

SHAPE JOURNAL

WAVES AND FIELDS

HYDRODYNAMIC, MAGNETIC AND ELECTRIC VORTICES / SUBSTRATE AND RESONANCE / FIELD LINES IN SPACE
CARRIERS OF ENERGY AND PROPAGATORS OF WAVES / THE NATURE OF FORCES / WAVES AND FIELDS IN MEDIA

©2020 Jim Schofield
Words Jim Schofield
Editing & Design Mick Schofield
Cover Photograph Alexander Lauterwasser

www.e-journal.org.uk/shape



Waves and Fields features Cymatic photography. The word Cymatics derives from the Greek 'kuma' meaning 'wave,' and is used to denote the periodic effects that vibration and resonance have on a medium - in this case sound's effects on water. The cover image was masterfully photographed by Alexander Lauterwasser who has published a book of them entitled *Water Sound Images*. Here they are used to provoke contemplation of the role waves might play in establishing fields in media, including an invisible sub atomic substrate.

Waves and Fields

Issue 69 / April 2020

4. Waves and Fields in Media
8. Considering the Universal Substrate
10. Thoughts on Vortices
13. Hydrodynamic, Magnetic and Electric Vortices
17. The Magneton as a Vortex
21. Field Lines in Space
25. Carriers of Energy and Propagators of Waves
28. The Nature of Forces
31. The Substrate and Resonances

Waves and Fields in Media

A Philosophical Project

by

Jim Schofield

Welcome to Issue 69 of SHAPE Journal, an edition which tackles some of the most important problems in Physics from a Marxist perspective - revealing the science's overlooked assumptions and disingenuous methods in comparison to new materialist Substrate Theory. This new kind of Physics assumes a hidden medium of Lepton particles permeates the known Universe, propogates light and explains some of Physics' darkest corners - from pair production to quantised orbits to Dark Matter to Heisenberg's Uncertainty Principle.

As scientists dug ever deeper into Reality, even approaching the mythical "Fundamental Particles" of the Universe, which were supposed to be the original causal sources of absolutely *everything*, the proliferation of impasses became so abundant that "Explanation" itself was abandoned as a myth, and replaced by Mathematical Forms alone.

Unfortunately Mathematics is a Pluralist Discipline, requiring only *fixed* determinations of disembodied entities and forms, so it was always congenitally incapable of addressing what was required. Instead of seeking the engines of Qualitative Change, which might explain the evolution of matter and the rules which seemingly govern its behaviour, the discipline was still permanently orientated to seeking only *eternal* Natural Laws. Sub Atomic Physics, experimentally, was primarily restricted to seeking new discoveries in ever-higher-energy Colliders, or ever more powerful Telescopes - as if somehow technological progress would prove to be a magical salve to these shortcomings. All the while, Physical Theory was relegated into the mere exotic

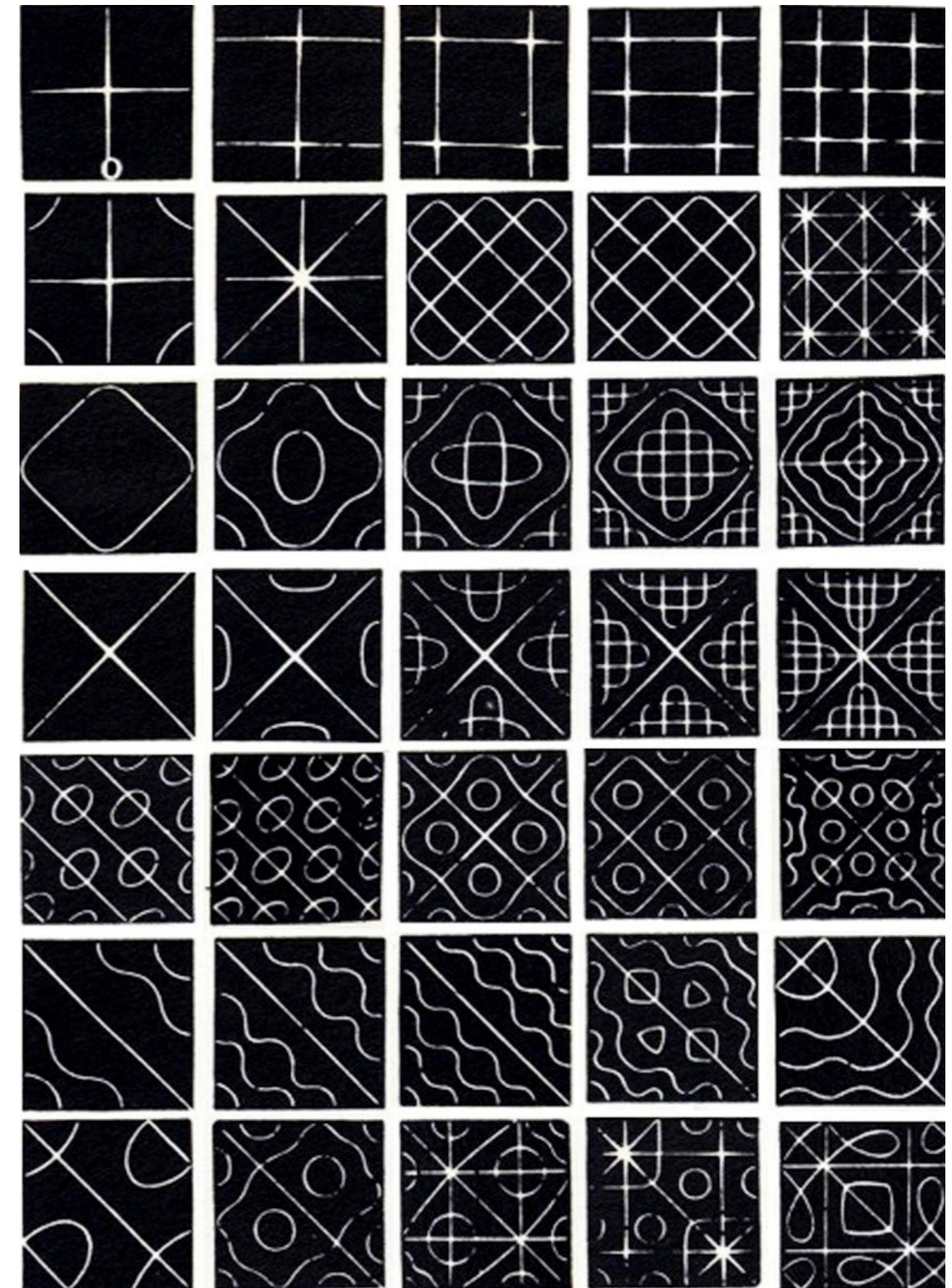
manipulation of Mathematical Equations. Physics had been totally emasculated!

As a result, such an important scientific discipline has been effectively disabled from being analysed in the usual classical way, and, in spite of the sophistication of the Mathematics involved, on any completion, it has still been returned to its inadequate means of the past - explaining very little, yet delivering over long periods of time, a stream of seemingly constant states, each of which maybe "Wholly New", to give the false impression of real descriptive Progress, but that old simplifying Phase has long passed.

What is clearly required today is a Revolution in Explanatory means, which can no longer avoid the crucial mechanisms of Real Qualitative Change - something the old single causes can never deliver.

Now, such a requirement cannot be solved by the usual kind of Causality: it is not a specific result requiring a single cause at all, but, on the contrary, more like a Complex, multi-factor System, that in exceptional circumstances changes into a very different one, or even a wholly new, never-before-experienced Emergent State.

It is a problem, which most certainly, involves many simultaneous factors, which have NOT led to Chaos, but, on the contrary, have arrived at an overall-interacting-mix of processes, that usually delivers a reliably stable-and-unchanging overall state (in fact appearing as a permanent natural and unchanging arrangement -



allowing that assumption of the eternal laws of physics which dominate the field), but which in particular and unusual sets of internal changes, can flip-as-a-whole into a new and different, but temporary stability, once again appearing to be another “permanent” result!

Clearly such Qualitative Changes are never the result of a particular single cause, with a known outcome, but, on the contrary, actually a temporarily-balanced outcome of a complex system, which will find a balance in one of its many possible outcomes, yet most-of-the-time stopped by the internal consequent changes that actually automatically oppose any externally imposed changes, in various corrective ways. But, exceptionally, can alternatively also wholly dissociate, and thereafter re-organise into something entirely NEW. And as the whole thing involves many different factors and levels, each and every one accompanied by one or more balancing opposites, so, the overall results are not easily diagnosed.

Now, unlike the usual Pluralist kind of Causality, the Dialectical form is never, so-directly, predictable: indeed, though the changes often take place within relatively-short Emergent Interludes, it initially involves the trajectory of a whole sequence of dissolutions, and a following, and often-entirely-new sequence of constructive associations, to finally deliver one-or-another from a whole range of possible final outcomes. Indeed, these Emergences are so quick-and-diverse, that the detailed trajectories seem impossible to theoretically reveal!

But, nevertheless, it was surprisingly discovered happening within Social Revolutions, and at much slower tempos, which could indeed be effectively interpreted, dialectically. Indeed, it was, in just such solvable situations, that Karl Marx finally got a general handle upon holistic processes of change, and enabled successful outcomes within a whole series of such Revolutions occurring in the 20th century.

Now, historically, the total absence of such a Dialectical means of analysis, meant the continuance of the prior Pluralistic Approach, which could never cope with such Changes, so the usual method was to, successively, greatly simplify the real situation, until it finally DID conform to Plurality, for each and every recognised Law, applied separately, within separated, tailor-made series of set-ups, would be necessary. And, to compound the felony, the other defining aspect of Plurality - that such acting laws were independant of one another, so their combined

results would be given by mere additions, would also and quite incorrectly, be included in the analysis.

Naturally, in spite of such multiple, separately carried-out experiments, to model the Natural Combined Event, the results would NOT conform sufficiently, so further restrictions were included to remove any possibly-transmitting intermediaries, such as any *Media*, which could intervene, with the excuse, seemingly verified by the Michelson/Morley Experiments, that Space itself was totally empty of any Universal Substrate!

But, of course it was the role of such substrates, which enabled many phenomena to be adequately physically explained by *Waves* within them.

The Wave or Particle Nature of Light exemplified by the disagreements between Newton (for Particles) and Huyghens (for Waves) was resolved by the belief in Waves, but somehow without-a-Medium.

But this, in the 20th century, was removed from physical explanation altogether, and via a construct known as Wave/Particle Duality, “unified” by a wholly illegitimate mixture of Wave Theory and Probabilities, gave useable results, purely pragmatically, via mathematical formulae alone.

But, there is the much more important aberration of *Understanding*, now dominant across all the Intellectual Disciplines, which does not merely distort our view, but damagingly emasculate our ability to travel, even slowly, towards the objective of revealing the Truth of Reality. For Plurality, as is totally unavoidable in Mathematical Reasoning, has long been uncritically extended to both Formal Logic and literally all the Sciences. So that Qualitative Change, which is the *only* engine of all the varying qualities of Reality, and all development too, have been totally excluded from our view of the Universe.

Yet, there has been a tenuous, and often, all too frequently, an almost invisible link - to a solution, literally equally as old as has been the influence of the current consensus established by the Greek Intellectual Revolution, some 2,500 years ago.

It consisted of a totally opposite stance, which was developed by the mystics of India, simultaneously with the Greek Revolution, and greatly influenced by The Buddha, in which the determining essence of Reality was

NOT Stability, as it was with the Greeks, but Qualitative Change - as evidenced by The Whole Living World, and the Consciousness of Man, both of which were available all the time and everywhere, though far more difficult to extract than the simplifications of Plurality.

