

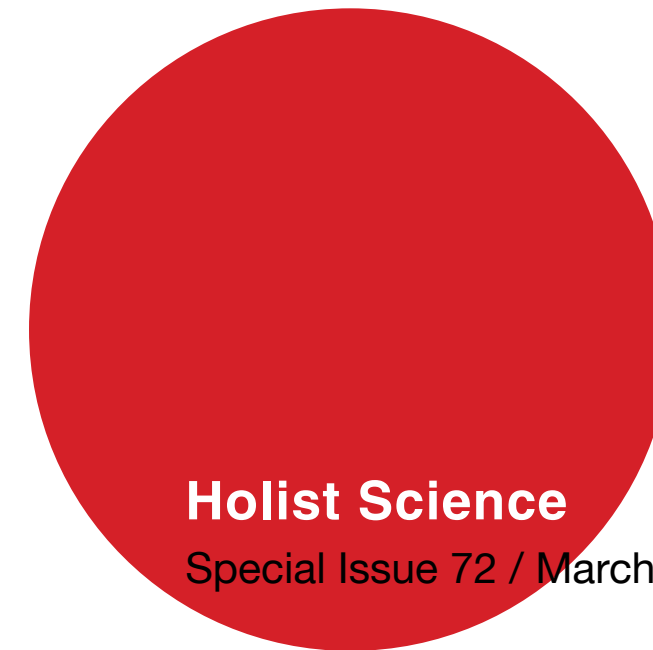
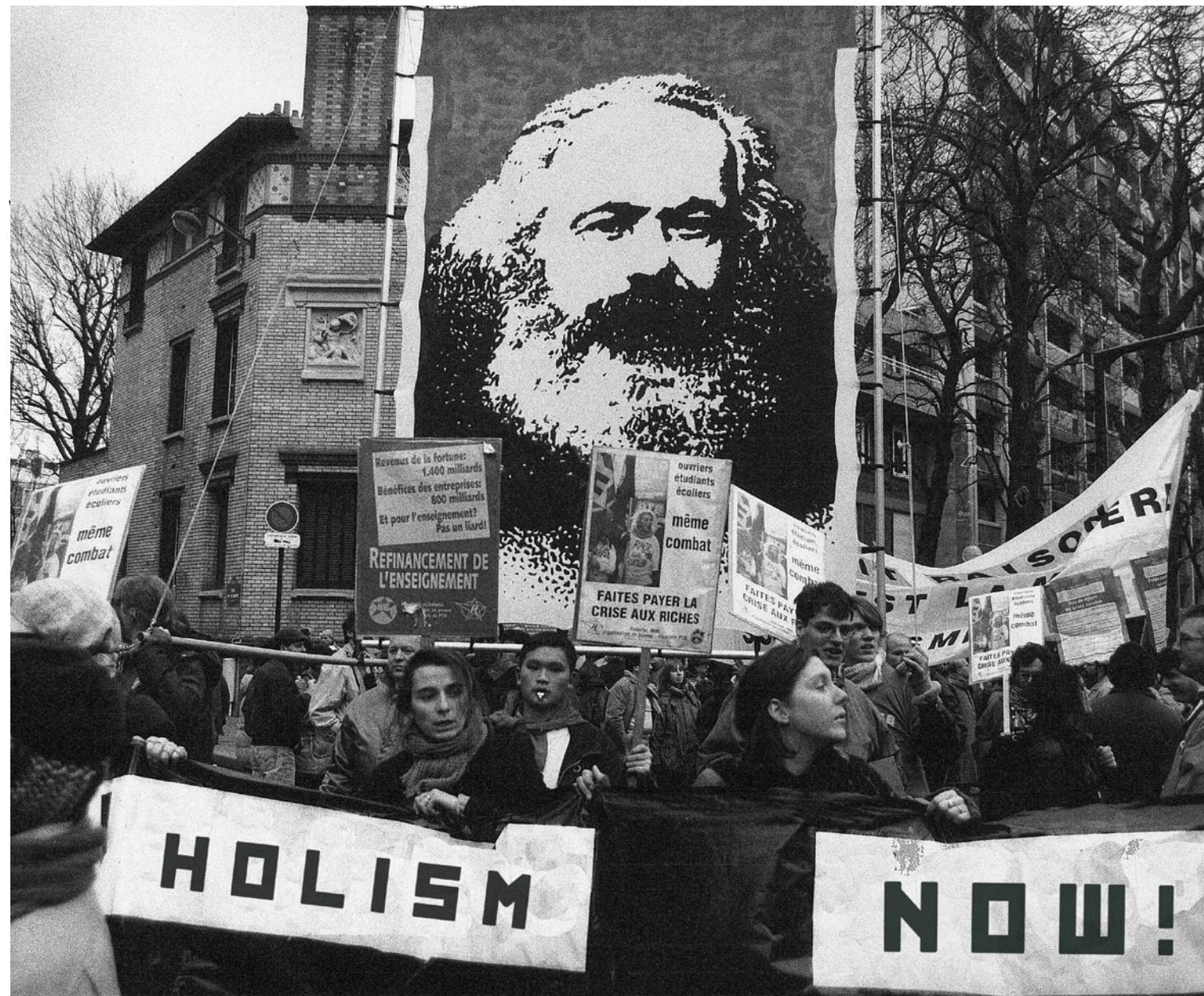
SHAPE



