywhere, then a traversing Particle could cause disturbances in the invisible medium, propagated onward, which would then pass through both Slits in the Double Slit Set-up, and interfere when they encounter one another beyond the Slits, having got there well before the much slower Particle. which when it finally reaches and passes through either of the slits, will encounter the maintained interference pattern in the Substrate and be deflected (or not) depending upon its path through the Interference Pattern.

So, a series of Particles will ultimately build up the pattern on the final screen exactly as observed.



[SPECIAL ISSUE 3](#)

This issue of SHAPE Journal contains a write up of the new Theory of the Double Slit



## Substrates and Resonance

The philosophical position adopted by this theorist has certainly profoundly affected his view and reconfiguration of Physics. Equally, the findings in science resonate back on those ideas redefining the Philosophy.

This is exactly what needs to happen to advance both Physics and Dialectical Materialism.

I have developed an alternative physical explanation to the usual Copenhagen idea of quantized electron orbits within atoms, that have directly arisen from a rejection of the current consensus Idealist/Pluralist philosophical position within Sub Atomic Physics.

For, the clearest self-negation evidence of that consensus stance, may I recommend the recent YouTube Videos directly from Stanford University upon Quantum Entanglement, which very clearly indeed reveal the total abandonment of any attempted kind of Physical Explanations whatsoever! For, the current wholly illegitimate Idealism and Plurality of Mathematics is taken entirely alone as a sufficient and delivering source for such a stance.

Yet, when such ideas are “explained” exclusively with reference to mathematical formulae alone, absolutely NO physically-explanatory-account is ever even mentioned, of any of the wholly artificially-contrived Pluralist nature of the “Rational System” being exclusively-used, and which, though validly-applicable, to Pure Mathematical Forms only, is therefore certainly wholly inapplicable to the Qualitatively Varying and, indeed, Qualitatively-Developing-Nature of the Real Concrete World.

For, the recent, entirely New, and exclusively-physical theory, which has now replaced the Old and Increasingly Dissociating Copenhagen ideas, particularly within the setting-up of driven “streams”, within an ever-present, though currently undetectable, Universal Substrate,