It became known as Holism!

But these two alternatives appeared as mutually exclusive, so once one of them had been decided upon, consideration of its direct opposite appeared not only impossible, but actually incomprehensible! Though even within the Greek dominated arena, a dissenter called Zeno of Elea appeared immediately after the Intellectual Revolution, who in his Paradoxes, where he applied legitimate contradictory concepts to Movement, was able to expose many rationally untranscendable impasses, though he wasn't aware of it, to the falsity of the Pluralistic stance imposed by the Greeks, upon General Reasoning from Mathematics.

And it wasn't until some 2,300 years later, that the German Idealist philosopher Hegel, resurrected Zeno's crucial exemplars, and considerably extended them to a much larger number of Dichotomous Pairs of Contradictory Concepts, that a possible reason for them appeared to be revealable.

And it boiled down to the impossibility of Plurality in situations where certain things could and indeed did change over time, in these particular cases, due to their being caused by two simultaneously-present opposites, in which the current relative proportions of each of them could change, and naturally cause a resultant switch in dominance between them.

It was a simplified explanation, but was then extended to a more complex System wherein everything varied, but arrived at complex Systems that settled into self-correcting, apparently permanent Stable States (such as those considered primary in Plurality and Physics).

The keys were still natural opposites, but “interpenetrating” in various ways to deliver an important System of corrections to Pluralist Formal Logic, which Hegel termed Dialectics.

NOTE:

An important contribution to this theory was recently developed by the writer of this paper in his researches into the pre-Life Chemical processes, which had to have preceded the first appearance of Life itself, in Systems of Natural Organic Chemical Reactions, and their overall trajectories of change, which were the prerequisites of Life, and which I called *Truly Natural Selection*.

Of course, Hegel's version as an idealist philosopher was to his *mind*, and could only be about Human Thinking: but the transforming step was completed by the Young Hegelian follower of Hegel - namely Marx himself, who transferred over all of Hegel's gains to a wholly Materialist stance, which only then could be correctly applied to both Reasoning and Science, initially by his own Key Intermediary of History. within the most profound Qualitative Changes ever - those occurring within Social Revolutions, as their necessary slow-tempo revelations, and his ever burgeoning Critique of Capitalist Economics, as the detailed coherent definitions of all such Qualitative Changes, in an on-going, constantly developing, yet constantly contradictory System.

Sadly, the final steps in this new Intellectual Revolution, which just had to be the detailed application of Dialectical Materialism to Science, took another 149 years to be addressed by this particular 21st century Marxist, and only completed in the latter part of 2019.

In this new issue, these dialectical studies are taken further, looking at the role waves and fields play in physical holistic systems, and how their study might change Physics forever.

Considering the Universal Substrate

Some Developmental Muses concerning Substrate Theory

When I first considered an undetectable Universal Substrate, absolutely nobody in Physics showed the slightest interest at all. And even when I began to get significant results with The Double Slit Experiments, it was still considered insupportable.

And even as this research has finally produced a comprehensive materialist alternative to The Copenhagen Interpretation of Quantum Theory, I am still surprised at the total lack of response!

So, I decided to turn my attentions to other disciplines, including Cosmology, where Professors like Carolin Crawford of both Cambridge and Gresham College, have given a whole series of lectures on such topics as The Interstellar *Medium*, Stellar Dust, Dark Matter associated with Galaxies and even *Sound* in Space - looking at Cosmology it seemed to me that the abolition of the Aether may have been somewhat premature, considering these much later admissions regarding the materiality of space. And though these lectures were public-orientated and individually short, there was certainly enough in them for me to write this paper and address the latest developments in my own research.

In spite of the significant gains achieved in Modern Sub Atomic Theory by this author - ultimately torpedoing Quantum Theory - the new proposed entities and their qualities, on which Substrate Theory is based, have NOT, so far, been sufficiently developed, as a necessary part of the new system, mainly because of the general undetectability of all the components involved. This, alongside their extremely small sizes, and their often unusual, and as yet often unrevealed collective behaviours, when purely-theoretically separated into individual entities, outside of the Substrate context for investigative purposes, prior to seeing how these deliver wholly new features when existing in combination.

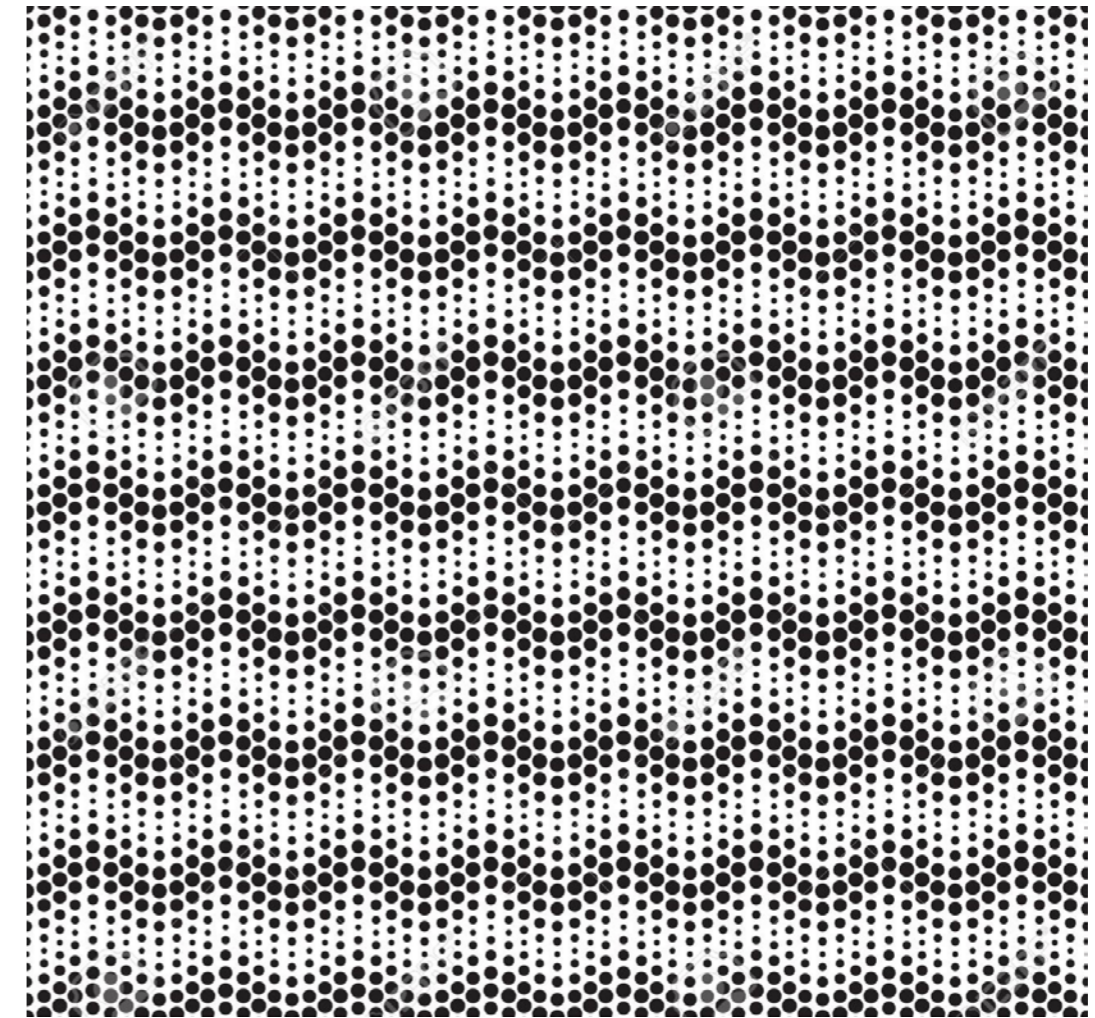
And these will be due to the absolutely “Everywhere-Present” nature of such a Substrate, along with its now defined multiple components, their consequent Phases, and even the hierarchical forms of the overall Levels, and, therefore, also its consequent diverse extra properties (also not helped by their universal undetectabilities too)!

[Editor - this is certainly one of the pitfalls of studying Physics using Holistic Materialism - situations rapidly become too complicated to deal with in the usual ways]

So, holding firmly onto a particularly successful way of revealing these Units, as well as some of the produced results, particularly those being either extremely tiny or of as yet undetermined properties, or even both of these together - we have entities, clearly possible, but as yet unallocated to any current properties and purpose.

Yet, considering only the already-defined Neutrinos, Magnetons and Gravitons of the Substrate, we have had to extend the properties involved, not least because the sizes of the Units differ so markedly as to push them into a clear layered Hierarchy of Substrates, with each level becoming the background generality for the one above it, and overall even having a size range across them all, of a Million-to-One: so that each Substrate-level can be conceived of as existing within another higher Substrate Level, composed of much smaller sized units. And, even finally suggesting that the Level Features of one are actually delivering a Substrate-Ground for those at the next level up!

In addition, as far as we can currently see, all the various Substrate Units can theoretically re-constitute themselves into Very Different Structural Phases - delivering quite different grounds for activities at the next Level up - these are somewhat similar to Gases, Liquids & Solids, but not temperature defined - delivering alternative contexts with very different properties.



Indeed, an alternative purely physical explanation of Quantized Orbits in atoms becomes possible (as well as the mutually-orbiting Pairs required by Substrate Theory) developed by conceiving of an underlying Paving Substrate Level of Neutrinos within the atom itself - in a Phase that can be externally-driven first to dissociate into separated Neutrino components, then traveling as a driven Stream, until finally delivering maintained Vortices, that derive energy from the driving orbit, but with the opposite also being possible, finally arriving ultimately at one or another of a series of possible stable orbits, with the gaps we observe in between.

It was becoming increasingly clear that the study of waves and vortices in fluids might help unlock how these hidden Substrate levels could behave.

In a similar way to Yves Couder's “walker” experiments, where he studies fluid dynamics as quantum analogs, the collective holistic properties of the Substrate would have to be studied as we study the dynamics of other media.

However, this is not without problems...

Thoughts on Vortices

The Vortex seems to be a very important feature of turbulence within the Substrate - particularly in on-going, constantly repeating situations, such as when associated with orbits.

For, in the more usual transient situations, such as linear translational movements, the energy involved soon gets dissipated and lost. But, in those constantly repeating situations, as within the orbits of electrons in atoms, there is a chance, because of the regular return of the electron, that any so-caused vortex could be regularly maintained by those many returns, and, via energy transfers in both directions, finally even arrive at a balanced situation, and a constant, stable state achieved.

However, in such situations, the vortices only occur if a prior Substrate has been dissociated, all along the orbital path, into individual Units, which are then further affected by the constantly returning electron, to be driven into separate vortices, as a kind of imposed Spin! It matters, of course, what the composing units are made of, and their properties, and finally, just how their imposed Spin will affect them.

Will, for example, a unit with an electrical charge, in such circumstances, produce a magnetic effect, due to the Spin, and deliver that effect along its axis? For, it is said that a spinning charged particle, like an Electron will do exactly that!