JOURNAL



**HOLIST
SCIENCE**



Holist Science

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Holist Science I

Dialectical Scientific Methods?

by

Jim Schofield

The problem we're faced with in developing a holistic approach to Science involves the unavoidable complexities and interactions of multiple simultaneous aspects of Reality-as-is. Indeed, they initially seemed to be so insurmountable, that Mankind came to believe that underlying all the evident and confusing complexity, there had to be an integrating simplicity at its heart. Otherwise, how could all the clearly evident regularity and even the exquisite beauty of the Natural World have arisen? Our forebears concluded that it might well be revealable, with the appropriate processing. For, if this could be achieved, the revealed Simple Laws of Nature (applied within those same ideal conditions) would allow them to be purposely used to Mankind's own conceived of benefits.

In fact, a great variety of things coexist within all Natural Environments! For, as we are already beginning to understand today -

First: Single laws do not usually exist as such: they are invariably acting simultaneously. with many others.

Second: The contributions of given factors, in a natural collection of Laws, will never be fixed, they will all perhaps vary!

Third: Individual Laws will never stay exactly the same: they will be influenced and changed by other simultaneously-acting Laws.

Fourth: All Laws inevitably Act upon two different Levels of condition:-

a) RANGE LIMIT: Outside of a given range the law vanishes, and other factors can change the Law's Limits.