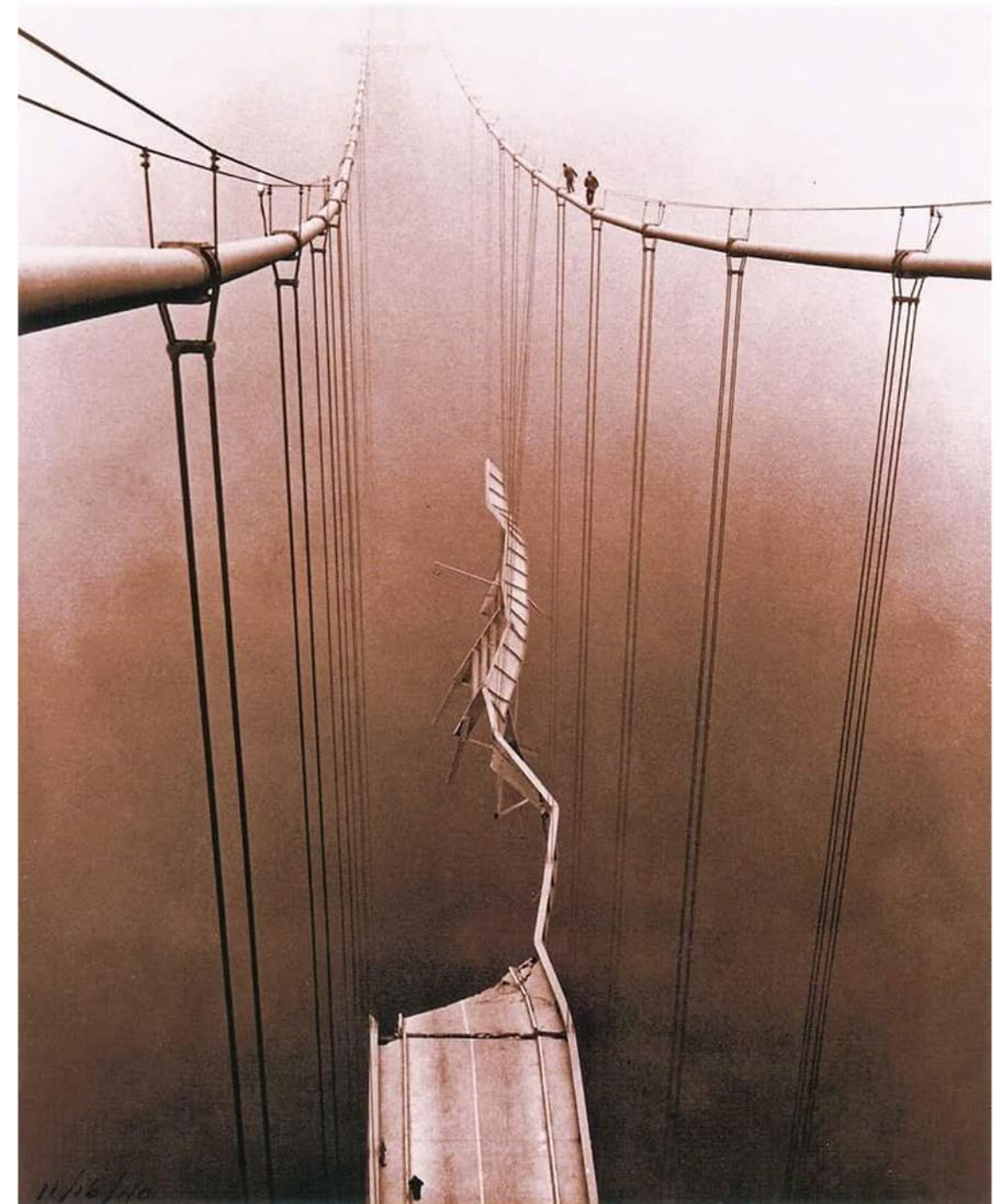
which also dramatically converts the path of any orbiting Electron, within that Substrate, so that all-along its route, that electron had first dissociated the weakly-linked Substrate, and then forcibly driven the now separated Substrate Units, into a series of regularly maintained Vortices, that can both receive their necessary contained energy, from the moving electron (thus decreasing its own orbit's size), or indeed paying back some of that energy, at some point, back to that orbit, if necessary, to maintain it, at one of a series of discrete stably achievable radii. So, by such means, this arrangement is said to produce a discrete or “quantized” series of these orbits, with purely-physical-causes - with absolutely NO Wave/Particle Duality, and NO Copenhagen Theory required.

Instead, there would only be these opposing processes, that could continue to exist as balances between opposing causes, as any other means could build up energy only if the orbits changed continually requiring a constant external source as in Resonances.

So, this alternative only can supply stable discrete orbits, if a both-ways, maintained balance of energy exchanges were involved! NOTE: the experimental evidence for such an explanation, has been proved by the French physicist Yves Couder, with his famous “Walker Experiments”, using a Silicone Oil as both Medium and also as the sole substance comprising his “constructed entities”, and producing “seemingly quantised orbits” by the exact means” described above.

Now, on seeing a Youtube video upon Resonance, and its occasional cataclysmic effects, I wondered if there might also be extreme cases concerned with these Electron Orbits within atoms too!