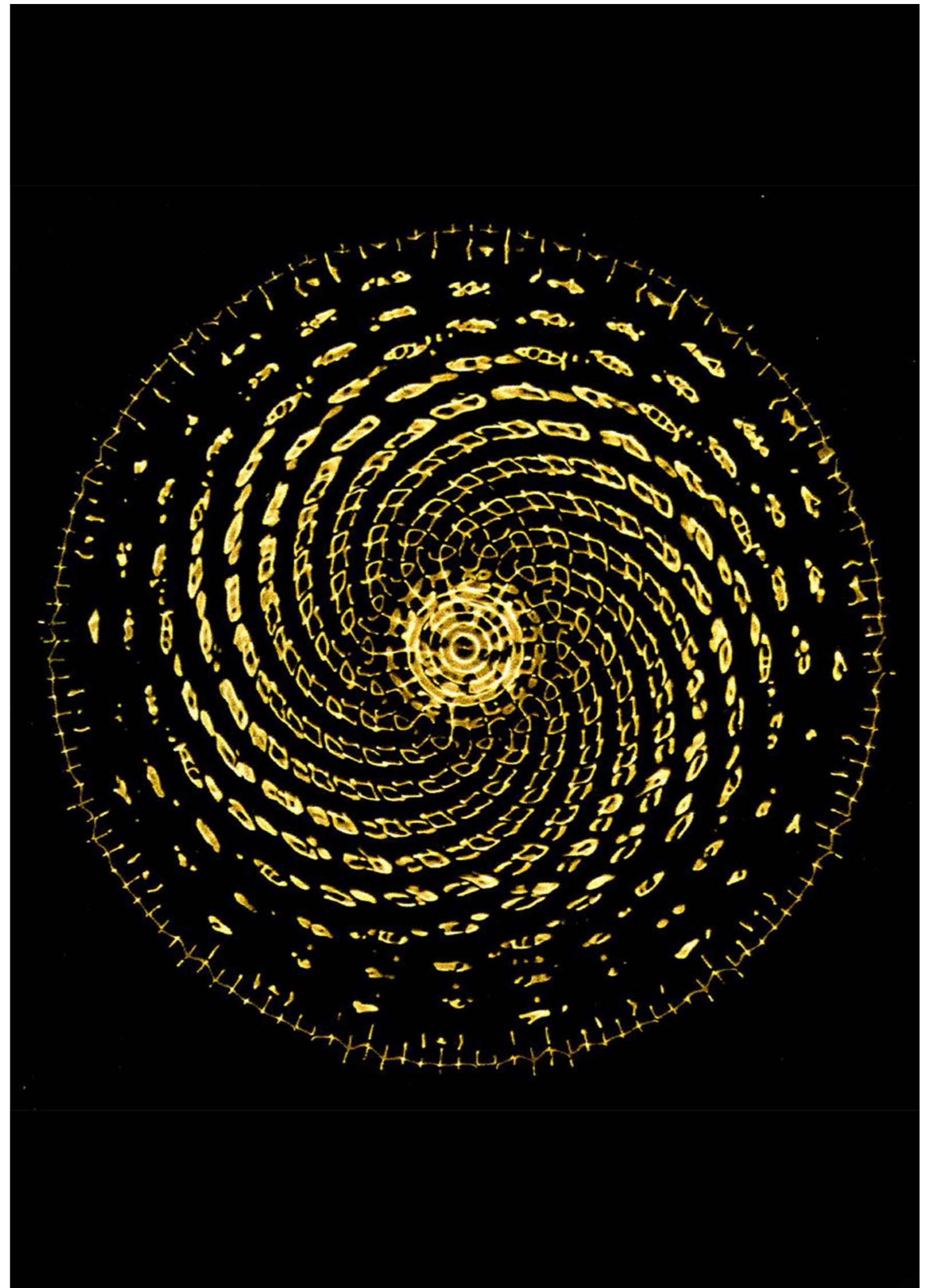
Now, also, a translationally moving charged particle, as well as carrying an electrical field along with it, will also produce a magnetic line of force perpendicular to its direction of motion that also moves along with it.

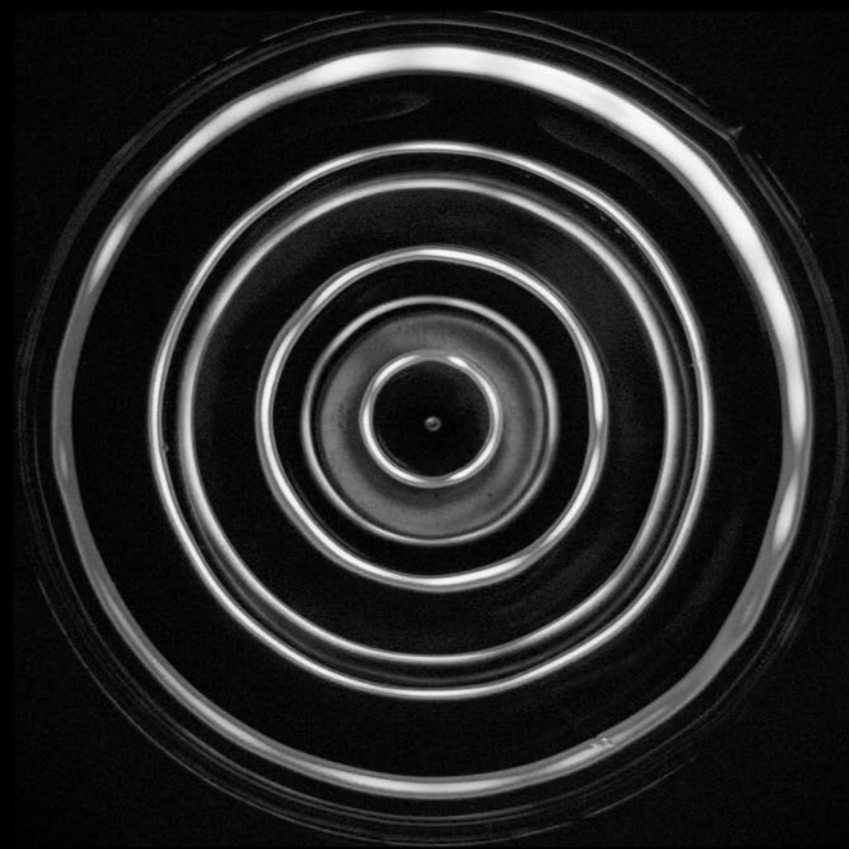
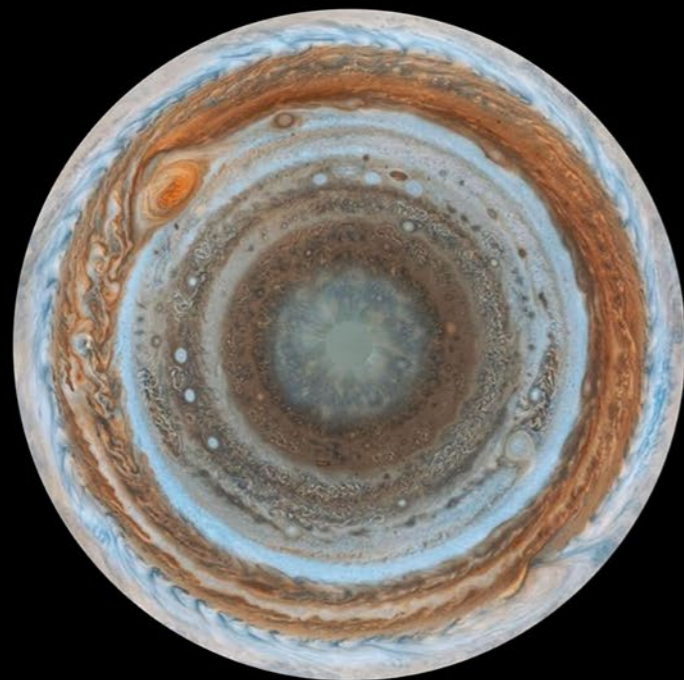
It will depend, of course, upon whether it is spinning or not! But, if it is spinning, the magnetic line of force will be in a single direction, determined by the axis of that spin. Whereas, if the magnetic lines of force emanate in every possible direction perpendicular to the direction of motion of the particle, AND the effect could then NOT possibly be due to the spinning of the particle, but something else.

NOTE: Indeed, an alternative was developed in earlier Universal Substrate Research, by this theorist, involving Magnetons, which certainly delivers all the directions perpendicular to the direction of motion case. These being due to detached Magnetons from the charged particle's accompanying Electric Field, due to impacts with the Substrate it is passing through, and these are then ejected off, in all sideways directions, as linked magnetic lines of force.

BUT - as the magneton itself has an intrinsic Magnetic Dipole Moment, it too requires an explanation of its properties, which obviously cannot involve itself!

This must have something to do with the level of Substrate below this one.





Hydrodynamic, Magnetic and Electric Vortices

Are the mathematical similarities in these diverse areas of Science masking their true and different natures?

To answer the question posed above we must first acknowledge how Mathematics simplifies any reality it attempts to represent - how it can only deal with pure form and qualitatively unchanging entities and laws.

Now, such a Discipline, though perfectly true in what it is - a Pure Formal Mathematics, defined by the Principle of Plurality - also meant that they could only deal with *Stabilities* as the only things possible within such strictly-defined limits.

Indeed, at the very heart of all Physics, for example, ever since that time, the first objective has always been to establish, and strictly maintain an easily-reproducible Qualitative Stability (such as in a laboratory experiment) in which to very easily and dependably investigate, gather data and extract a wholly Pluralist Law - only such Eternal Natural Laws are ever sought in that kind of Physics. And, thereafter, in order to use such a Law, the exact-same Stability would again have to be used again, for such a law to even hold.

And the excuse usually given for this methodology, was always that in Reality-as-is multiple-simultaneously-acting-laws greatly confuse things to the point of unintelligibly, so that each Law involved, had to be artificially isolated in order to extract it - "exactly as is"! But, that excuse isn't valid either, as multiple, simultaneously-acting laws don't just act *independently* and merely SUM, but do actually both affect and indeed *change* one another over time.

So, in a recent "educational" video produced by Caltech (Episode 36 of their Mechanical Universe series), Hydrodynamical, Electrical and Magnetic phenomena were each presented ONLY in such Stabilised Interludes, and in such a way as to produce only a single effectively identical relational Form for them all.

The inference was that they are all actually determined by very closely related laws, which in such pluralistically selected situations will always be the same. But, outside of such artificially distorting straight-jackets, they will, of course, differ markedly!

Consider instead a turbulent mountain stream, a bolt of lightning and the giant red spot on Jupiter: are they really all the same?

And as Mankind later struggled to apply such things within naturally unrestricted areas of Reality, where, for example all three could be happening together, and unable to be pluralistically simplified, such as in places beyond our interfering reach - in the Cosmos for example - what then?

And the biggest criticism of all: how do we investigate the actually occurring Emergent interludes of real and undoubted Qualitative Changes, which have made every single quality that we are now aware of on every side? How does such an Interlude occur? What are its causes? And, what is its the trajectory of change within it? Absolutely none of these can possibly be addressed with a Pluralist approach and consequently only producing a damagingly blinkered Science! Qualitative Changes are indeed both recognised and named, but never actually explained, or even adequately described in the Mathematics.

What is needed, but it not yet available, is a way of conducting science holistically, so that the methods used acknowledge and account for how changes really come about and how natural systems interact with and change one another. The alternative approach historically attributed to The Buddha, and termed Holism - can in some cases offer a more profound grasp of such natural change, but must be extended philosophically into an all-embracing investigative approach, and that was never done in its heartlands in Asia.

Indeed, its establishment could only be exposed and classical Holism reconstructed, out of a trenchant criticism of its exact opposite, Scientific Pluralism, and thereafter, in addition, its detailed application-to, and consequent development-by, Explanatory Science.