Outer LAW Limits pertain

b): RANGE: Inside its Range the Law acts, but is nonetheless affected by others

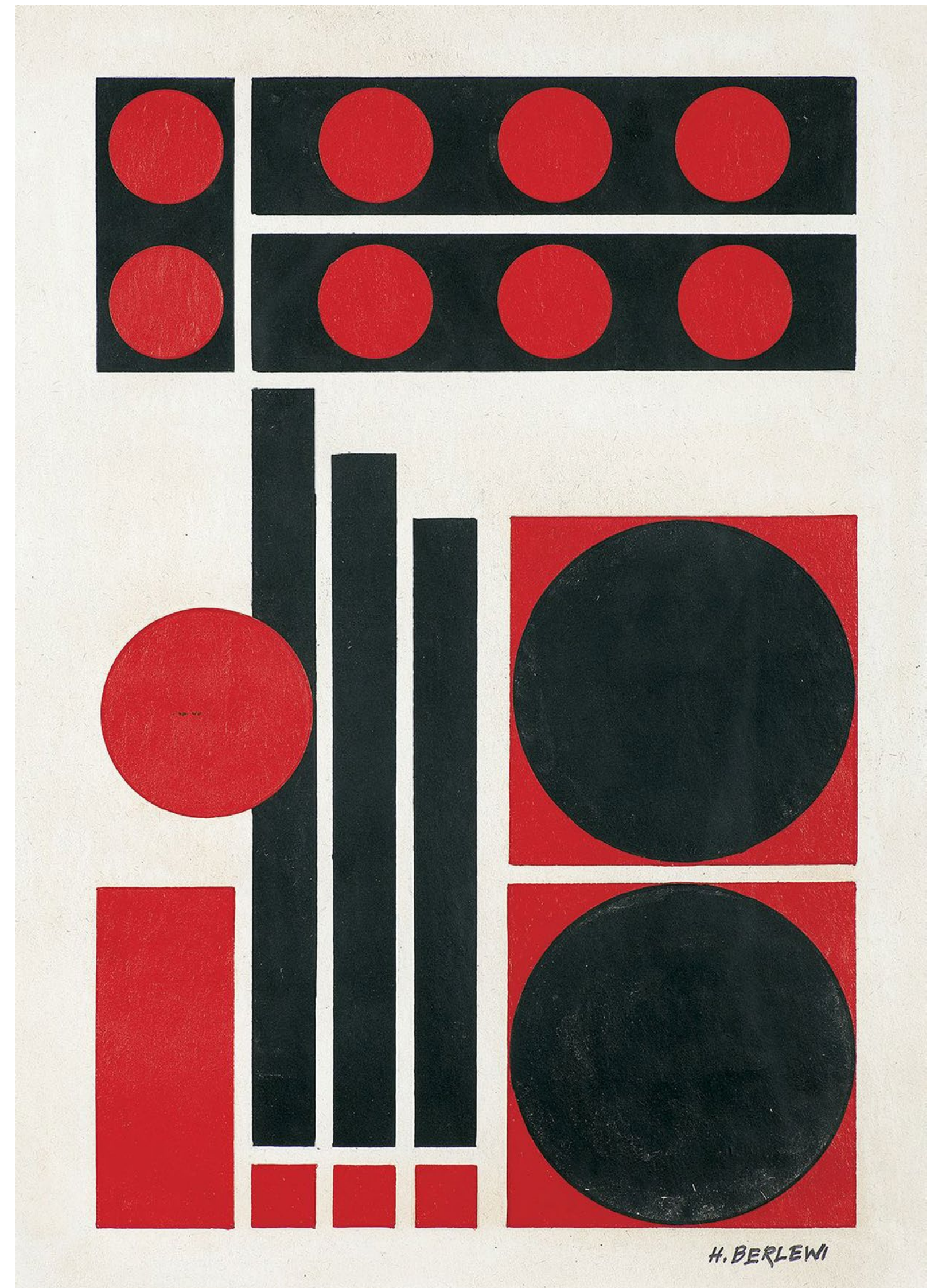
Inner Law pertains

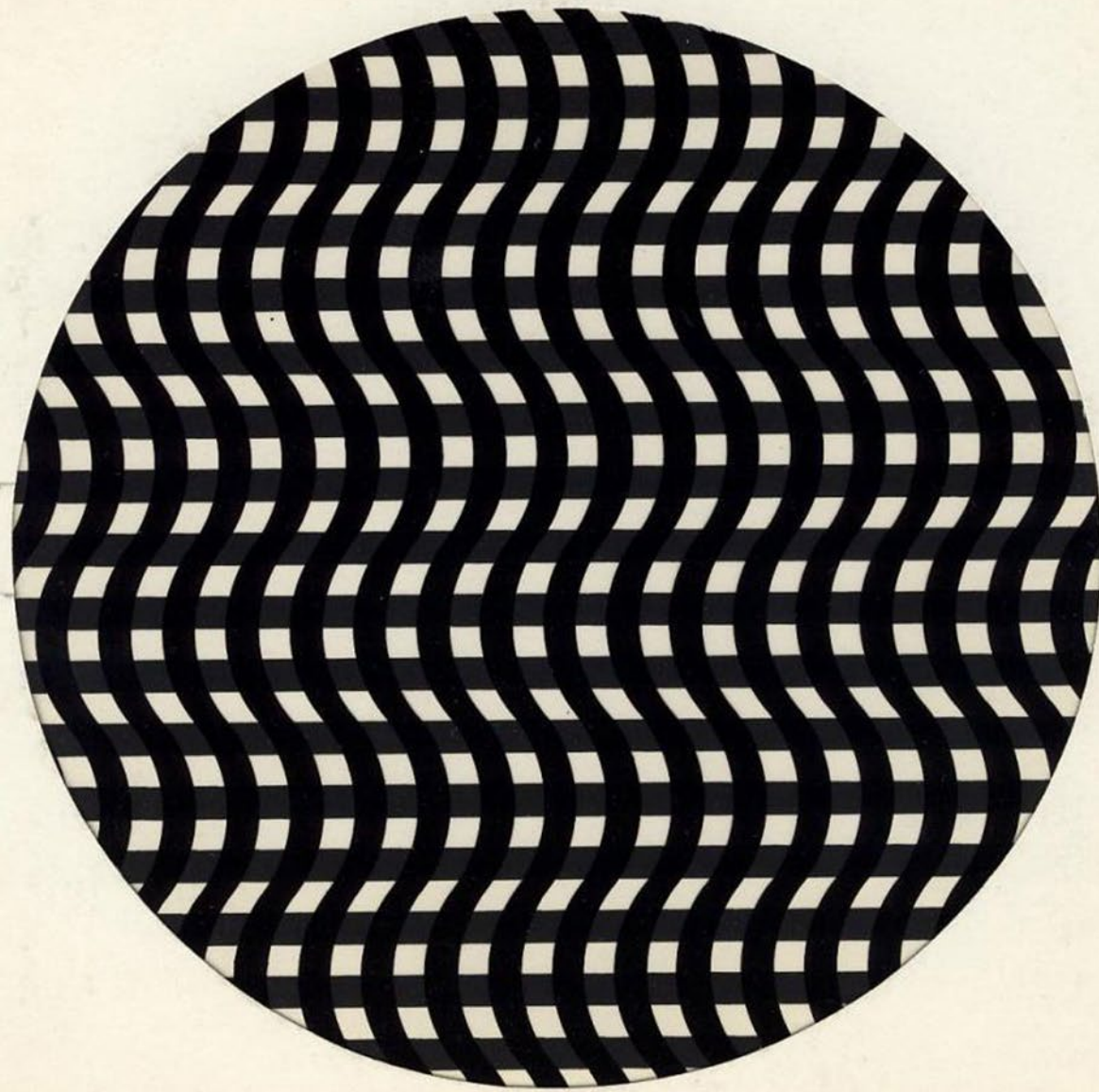
And Mankind's simplification of all these (and more) effects was to effectively, as far as is possible, "hold a situation-still", in order to study it. And, of course, how they did that would depend upon circumstances, and what it was they were attempting to reveal. Indeed, they didn't mind movement and quantitative changes: they could be achieved sufficiently easily.