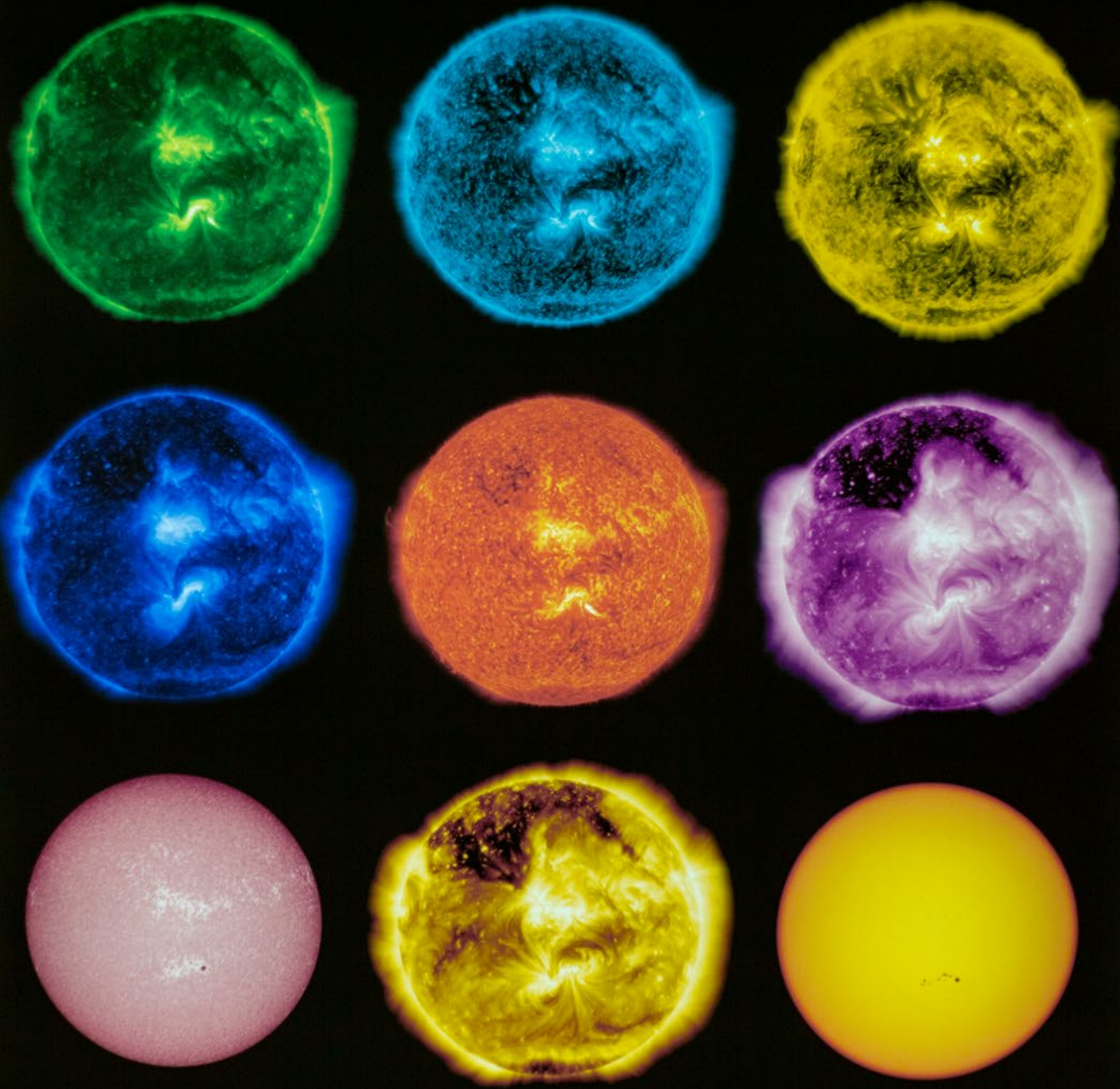
Could a resonant catastrophe, of the kind suffered by the Tacoma Narrows Bridge Collapse, also occur within the



Tacoma Narrows Bridge, 1940

Photographer unknown





atom? For, if the Universal Substrate is locally dissociated by the energy of the electron in orbit, then, presumably, other much more highly energetic flows could do the same sort of thing, but involving energies so high as to totally liberate Atomic Electrons from their captive orbits, and in so doing also ionising the atoms involved, to even impel an energetic flow of those electrons, and, if powerful enough, even the nuclei too, into a highly energetic flow of both of these, as happens in the outer layer of stars like our Sun!

But whatever the initial content of such an energy-delivering flow, it would very quickly include both a dissociating of the Universal Substrate into its individual Units, and an adding of them to the produced flow!

These possibilities would surely dramatically revise our concentrations of High Energy Flows of ionised Particles from the Sun, which themselves would be passing through and further dissociating, spatially, the Universal Substrate, thereafter, being passed through, into its Units too, as well as adding them to the mix in the Overall Flow!

Clearly, such flows would both greatly transform involved regions close to the sun and those at the other end of those flows, at planets like the Earth.

But though the substrate units involved would be neutral, by driving them into vortices, would again be likely, but with no causing and maintaining orbits involved. no balance between opposing processes could be set up. And the most likely result could well be the dissociation of the individual and now free, Substrate units, into their composing sub-units. So, in such circumstances, these charged units would become an active part of the Main Ionised Flow.

Now, the Positrons so released might well be driven along by the also positively charged nucleons of the main flow down towards the Planets, while the Electrons, would not be able to react electrostatically to that powerful positively charged, and highly energetic main flow, so might cotton onto an existing Electron Flow upwards from the Planet, back towards the Sun!