And though Zeno of Elea revealed Plurality's shortcomings in Formal Logic in his work Paradoxes, it was a full two millennia later, that it was partially applied by Hegel to General Reasoning, and the overall necessary developments finally initiated by Karl Marx, as what he termed as Dialectical Materialism - but it was only generally applied by him to History and Capitalist Economics, and is only now in the 21st century finally being systemically extended philosophically, and applied comprehensively to Physics!

The Problem of Mathematics

Now apart from the philosophical problems outlined above, those alone when addressed do NOT solve the underlying problem of the Sciences or even General Reasoning. And this was because an admirable means of dealing effectively with pluralistic situations had immediately preceded the developments in both formal Logic and Science. Mathematics, as the sole means in all pluralistic situations, now became the tail that began wag the dog!

For not only did it infer Plurality in all it was applied-to, but also imposed Ideal Pure Forms as the actual determinators - the causes - of all such phenomena too!

And this was no simple and easily remedied error: for the solution via Modern Dialectical Holism was many times more difficult to implement, as a thorough-going analysis, and Law revealer, but also Mathematics could be made-to-be useable by producing and maintaining Pluralist Stabilities, within which to carry out not only investigative experiments, but also predictable productive processes too!

"So, why bother?!" may be your initial response.

But such an approach only established an Age of Technology!

Science, on the contrary, should be about *Understanding* rather than Production, asking why things behave as they do, and thereby generalising what Objective Content (the partial Truths we can always find) to build understanding upon all things.

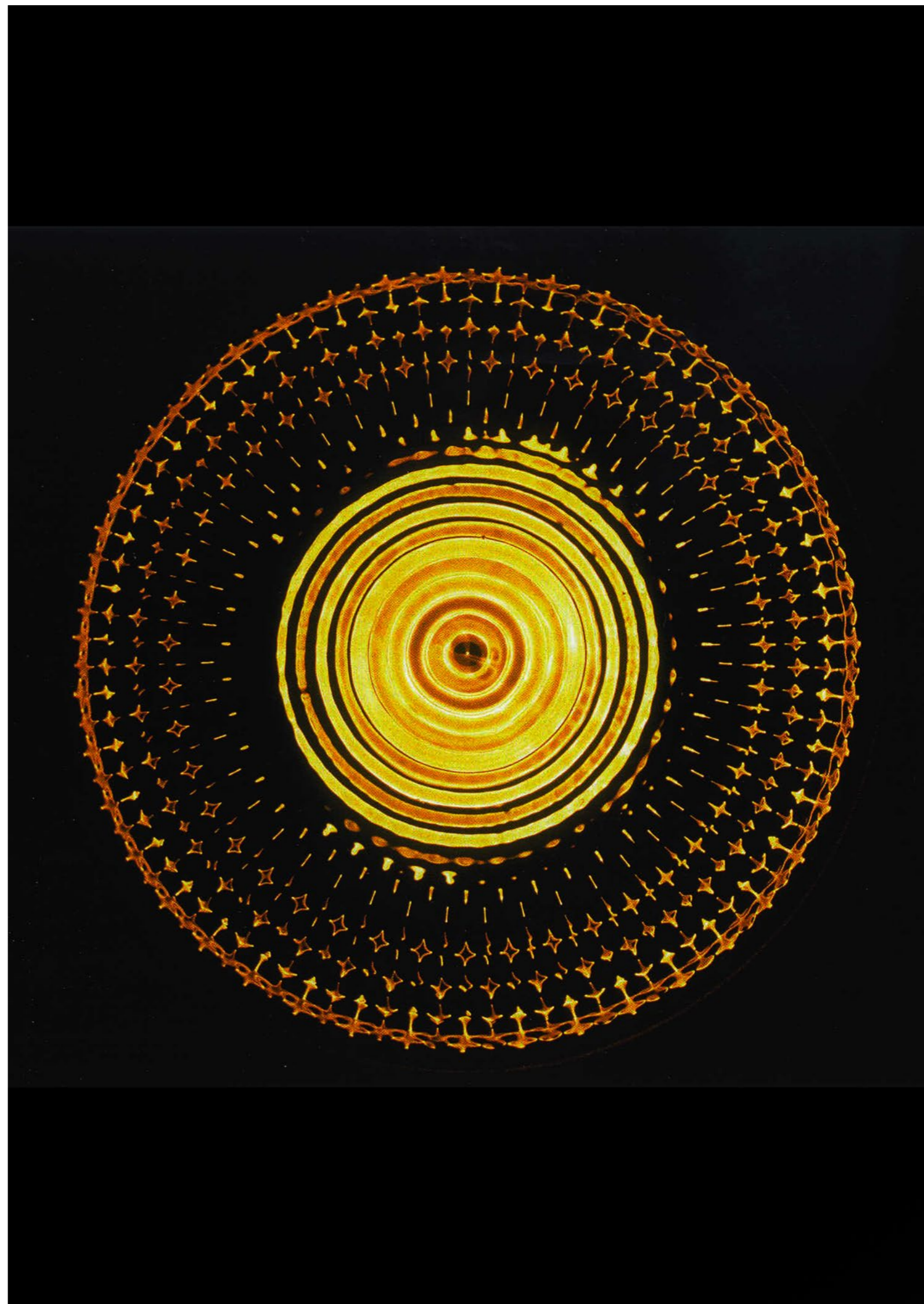
And this has begun!

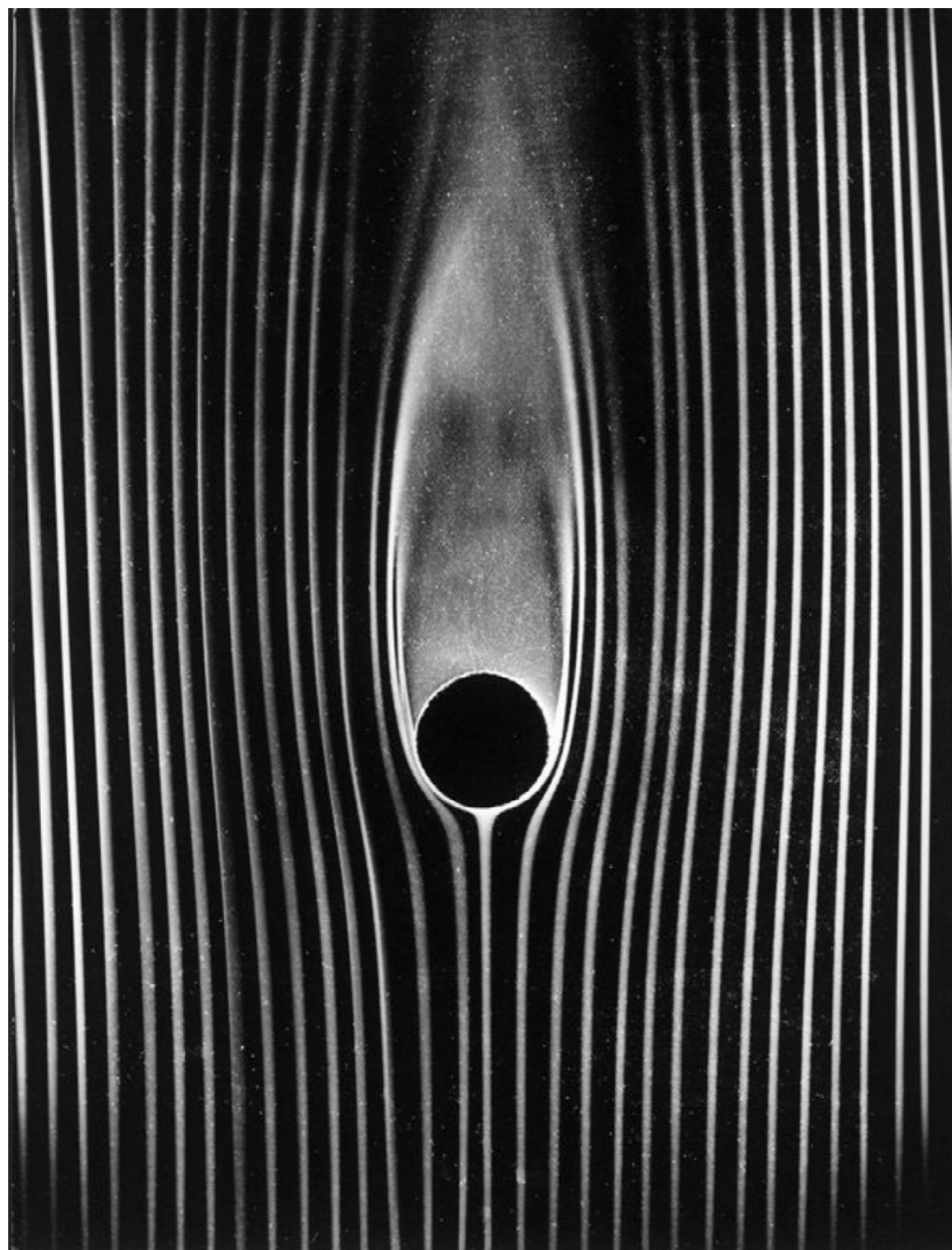
It is a very different kind of approach, which, for the first time ever, addresses Qualitative Changes as an inherent part of a Developing Materialist Reality, and not just as an idiosyncrasy of Dialectical Thinking, as it was with Hegel.

It delivers very different conceptions involving a constantly varying Reality, which, nevertheless, produces temporary, if sometimes *very* long-standing, "Balanced Stabilities", separated by short "Emergent Interludes" of Significant Qualitative Change which can totally change the game completely!

In Life they produce Adaptive Radiations via Evolution, while in Societies they deliver Social Revolutions - and even in the Cosmos they cause the birth and consequent development of every single Star, and much later both their terminating Novae and even Supernovae, and in so-doing produce ALL of the heavier Elements existing throughout the Universe.

If we are to study the similarities between fluid and sub-atomic substrate vortices, we cannot make the mistake of the pluralists and do this via studying similarities of abstracted form alone... we must explain the sequences of material changes that lead to these temporary stabilities and how similarities in these trajectories of change lead to any similarities of form.





Windkanal, 1955
Heinrich Heidersberger

The Magneton as a Vortex

Updating Maxwell's Theory of Electromagnetism

Re-reading James Clerk Maxwell's 1847 paper on Electromagnetism, I have been brought to a problematic halt.

I encountered what seemed to be a key contradiction, in my intended objective of attempting to validate his powerful (and I believe valid) method of primarily seeking Analogistic Physical Models, taken from already well-known areas of prior scientific study, to most effectively guide the construction of a wholly new theory, this time of Electromagnetism.

For, to actually achieve this objective, he clearly feels that he must depend crucially upon mechanical vortices, in order to bring into his explanations the 90° relationship between Electrical and Magnetic Fields.

Now, I too, had confronted an almost identical problem in addressing such fields, as properties of a material, but currently undetectable Universal Substrate, composed in some way of paired combinations of Lepton Particles, taken from the generally accepted Standard set.

My problem, some 170 years after Maxwell's, was in criticising the Copenhagen interpretation used to "explain" the ill-famed Double Slit Experiments, which I had, I believed already completely solved, entirely by assuming an undetectable, yet both affecting and effectable Universal Substrate.

But, of course, for this theorist, the next step had to be the full and detailed definition of the true nature of that Substrate! Indeed, what, exactly, was it composed of, and how could I explain that same 90° relationship between Electrical and Magnetic Fields within it?