BUT genuinely Qualitative Changes - when things became something else - were always prohibited! And, all the Laws that were sought, were assumed to exist as such naturally, independantly of all others, when they did appear together, they were assumed to merely SUM.

Such a stance conformed exclusively to what we call the Principle of Plurality - the opposite of the Principle of Holism.

And though entirely legitimate when considering Pure Forms (as in Geometry and Mathematics), such a Principle was always illegitimate when applied to Both Formal Logic in General Reasoning, and in all the Sciences.





But, perhaps surprisingly, Plurality could easily be accommodated via Technology. In fact, technology can be seen as the very farming of Reality that is required for Pluralist methods to work.

For with Technology you can always answer the question, "How?", but never the question "Why?"

And, as Mankind had been successfully following that belief for many, many millennia, they continued to do it ever since the Greek Intellectual Revolution of the 5th century BC. Their prior pragmatist tenet of "If it works, it is right!", nevertheless, continued to be used!

But, of course, though such a short-cut was a major step forwards, following the Intellectual Revolution, the very different objective of Understanding, as distinct from a limited range of Pragmatic Uses, that could never be generally achieved using a Pluralist Stance.

Yet, at almost the same time historically, thousands of miles away in India, the spiritual leader, The Buddha, being concerned with Understanding Life and the Natural World, devised the very different Principle of Holism, in which "Qualitative Change is universal!", and "Everything Affects Everything Else!"

But such alternatives seemed totally contradictory with one another - and didn't even begin to be integrated for a further 2,300 years, with the first step being Hegel's Dialectics - and even to this day, some 200 years later, such a universal integration has still not yet been achieved.

Holist Science II

Explanatory Science

Having been an avid supporter of Explanatory Science, ever since I was first introduced to it at school: AND a supporter of the manipulative methods of combining Mathematical Laws, entirely within Mathematics, I later became an avid denoucer of Maths-based, supposedly Scientific theories, becoming the most basic ground for that Science, ever since the time many years later, when I finally realised their grave-and-misleading limitations - though questions as to such processes' correctness had bothered me for some time previously. The question of how we interpreted Quantitative Science naturally immediately presented a major quandry!

For the actual *Use* of such a "Science" undoubtedly depended upon the quantities of various involved components, used in any subsequent productive processes: no other way was possible; so how could Science face both ways - Holistic in its Theories, while Pluralistic in its Uses?

The two-millennia-long compromise was to limit Experimental investigation AND the productive situations too, to strictly impose the very same artificially Pluralist contexts, as was involved in the extraction of the so-called "Theory". For then, both sides of the endeavour matched, BUT were also necessarily limited to those Pluralist Situations, that were necessarily both Distinct-and-Different from Reality-as-is!

Indeed, many crucial features of Reality-as-is, were purposely-excluded from what could possibly occur: and, significantly, All The Laws were necessarily Fixed, and also totally excluded All Qualitative Change.

The Mode of "doing Science" was totally determined by the requirements of predictable Production! Science was down-graded from Explaining-Reality, into straightforwardly reproducing only a much smaller subset of it.

Science was thus converted into Technology!