But to make any sort of reliable theoretical conclusions concerning Electromagnetic relationships between the sun and its Planets, we must have a reliable theory as to how the magnetic properties of Planets - like those

existing upon the Earth, first got started and why.

In particular how the Earth got its core magnetism, as well as the Gas Giants such as Jupiter, and how pathways between these Solar System bodies were initially established, and presumably thereafter, were actually mutually developed too.

Obviously, one-way spacial and timewise developments will never see it as such: but, as time cant flow backwards, the seemingly timewise-backwards effects, will have to have been recursive rather than Time itself reversing.

And all developments will not be one-way accumulative either, but also occasionally involving a recursive backflow modifying an already surpassed past via a burst of recursive impetus, to actually overtake its earlier transformations to increasingly new and better heights!

As the devout Christian, Pre-life Geneticist/organic chemist, called James Tour, proved conclusively, the way they are attempting to explain Evolution via Genetics is totally doomed to abject failure!

I don't agree with his Religion, but he is a masterful scientist in his Field, at least upon that crucial question.

Clearly, the currently dominant philosophical stance that still, to this day, rules all of the Sciences, is completely hamstrung by the limitations of its Pluralist view - it has absolutely NO hope whatsoever of transcending these limitations, unless and until, it is replaced by a redefined and rehabilitated Dialectical Materialism, and its currently fast developing ability to deal with Real Qualitative Changes, which Plurality with its Fixed Natural Laws never can.



A muse upon

## Gravity, Relativity and Substrate

The bane of all Science has long been in the role of mathematical formulae, which can, and often does, frequently-and-illegitimately totally replace real explanation (in terms of physical and chemical qualities) by purely formal descriptions of the patterns of such effects. Patterns occurring in Reality are then incorrectly used as the Causes of measured phenomena.

In other words, a materialist Science is replaced by a formal, and hence wholly idealistic, alternative. And, it has long been a regularly adopted pitfall, so that often incompatible alternatives vie with one another as the legitimate “explanations”! Yet, it often does not deflect technologists from effective use of the Form, which if applied in the exact same conditions as those from which they were originally extracted, will work quite well: BUT they never ever *explain* why the relation is such, they just describe it accurately in those essentially-required circumstances.

Now, Einstein’s Relativity is wholly formal in this very way! It cannot explain WHY the presence of Mass bends his Spacetime construct. It is clearly a formal description without any causal explanation.

Now, in my own extended researches, in attempting supply materialist causal explanations, where, currently, only formal descriptive Equations are currently available, I have been able to explain various phenomena by the inclusion of a currently undetectable, yet universal, Substrate, which has been particularly successful in wholly replacing Quantum Theory, in a host of important areas: so it seemed worthwhile to see what such an everywhere-present material-but-as-yet-undetectable Universal Substrate, would have upon the bending of Light by Gravity!

Now, if this were the case, according to the physical Theory that has been developed for Fields of all kinds,

the Units involved would be composed of mutually-orbiting pairs of equal-and-opposite Leptons, enabling, as in atoms, the holding of electromagnetic energy in promoted, internal orbits, and that were then also wholly undetectable currently, but some could both propagate Electromagnetic Energy, such as Light, while others including Magnetic Dipole moments could deliver both Electric and Magnetic Fields, while others, still similar, but excessively-tiny forms could deliver Gravitational Fields.

Now the particular substrate Units propagating Light, have been shown to form loosely connected substrate strands, making possible its propagation of quanta of Light Bucket-Brigade fashion via equally spaced, but linked Units, and the Speed of Light would then be fixed due to the equal spacing of the Units, and any gravitational field distributed by organised Graviton Units would deliver to the units propagating the light, the necessary gravitational forces to pull the strand towards the Gravitating object!

The necessary Theory for the multi-unit Substrate, has been thoroughly developed elsewhere in SHAPE Journal as part of a 10 year comprehensive assault upon Bohr and Heisenberg’s Copenhagen Theories. As well as an extensive critique of the Pluralist Basis of literally all the Sciences, and a damning criticism of Pluralist Mathematics as the Lingua Franca of the Sciences.

But underpinning all of this, is a trenchant criticism of the philosophical basis of the entire Western Philosophical tradition, and its hidden and deleterious effects on Science.

We must carve out a new philosophical path based on explanation, holism and materialism to move forward.





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