But, nevertheless, prior to that particular conundrum, I clearly had first to define the necessary Units (and their required properties) of the Substrate, that would make

it both undetectable, yet also, nevertheless, significantly affecting certain intruders, while also itself being ultimately also affected by them - another contradiction!

I initially settled upon a version of the Positronium - a mutually orbiting Pair consisting of one negatively-charged Electron and one positively-charged Positron, which I established as an everywhere-present unit of a Universal Substrate, could indeed be stable, but would also explain both Pair Productions, and Pair Annihilations in appropriate destabilising circumstances.

For, this suggested Substrate Unit, entirely alone, solves all the basic problems of the full set of Double Slit Experiments (Ed - please see Special Issue 3 of this journal). But also, via its established Three Possible Phases of Existence and (renamed) as a Neutrion joint particle, it was wholly capable of explaining Quantized Electron Orbits too. When separated into free-moving individual Particles as, or even thereafter as driven-flows (by moving Electrons), they naturally produce Vortices that define and maintain the Quantization of Electron orbits in Atoms, via a series of stable paths, achieved in each, via a balance of energy transfers between the Orbits and the Vortices!

So, Vortices were a key part of Substrate Theory even before its Right Angle characteristics were considered necessary too!

But, in spite of the successes with Neutrions, absolutely nothing seemed to be available for delivering Electromagnetic Fields in space! EXCEPT that is the remarkable model of the Hydrogen Atom. For though it was much too big, and would certainly NOT be undetectable as these proposed Substrate units must be - its Form could be achieved in yet another Substrate Unit also composed of pairs of Leptons.

A mutually orbiting Pair consisting of single Muon and Tau particles, having opposite charges and matter-types, could indeed deliver exactly what was needed to deliver Electrical or Magnetic fields, and if also accompanied, in equal numbers, and in a free-moving form, by its clearly possible mirror-image form, they would effectively cancel out, and deliver the required undetectability too.

But also, and indeed crucially, these Magnetons, were clearly similar in their involved form to a Vortex!

And they each possessed a Magnetic-Dipole-Moment perpendicular to the plane of the orbit of the smaller component Particle.

And, to cap it all, they would all be individually dipolar! They could form chains, to go from a magnet's North Pole, within a Line of Magnetic Force, all the way to that magnet's South Pole. Things seemed to be getting more and more possible!

Maxwell was also enamoured of uncharged material particles forming into Vortices, and of tackling the problem substantially in terms of motions and consequent Pressures and Tensions in the Three Directions of Space itself. But clearly the electric charges, particularly those Negative Charges of Electrons, just had to be involved too.

NOTE:

Now, these Magnetons seem to be able to arrange themselves, in appropriate circumstances into either Electric or Magnetic Fields.

Yes, both of these seem to be possible!

The forming of Electric Fields around charged particles make sense as complete spheres, with all the units in such a shell of the same field strength. And subsequent shells will form around the first one, but each shell having a smaller common field in all its units: the closest relations being always within the individual shells.

On the other hand, the Magnetic-Lines-of-Force emanating from one end of some material Magnet, which instead form chains of Magnetons, linked N-Pole to S-Pole all the way round to the other pole of the initiating Magnet, and all of them limited to the very same contained Field.

Except that the lines of force from the centre of the Magnet's ends seem to be heading off to nowhere seeking a compatible Pole to link to doing exactly the same but from elsewhere [if we extend this to coils of wire carrying a current we get the same Magnetiv Field. But, if the coil joins itself in a ring or toroid, ALL the lines of force are entirely within the coil and NONE appear outside of it]

Now, a previously unanswered question concerning fields in the now standard Substrate free conception of Empty Space is:-

“Where does the energy come from to power actions of the Electric or the Magnetic Fields on their interactions with interlopers?”

It cannot come from the “supposed causes” of the Fields, for they are always unaltered by the actions of the fields. And it cannot be from the affected interlopers, because their energy is accounted for completely in the subsequent trajectory of the interloper: so NONE initialises the change in direction involved.

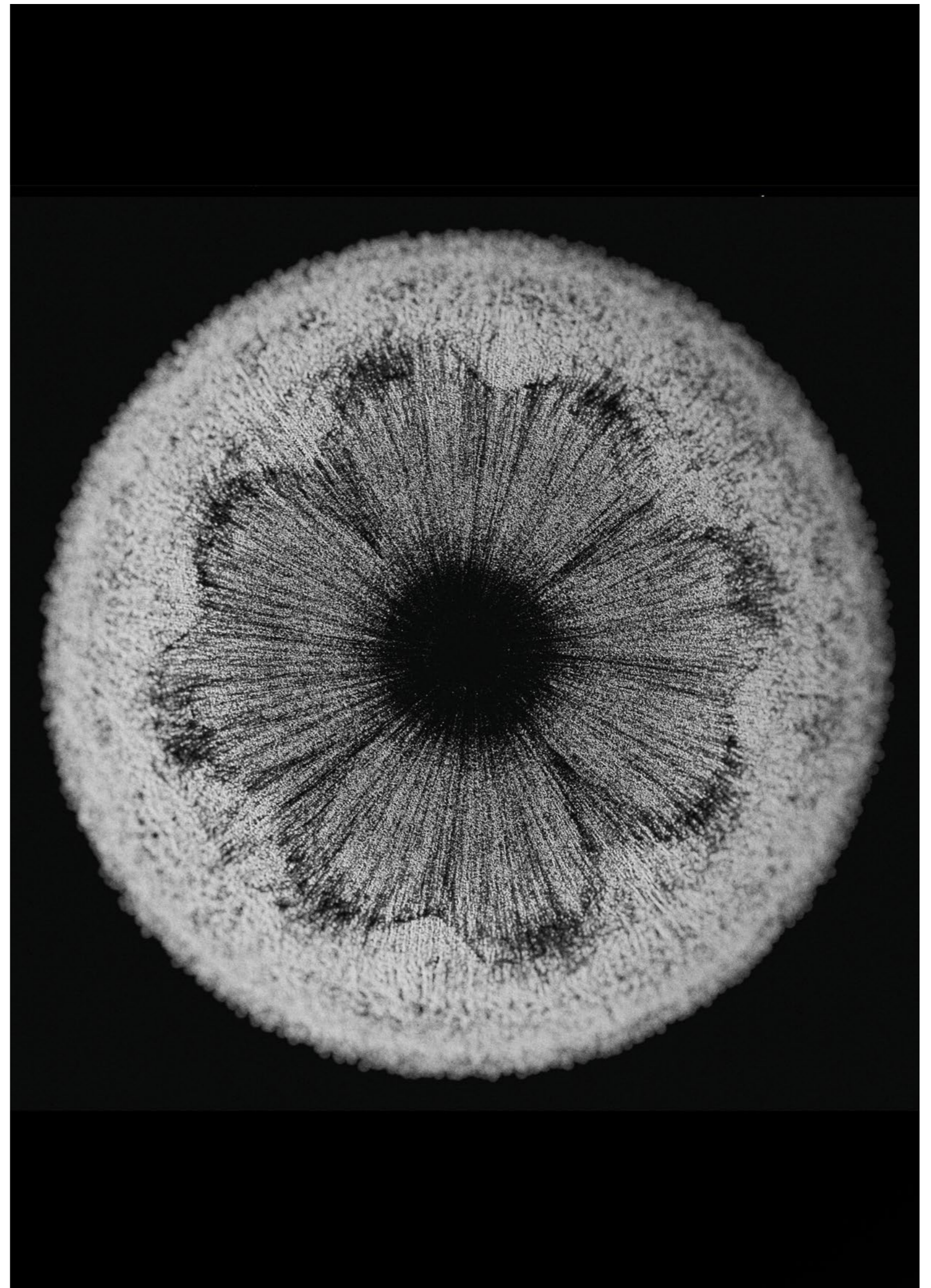
And that only leaves the *Field itself* as the source of the energy required. So where could it be IN THE FIELD, and how would it be replenished afterwards to restore the field?

There is an answer with Magnetons!

For their internal mutual orbits can have been promoted in the establishment of the Field, and thereafter hold energy, which on demotion would be released to power the changes. While such entities in the Substrate could transport energy Bucket-Brigade style from elsewhere in the Substrate to fill a clearly defined hole.

The conception of mutually-orbiting pairs of oppositely charged entities and composed of opposite Matter-Types, seems to have radically altered the concept that there is NO Universal Substrate, and also just as these same ideas have recently totally scuppered The Copenhagen Interpretation of Quantum Theory, they are now demonstratng how the current theories about so-called Empty Space are mistaken too.

And already there are multiple areas in Cosmology that seem to be radically challenged by the very same concepts across many questions at the Cosmic Level.





Field Lines in Space

On reconsidering the forces inherent within any kind of Field, various necessary concepts are unavoidably and implicitly involved.

The first of these is the idea of an entirely Empty Space, necessarily containing absolutely nothing else (or, at least, nothing that could be assumed to be *material*).

Thereafter, in what we are absolutely sure is just such a totally Empty Space, we find that we can detect a seemingly wholly *disembodied* Field, which can, and also be demonstrated to actually forcibly-affect, any introduced, susceptible material entity encountering the aegis of that Field at its currently occupied position.

Yet absolutely nothing can be detected in that entity's immediate vicinity, which can have caused the Field!

But, extensive and widespread investigations will always find the identifiable cause somewhere further away: and this is also confirmed as such, by the detectable structure and nature of that field all round its source, and extending predictably out to our occupied, disembodied Field Point.

Indeed, by connecting all such points with the very same Field strength, with a drawn set of Lines, we could easily deliver a kind of partial skeletal Image of that Field, via such "Lines of Force".

But such an image can also be, of course, somewhat misleading, as it artificially makes visible only part of an otherwise invisible Field, as no matter where we test, within the area encapsulated by the Field, there will always be revealed yet another Field Value.

The Lines of Force will be everywhere within the aegis of the Field, and often only provide the contours of most Fields!

Now, at such a point, a valid conclusion can be extracted from the Drawing, and the known values, for no matter on what basis we commenced each line, they would appear closest together, where the Field is at its strongest. And this allowed a mistake to be made as a kind of short-hand description of the Field - it could be said, for example, that there were more lines of force wherever the areas of the Field were strongest.

And that, though a rough rule of thumb guide, that is actually incorrect!

The Field will be *everywhere* surrounding its apparent source.

It appears to be continuous, yet wherever we elicit its power, we will always receive a discrete amount of Force. So where will that discrete amount of necessary energy reside, as our point appears to be entirely Empty Space?

The trouble then also is, "How can such a force-capable field be communicated from its supposed source and all the way across Totally Empty Space?"

And why is that supposed source always totally undiminished in its measured properties by actions of the field: and if the same precise effect is again triggered, will it happen again, exactly as before, as if the Field is totally undiminished by its actions?!

How can we have such Actions at a Distance?

Now, such reasoning is not original!

So Mankind, in attempting to explain such events, long ago, carried over the known existence of material Media, such as Air or Water, into the supposed Vacuum, but, always as a currently undetectable Universe-wide Substrate, which was then called The Aether.

[And it would have to hold the right discrete amounts of energy at all points in the Field, which would have to be replenished after an action, but NOT from the supposed source, but elsewhere - for it doesn't change!]

And it was used in various ways, to not only deliver seemingly immaterial Fields, but also to enable the propagation of Electromagnetic waves across that assumed-to-be Empty Space, like waves in the sea or air.