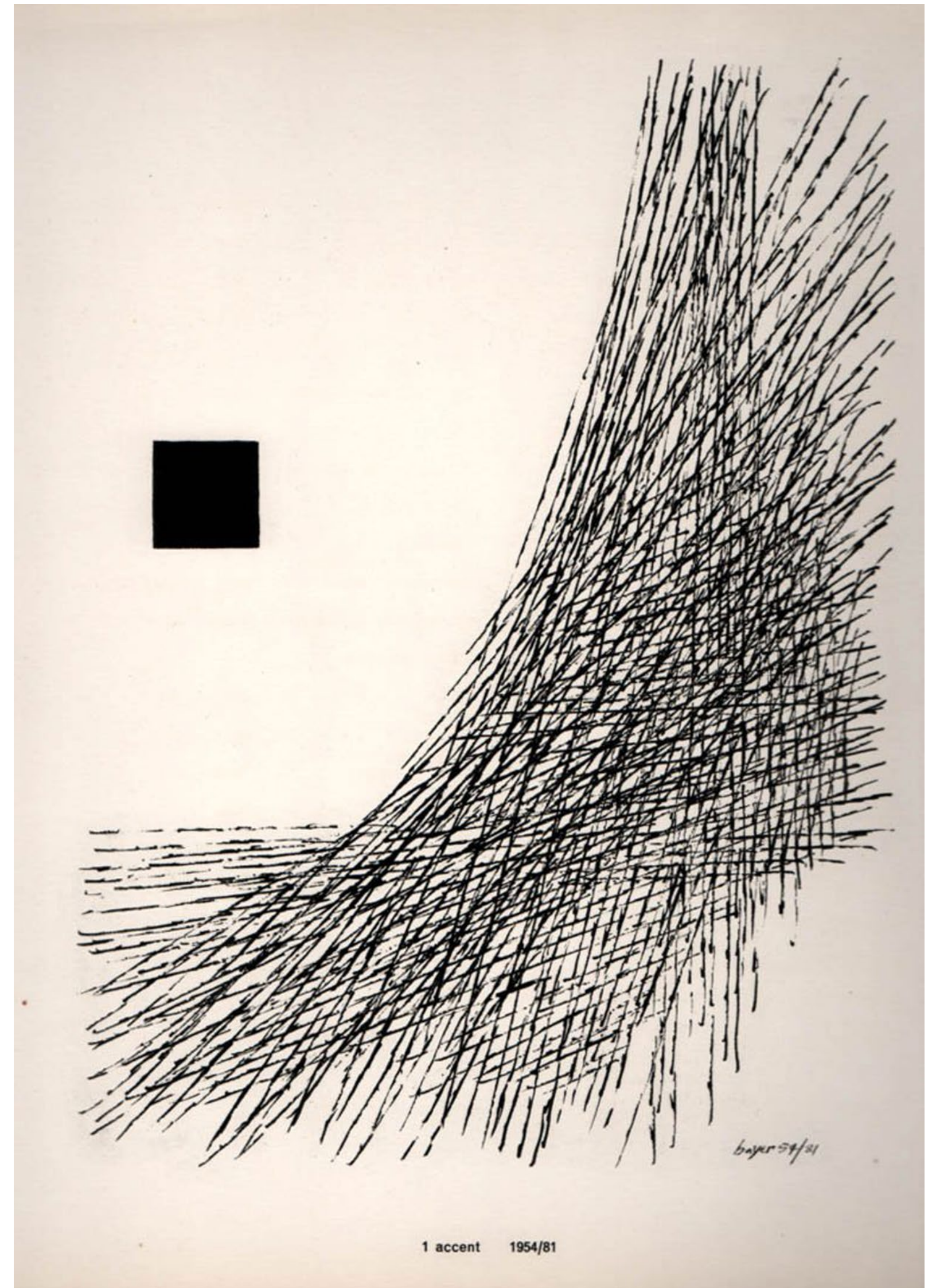
And, by far the most damaging consequent transformation, was in turning so-called "Theory" into a set of solely pluralist-distortions too. So, thereafter, mathematical manipulations of several of these Pluralist Laws into new, "more-widespread-versions" were necessarily WRONG!

For, each-and-every Pluralist Law required its own different limitations, and therefore NO general overall Context was ever achievable, in which to apply it. You couldn't do what was eminently possible within Mathematics, within Pluralist Science.

And, the profundity of that conclusion was totally crippling, to all of Consequent Pluralist Science: for it was, at best, a limited Technology, and absolutely NEVER a developable Explanatory Theory of the Natural World.

I'm afraid Mathematics is NOT the Lingua Franca of Science!

Now, of course, that was too much to bear for its numerous supporters! They insisted that every Pluralistic experiment is actually a valid way of extracting the underlying targeted Law, because what is achieved pluralistically is exactly the same as the role it plays in all complex mixes with other simultaneous laws.