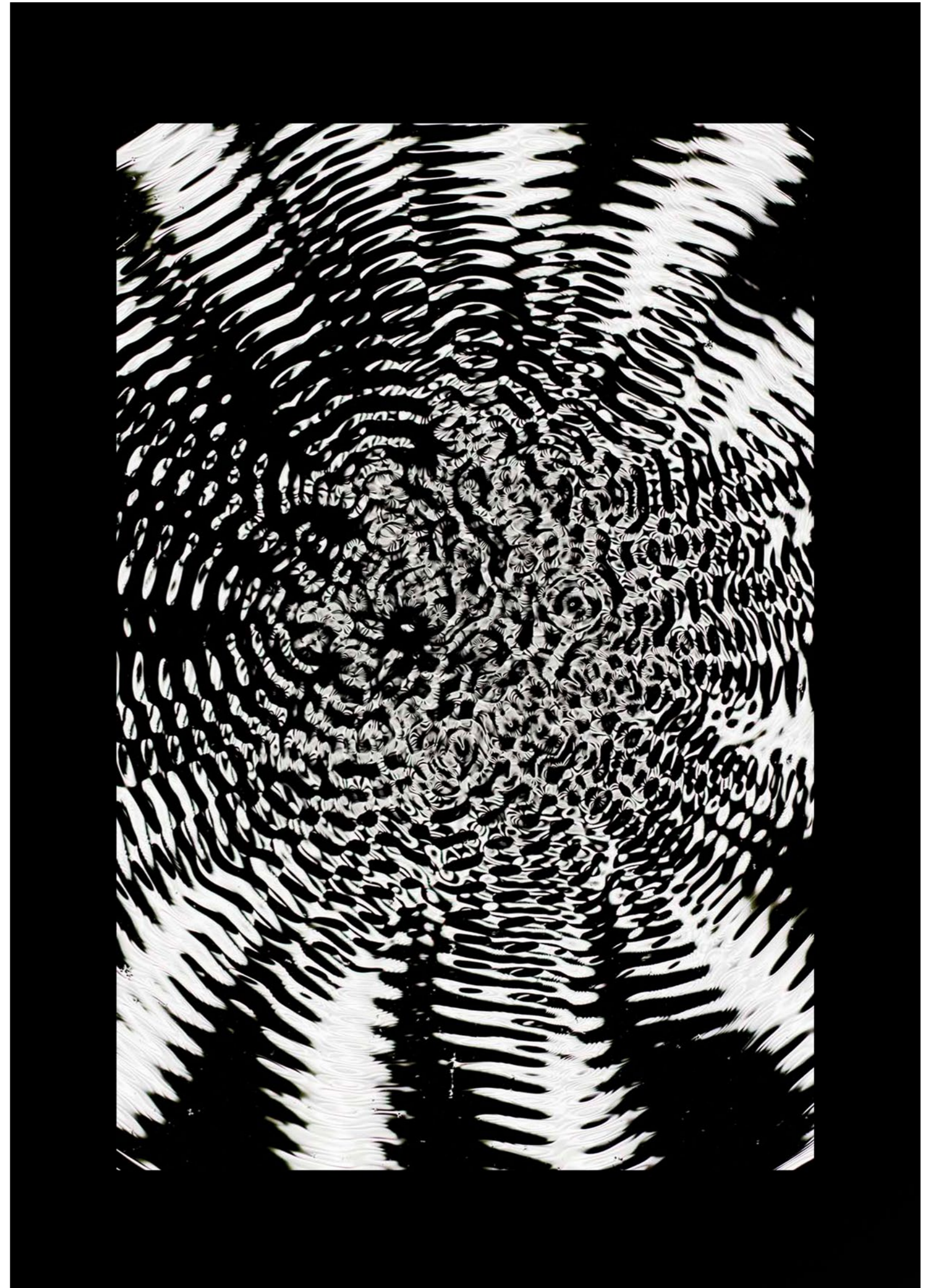
And such a material, if currently an undetectable Substrate, could also by analogy with known Media also allow explanations via multiple discrete units of what were conceived of as Continuous processes, though almost always as features of those individual units acting together and influencing each other collectively.

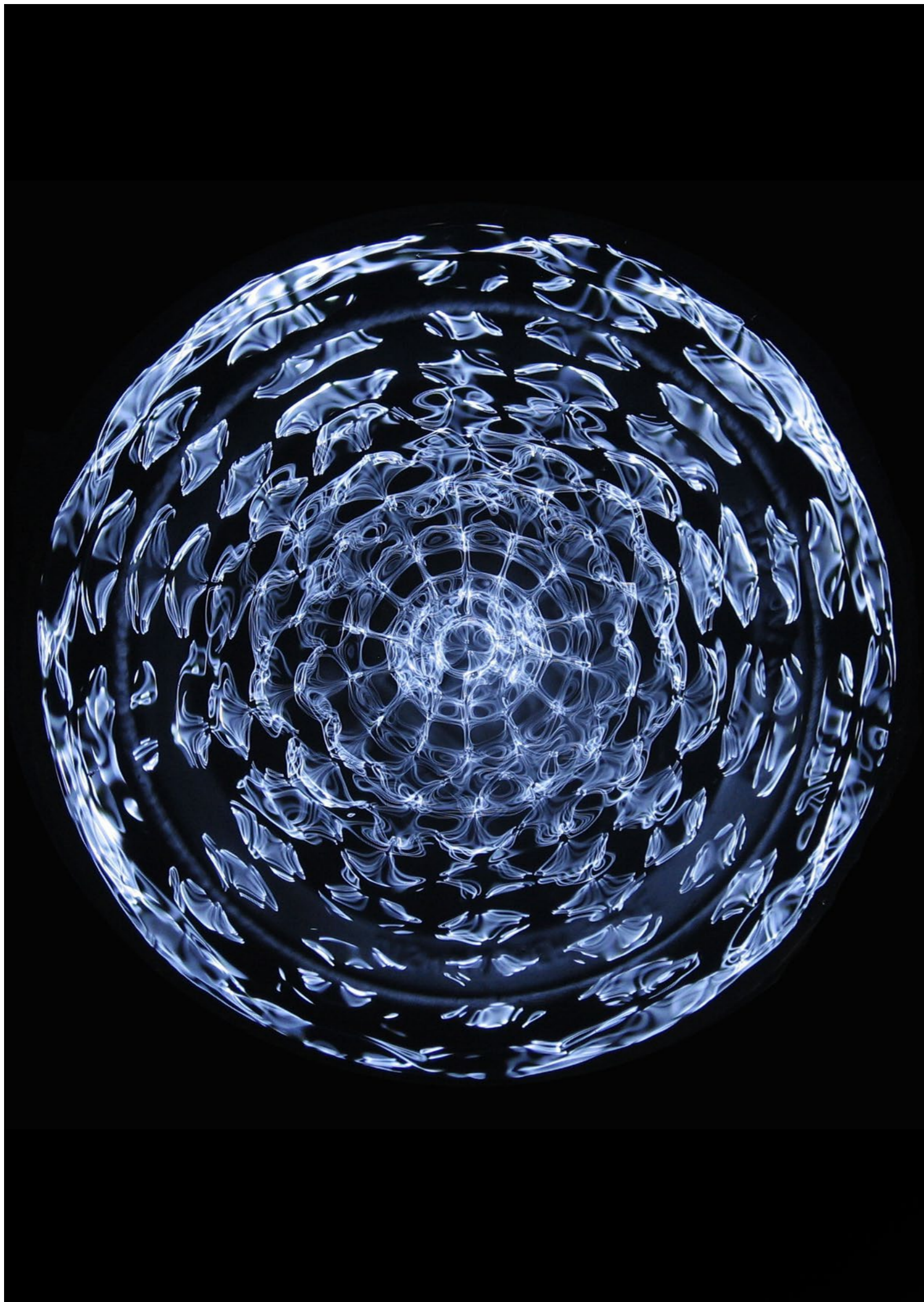
Such Waves are communicated by their mutual effects or collisions overall, they don't deliver anything individually. So the Aether was kept as a placeholder for some, as an as yet undiscovered alternative, with those imposed characteristics required to "do the jobs"!

And, the Aether survived until the famed Michelson/Morley Experiment, which could find no sign of such a Substrate, so the placeholder was abandoned leaving only a "Hole".

Empty Space as Nothing was conceived of to replace it. It was left open!

However the solutions were really a set of Mathematical tricks which failed to explain the physical properties of the vacuum, how fields exist in Empty Space, the wave-like propagation of light or spooky action-at-a-distance. Substrate Theory plugs these holes in Physics, but we still know very little about what this invisible Substrate is or how it behaves.





Carriers of Energy

and

Propagators of Waves

170 years ago James Clerk Maxwell was puzzling over the possible carriers/propagators of Magnetic Lines of Force in a vacuum. At the time he believed, along with literally all of his contemporary colleagues worldwide, that space must be filled with an invisible (but material) Universal Substrate, at that time usually termed, The Aether, mainly because many of the revealed properties of that vast expanse clearly supported phenomena, which could not be explained in any other way.

For, Lines of Force appeared to be important active features of Magnetic Fields, clearly associated with delivering real Magnetic Effects, and somewhat surprisingly, generating, in addition, clear extra effects between those Lines of Force, themselves, while also being associated with the evident propagation of Magnetism too, being wedded to the Aether! So, Maxwell was attempting to make it, as a medium, the general carrier/propagator, for all Magnetic effects, but could not deliver absolutely everything required by such usual means!

His problem was in deciding whether the entities involved in these processes were Particles or Waves (remember this was over 70 years before the advent of Copenhagen Interpretation Physics) so for him it had to be a choice between the two!

In order to establish a comprehensive Theory of Electromagnetism, and, in particular, Magnetism, he found contradictions in attempting to deliver all such features, by one or the other of these means. He was, of course, in a sense, pre-echoing the problems of the Sub Atomic Physicists of the 20th Century, with their attempts to explain the Physical Theory of the ill-famed Double Slit Experiments, which ultimately caused physicists to abandon Explanatory Physics for

an exclusively Mathematical alternative, along with a wholly speculative defining of what they termed Wave/Particle Duality. This re-defined Electrons (for example) as entities which could switch their natures (somehow!) from being discrete, local and material Particles, into becoming extended Waves - and NOT, it must be emphasized, within a separate permanently existing Medium of some sort, but, on the contrary, as merely an alternative self-expression of itself, but in appropriate changed, and determining circumstances!

Now, this contributor is by no means ready to deliver a fully formed alternative to both Maxwell and the Copenhageners problems, within this paper.

But, the solutions in Sub Atomic Physics, produced by this theorist, are certainly worthy of consideration with regard to Maxwell's problems too.

The 21st Century proposals, by this theorist, re-instated the idea of a Substrate, but was wholly unique in defining its composing units as legitimately-undetectable due to their being NOT single particles at all, but mutually-orbiting-pairs-of-particles, consisting of diametrically-opposing properties, and hence delivering individual Substrate units with neither any resultant charge, nor magnetic effects as a whole, but nevertheless capable, via their promotable mutual-orbits, of absorbing-and-carrying individual Quanta of Electromagnetic energy - totally-invisibly - but in a variety of different forms, thereby enabling ALL the properties of supposed Empty Space to finally be physically explained!

Now, this may be considered a chance resonance, except for other features connecting Maxwell's ideas with these later conceptions: in particular those concerned with

Vortices! Because in the New Theory of the Universal Substrate (2019), it has become possible to adequately explain the Quantized Orbits of Electrons within atoms, entirely due to caused and maintained Vortices created-by and accompanying those Electron Orbits within Atoms - entirely physically.