They misinterpret the pluralist physical situation, as being merely an "abstraction-process", similar concretely to what it was formally in extracting the equation.

But that is incorrect!

Physical Laws are NOT like pieces-of-intellectual-Lego - unchanged in combination: but, on the contrary, all such Physical Laws affect-one-another, to a greater or lesser extent, in every single physical combination.

Remember, that the Pluralist approach excludes ALL Qualitative Changes. If things evolve and new entities emerge, that must occur within the Holism that reigns within Reality-as-is - something which Pluralist Science cannot access.

The clear absence of Qualitative Change shows how misguided have been the underlying assumptions within Science over the last two millennia. So, clearly, the primary-and imperative scientific task at this time, must be the revealing of Qualitative Change - and its Laws - to both identify and explain reality's dynamism.

Now, from the beginning of science direct access to this was impossible, entirely due to the tempos and timescales involved, and the then inadequacy of available means to even clearly reveal such influences. For, as Karl Marx was finally to show, over two millennia later, Reality-as-is acts simultaneously in a hierarchy of many different Levels - and some laws are hidden, or even over-ridden by others at some Levels, while dominating at others!

For example, Marx was able to reveal important Qualitative Changes within society during Social Revolutions, that were not occurring in much more common "non-revolutionary" situations and periods. While Darwin, studying animals with reference to discovered fossils, could clearly distinguish both Quantitative as well as Evolutionary Transformations - both of which had been long denounced as impossible by scientists previously!

Clearly, both the short life-spans, and the inadequate means available to Mankind, made this usually unavoidable, but was latterly, if with great resistance, from those with a vested interest in the Status Quo, was finally changing if incredibly slowly.

But, and this is incredibly important, without a correct, Holist guiding Theory, attempts at re-writing entirely Pluralist approaches and Laws, into Holistic ones, cannot be easily achieved.

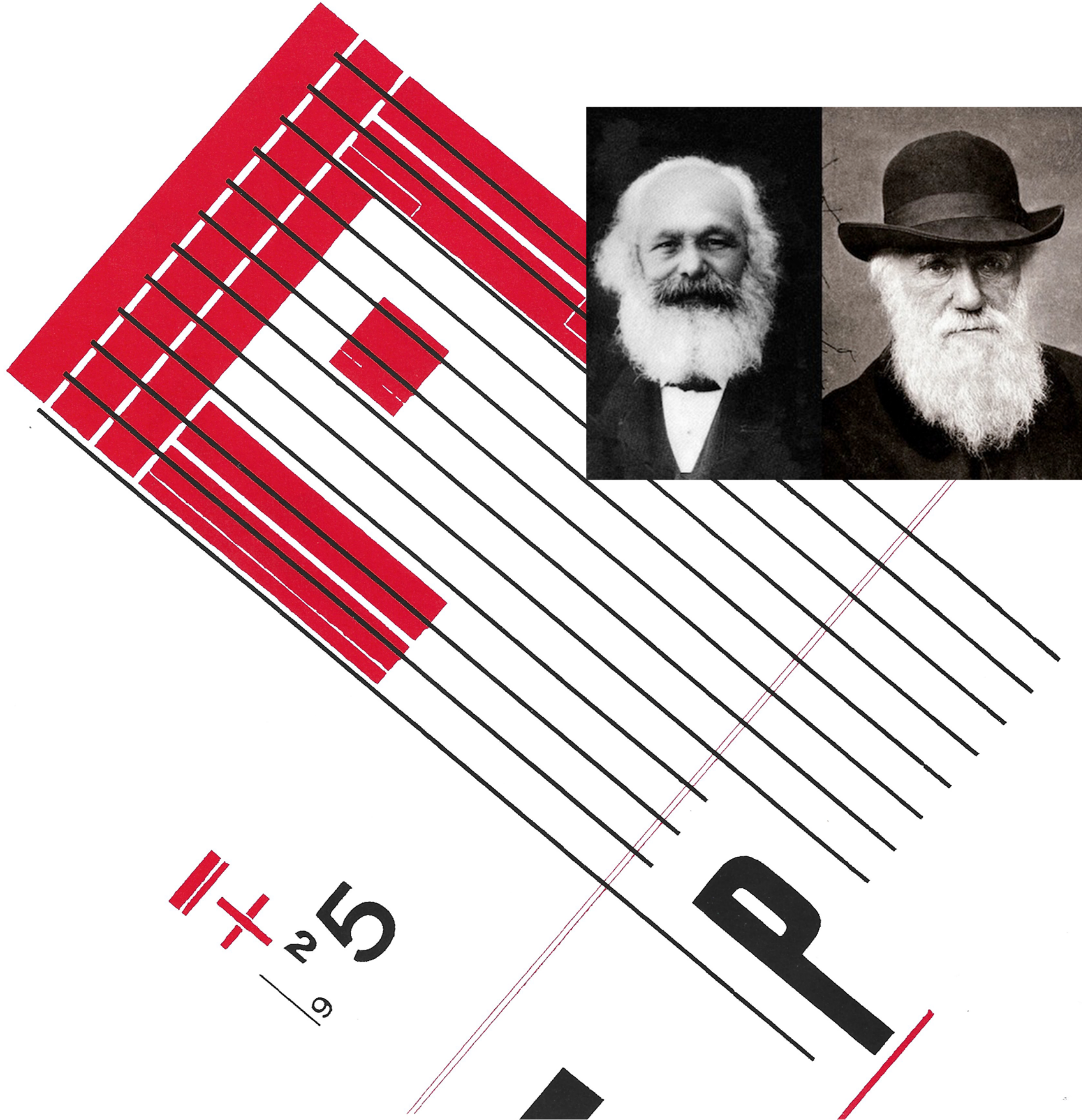
Indeed, we are back to requiring tailor-made Experiments to confirm the unavoidably speculative effort at establishing a correct stance.

But, over the years, an alternative methodology was devised, which could get somewhat closer to the necessary Reality-as-is involved, than the prior Pluralist Standpoint, entirely because it took Reality-as-is in another comparable area to suggest an Analogistic Model from a much better understood area, as an initial guide in devising, first, a Model of the situation being addressed, and thereafter a critique of that Model to improve it.

And if this sounds sketchy, may I direct you to the work of James Clerk Maxwell concerning Electromagnetic Theory? For, he started by defining The Ether - the assumed invisible Universal Substrate responsible for the propagation of light and other EM radiation, which he addressed by designing a model solely in terms of what it clearly was already known to accomplish! His wholly *Analogistic* Model was NOT a true description of that Substrate - but it did deliver most of the same things! And with appropriate Experiments, he improved his model, then used it with further Experiments to then devise his Laws of Electromagnetism - which we still use today.

Now, it took a century and more for this work to be developed further by Hannes Alven (winner of the 1970 Nobel Prize) and his followers, to establish the much more general Theory of Cosmic Plasmas, which has significantly challenged The Big Bang Theory concerning the Origin, History and consequent Nature of the Universe! And which, in turn, has led to a significantly different development in the Approaches to the Generation of Electric Power via Focussed Nuclear Fusion, in the on-going work of Eric Lerner et al, in their advanced Focus Fusion Generator.

But, the major developments in Sub Atomic Theories generally will only be realised by a very different Holist Approach to a much better Theoretical Analysis - finally addressing the generality of simultaneous and different Laws both changing one-another in their individual Effects, AND their in their combined results.



Now this has always seemed an impossible task, as it involved NO reliable Constant relations (as in Pluralist Physics).