And the energy taken from the Electron orbit, originally in constructing the accompanying vortices, within the Substrate, and thereafter, first maintaining them, and then exchanging energy both-ways to finally produce a possible series of Quantized Orbits.

All of which again has crucial similarities with Maxwell's Analogistic Model of the Aether, which also involved crucial Vortices, and maintained in exactly the same way by "flows of electrical particles"

NOTE:

And the maintained storm vortices around the North Pole of Saturn, delivering a permanent polygonal form by an essentially similar process is also worthy of mention!

Maxwell's Causality

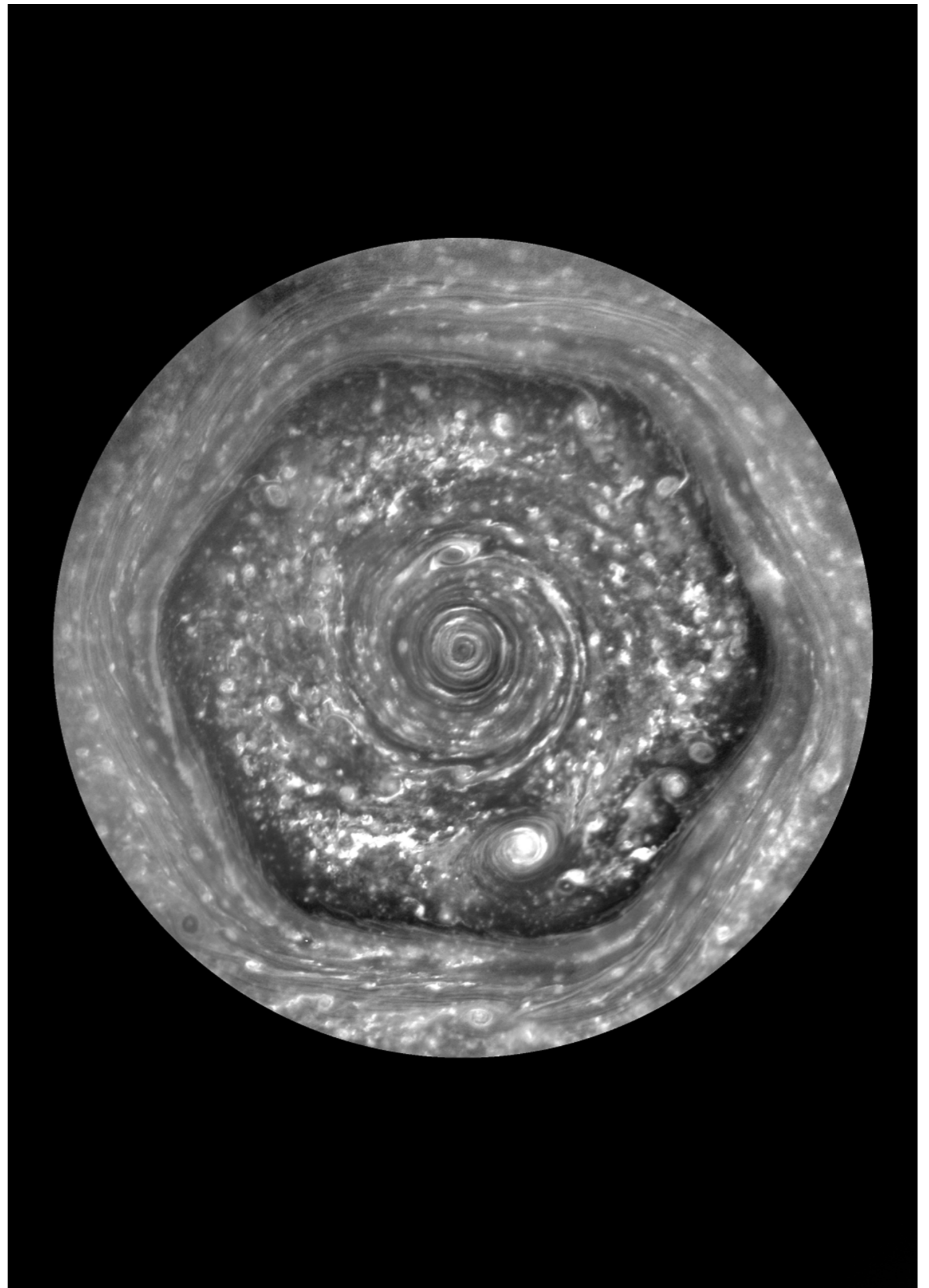
Maxwell, in the paper under discussion, resorted throughout to a *fluid* Universal Substrate, even within his Lines of Magnetic Force, in order to attempt to explain their nature and properties.

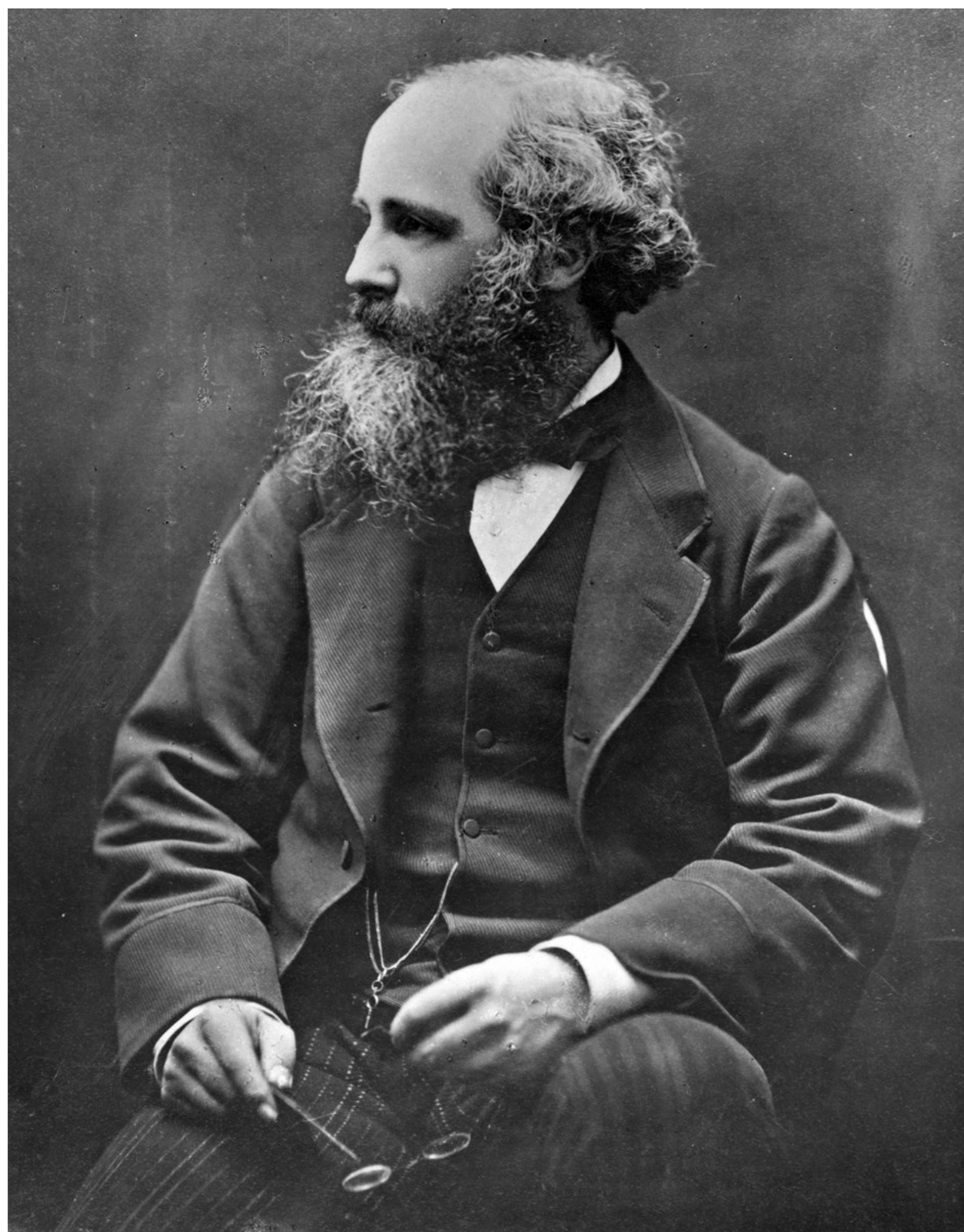
Though, in addition, he also uses conceptions of different pressures & tensions, in certain directions, caused by flows in those directions. And, these flows producing vortices in an underlying internal medium.

This may gel with the Hierarchy of qualitatively different Substrates that I have been developing in my Substrate Theory of Physics.

Though all of these Substrates are composed of mutually orbiting Pairs of property-cancelling Leptons, so it may be necessary to ALSO define the New Substrate Units in a similar way for Maxwell's versions too!

Maxwell was attempting to address the unusual properties of Magnetic Lines of Force using only what was available to him at the time. As yet he hasn't explained the dipolar nature of a Magnetic Line of Force, which he might do so later in his very long paper!





James Clerk Maxwell

The Nature of Forces

The Differences between Gravitational, Electrical and Magnetic Forces

In ways that mirror Yves Couder's "walkers" experiment, James Clerk Maxwell always used Analogues from the already well-known and effectively studied areas within the Macro World (such as liquids) to attempt, initially-at-least, to model the hidden worlds of the Sub Atomic scale.

But, he was certainly always well aware of the pitfalls involved, and never ascribes Absolute Truth to his various models. However, he always preferred such an approach to the purely pragmatic one that uses "If it works, it is right!", as THE Final Arbiter. For he knows that a useable Description, even when capable of precise prediction, is very different indeed from an Explanation, as a Description only matches a Pattern or Form, whereas an Explanation depends upon understanding actual physical causes - based upon knowledge of the nature of what is being studied!

And, a purely pragmatic description, always involves absolutely NO attempts at producing a generality: it instead finds something of the presented particular to be "sufficient", and hence infers that The General can indeed always be built out of many particulars with the same descriptions, which is totally untrue! Otherwise the study of Forms would not be so universally evident in unrelated areas.

So, seeking Causal Explanations is the only way of finding routes towards General Truths - and causality is not simple or one-way!

NOTE:

Though Maxwell was unaware of it, by his time the well-established-method within the Sciences, was the same as that had been discovered by the Greeks in originating and developing the first-ever Intellectual Discipline of Mathematics, and though totally correct there, the very same Rationality was also mistakenly carried over

immediately to both Logic and Science, though entirely inappropriate in both of those crucial disciplines. And it was primarily this assumption that incorrectly became established as the basis for their intrinsic rationalities too!

Now, that origin, when applied to Science, distorted it significantly: for it diverted that discipline into an exclusive search for forms and relations as eternal Natural Laws, which actually only ever existed within natural or purposely-arranged-for Stabilities. The essence of Reality-as-is has always been its involved Qualitative Changes, and its consequent crucial effects of Development, Evolution and even Revolution!

So, in attempting to develop a Joint Theory of both Electrostatics and Magnetism, Maxwell came up against this anomaly from the start - for Qualitative relationships were unavoidable, in spite of clearly existing similarities too!

The Gravitational. Electrical and Magnetic relations, both displayed clear similarities, yet were all delivered in very different ways. And those similarities, especially as established via Formal Equations always exported the Plurality of Mathematics into misleading-and-unavoidable supposedly Causal Laws and inevitably led to what seemed to be an increasing number of contradictions.

But, the commonly-used Equations' similarities effectively papered over their very different physical causes. And, this wasn't helped by the insistence since the Michelson-Morley Experiments of the dumping of the Concept of a Universal and interposed mediating Substrate filling all of Empty Space.

Now, interestingly, Maxwell, somewhat earlier, than that scientific "revolution", always stood by the idea of an undetectable but nevertheless material and

ever-present affected-and-effecting Substrate, and in designing his Analogistic Model of that Aether, as well as in his extensive causal treatment of such Forces, always considered that Model, in attempting to explain them in terms of the Fields that were establishing within that medium. And locating the energy for the actions of such fields, in some distant source made no sense to Maxwell: the energy had to be located locally in the field where it was acting.

Now, before our much-more-modern colleagues, throw up their hands in despair, at such abject “primitivism”, may I recount my own alternative Theory of the Double Slit Experiments, that fully explains all their anomalies purely physically, without any recourse whatsoever to either Wave/Particle Duality, OR any of the inappropriate imports that enable the Copenhagen Interpretation of Quantum Theory to have been constructed!

And, remarkably, I will use NO Mathematics (perhaps now you can guess why?)

For, a materialist philosopher and physicist, such as myself, I have long rejected the idealist and pluralist stance of the Copenhagenists: and most energetically of all in the final ideas attached to the Double Slit Experiments by Bohr, Heisenberg et al. For they have totally abandoned materialism and explanation, for an amalgam of entirely pluralist mathematics and inappropriate use of Probabilities and Wave Theory.

So I decided to attempt to re-introduce a Universal Substrate into these contemporary considerations, but this time, one that is currently totally undetectable - though made of matter it appears to have no matter or charge. And, instead of their Wave/Particle Duality, and Heisenberg’s philosophically idealist fudging, I saw the Waves as taking place in that intermediate, yet undetectable materialist Medium, and the Particles involved both disturbing, and later being-affected-by that disturbed substrate, that had also been re-structured due to the passage of disturbances through BOTH of the Slits, thereafter producing a maintained interference pattern in the hidden Substrate, to then redirect-or-not the slower moving Particle as it passed through.

Every single anomaly, in the whole set of Experiments, was fully explained entirely physically, without a moment’s recourse to the frigs of Copenhagen - the Observer Effect is effectively explained as a result of the

dissociation of the fragile interference pattern established in the quiescent Substrate before the detection screen. Any attempt to observe the slits creates waves in the Substrate disturbing the temporary field.

Following such a successful Thought Experiment, I decided to reveal exactly where-and-how the wrong-turnings in Physics had occurred that finally led to Copenhagen.

It shouldn’t surprise us that such detours take place, that we can kid ourselves that something is correct for centuries. Mankind had to find simplifications of, and even actual moderators of change to even arrive at approximate and always only temporary truths. And a mixture of the dexterity of his manipulative Hands, his evident intelligence, imagination and successful pragmatism did enable progress in what could be achieved, even if not yet actually *understood!*

By the time of Maxwell’s work on Electromagnetism, there were already anomalies that could not be easily be solved due to the still persisting dominance of philosophical Plurality (i.e. separable and eternal Natural Laws) which always totally excluding all Qualitative Changes to those “laws”, occurring in Emergent Interludes, and also made impossible the qualitative combined effects of simultaneous multiple holistic causes.

So, Maxwell naturally sought answers in already known situations involving simultaneous effects within media, in his case The Aether, but for him involving different simultaneous flows in various directions, which he imported from flows in other media, like water for example!

He concentrated initially upon Magnetism, and in particular upon Magnetic Lines of Force, which seemed to be simultaneously present along with Electrostatic Fields, presumably both of them being initiated by the presence of Electric Charges.

NOTE: Other Forces like Gravitation did not seem to have a similar-partner-effect, so he addressed the difficult one first, to avoid any simplification being laid down from that area of study. Fields like both the Electrostatic and the Gravitational were Inverse Square Law situations, arranged spherically and symmetrically, in radial lines outwards from the initiating Source.

And these were unipolar, and though they could and did link up with suitable terminating other initiators, they are NOT dependant upon them, and if none are available, merely reduce the Field all the way to zero!

But Magnetic lines of Force are dipolar, necessarily linking up with another Source of the opposite Magnetic Pole - usually at either end of a Magnet - where one North and the other South.

Now, these Lines of Magnetic Force are considered Dipolar, for they terminate differently - one end upon a North Pole, While the other end is on a South Pole. And though different free-moving Magnets (like a moveable Compass for example) will behave differently at the Line of Force, the level of its contained Field(s) is the same throughout its length! So the energy imparted to the compass, will re-orientate it, it will not move it bodily, though its orientation will be adjusted for every different position along the Line of Force.

But, in addition, perpendicularly to the Line of Force there appears to be an inherent repulsive force actually acting upon adjacent lines of Force! Yet the inter Line of Force separations, though ever wider as distance from the ends increase, do seem once achieved to remain constant. The Question has to be, “Why?”

Now, Maxwell had only Macro media like water and gases as possible analogues for his undetectable Aether, so he could not use them to explain what he was finding, so as is well known, he started with what appeared to be the built-in functions of his Aether - as they clearly presented themselves, as the discernable properties of “seemingly-Empty-Space”, and used them to construct a wholly original Analogistic Model of the Aether, by designing his own conception of exactly what the unknown Medium had to deliver!

In his preferred Analogistic manner, he imported features from elsewhere within Reality, that he thought would model what he knew to be needed, and his chosen components were Static Vortices and constantly moving “electrical Particles”.

Now, in spite of the weaknesses of such a method, it did bypass all the usual pitfalls of both Plurality and Idealism inherent in the usual experimental and theoretical means, it had some chance of giving a reasonable Model.

In my previous life as Computer Science researcher I used similar models in a very different field. In researches along with a senior colleague into a model of the Human heart, based exclusively upon Van der Pol’s equation for oscillating electronic circuits, turned out to be very revealing. My remit was to graphically explore the Possibility Spaces of versions of this model, which remarkably produced both Fibrillations and even Heart Attacks, thus proving that such a route could, and indeed did, reveal more than those usually achieved by pluralistic Equations!

Now, Maxwell’s Analogistic Model and the forms he employed were determined by other well-known Substrates, and had to causally explain the features outlined above for Magnetic Lines of Force, which he categorised as Pressures or Tensions, within his containing medium. And, from examples elsewhere, he attempted to explain consequent forces at Right Angles to basic flows within his Aether.

The Substrate and Resonances

Considering Electron Orbits in atoms. and Propagations in Space

This theorist has developed an alternative physical explanation to the usual Copenhagen idea of quantized electron orbits within atoms, that have arisen from a rejection of the current consensus Idealist/Pluralist ideas 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, 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.

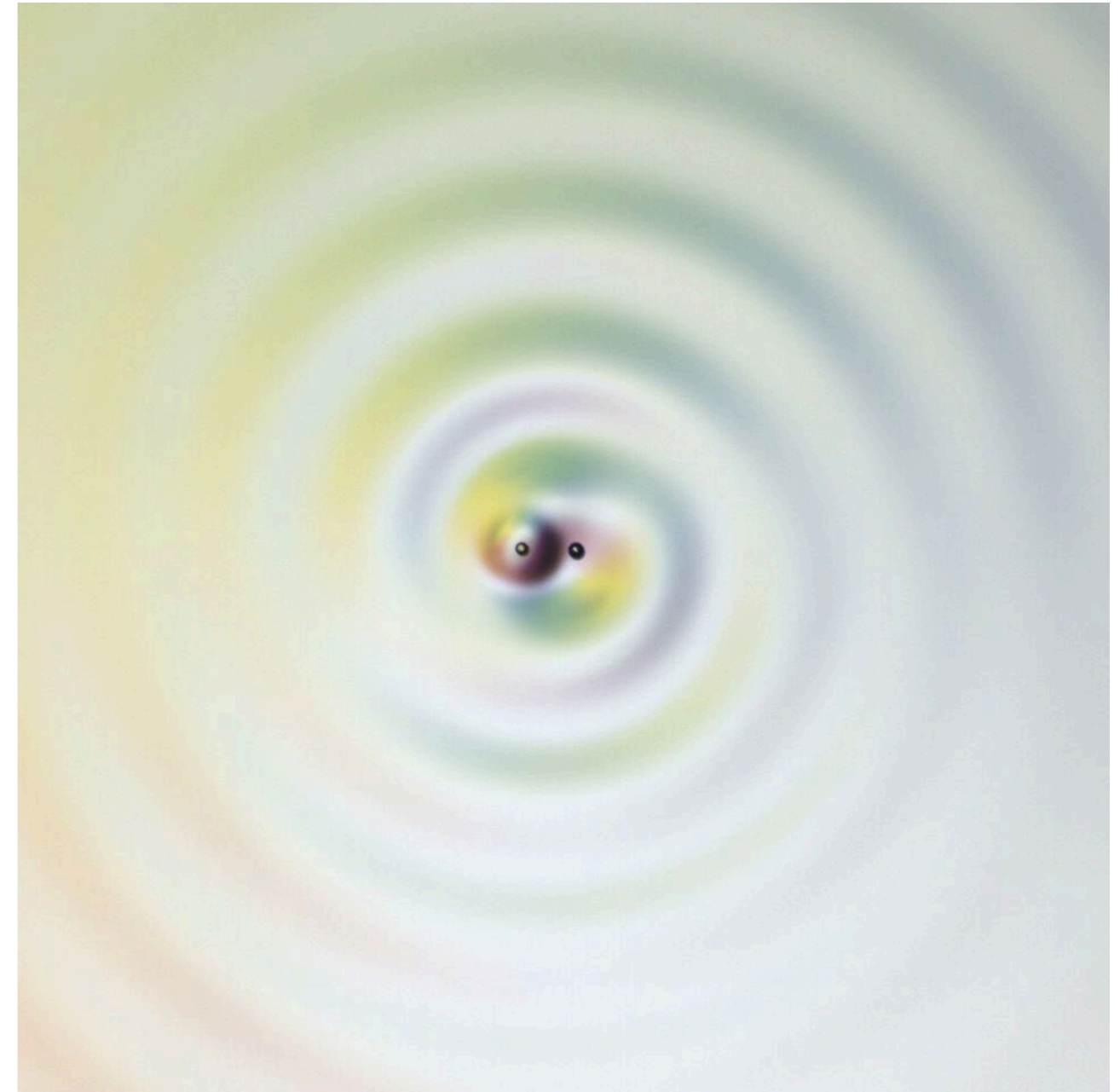
For, instead, there would only be these opposing processes, that could continue to exist as balances between opposing causes, as any other means could build up energy only if the orbits changed continually requiring a constant external source - as in Resonances.

So, this alternative only can supply stable discrete orbits, if a both-ways, maintained balance of energy exchanges were involved!

The experimental evidence for such an explanation comes via French physicist Yves Couder, with his famous “Walker Experiments”, using a Silicone Oil as both Medium and also 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 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,



Yves Couder’s “walker” experiments managed to model Quantum Physics behaviours using only a liquid medium and vibration - fields created from resonant standing waves in the oil substrate.



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 spatial 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, James Tour proved conclusively, the way they are attempting to explain Evolution via Genetics is totally doomed to 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, with what can only be termed as entirely Pluralist, it has absolutely NO hope whatsoever of transcending its current limitations, unless and until, it is replaced by Dialectical Materialism, and its currently fast developing ability to deal with Real Qualitative Changes, which Plurality with its Fixed Natural Laws never can!



SHAPE JOURNAL

WWW.E-JOURNAL.ORG.UK