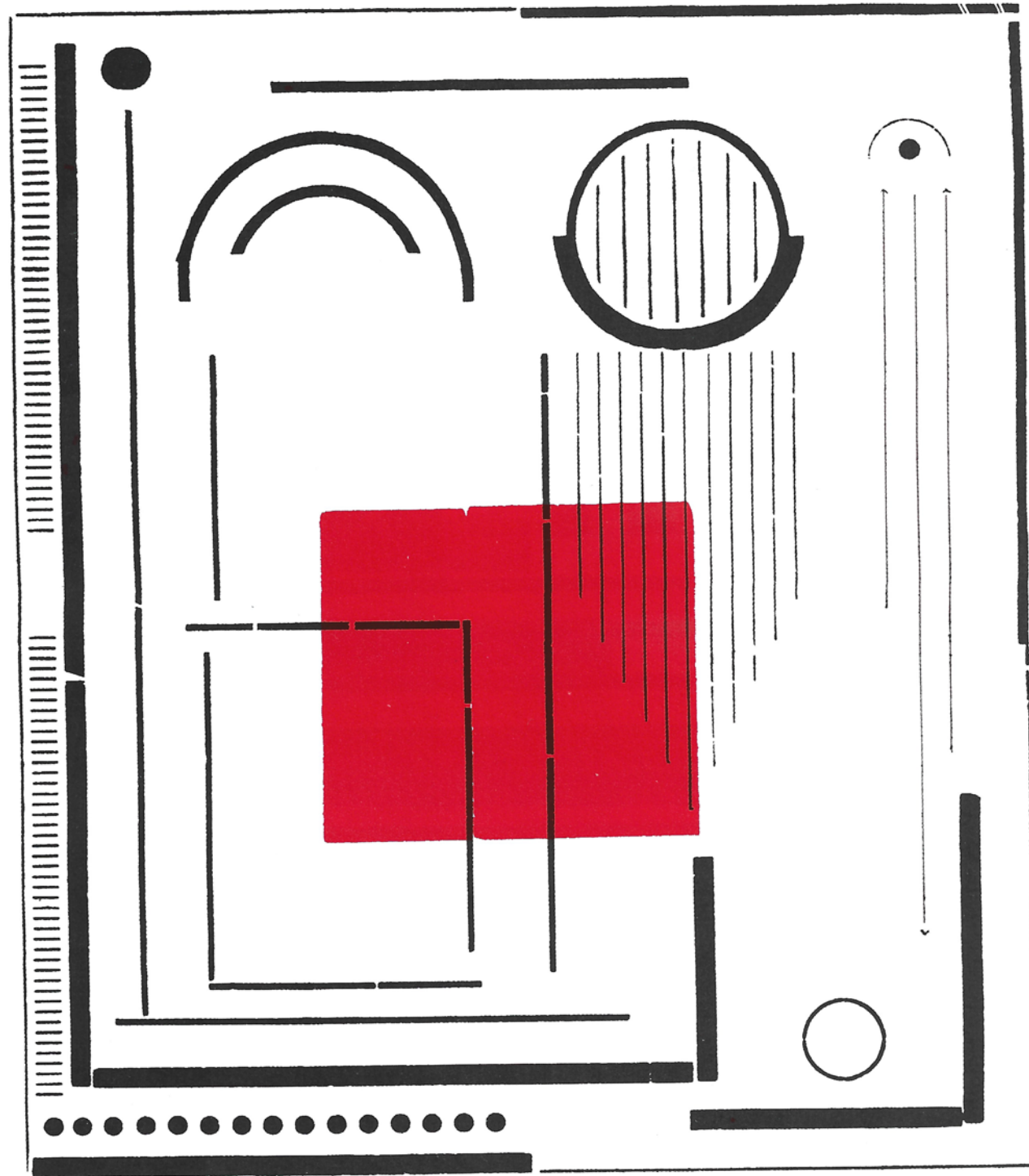
But though there weren't any like those in Plurality, dynamic and long-lasting "Balanced Stabilities" enabled the extraction of both useable (if temporary) Laws, AND the Dynamic Revolutionary Laws of Qualitative Changes, occurring within often Cataclysmic Interludes of Change.

And this is a major change in our scientific Understanding!

There are NO Eternal Laws!

Holist Science III

Qualitative Changes



For some time now, my work in this journal has been edging towards a Truly Holistic Approach within the Sciences. This has been an incredibly daunting task, particularly once we address the incontestable fact, that every single Science has been largely, if not wholly constituted, using Pluralist philosophy from its very inception. For two millenia or more, since that Greek Intellectual Revolution, and the creation of a single totally-consistent Discipline - Mathematics - and its consequent and vital Rationality, Science has only flourished within its confines, which was then, in that Revolution, validly and soundly based upon the Principle of Plurality, which required that all involved Relations or Laws be Qualitatively fixed.

And, this basis was absolutely essential, as Mathematics was about the fundamental relationships between Forms, and only if these were permanently unchanging, could a Consistent Logic of their inter-relationships be depended upon, when using a Purely Cerebral Rationality to generate a comprehensive Logical Unity of the Whole.

Now, until that time, absolutely NO Rationality (of any kind) had been devised-and-used within any totally cerebral developments, in any Discipline at all: for such seemed wholly impossible to define - so there was no purely mental or intellectual means of thinking-through to explanatory solutions in anything! For, all attempts to construct such a Rationality, all totally foundered on the Variability of Definitions!

So, the Ancient Greeks invention of Simplifying Relatable Abstractions, for use initially within spatial investigations, enabled a comprehensive and widely useable Rationality, known as Euclidian Geometry.

And, a similar legitimate system was then devised for the rest of Mathematics-in-general, and *Theory* was born for the very first time!

Clearly, prior to this, NO such general method was even possible, so devisers to solutions could never extend their particular methods universally, because they simply would not work outside of their applicability.

So, what was it within this new Mathematical Rationality that allowed it to always transcend the prior failures occurring in all other studies?

It was, of course, two things:

First, those *Simplifying Relatable Abstractions*

and Second, the fact that these would stay exactly *The Same* while they were being studied!

And though Mathematics was extended to become the supposedly legitimate Rationaliser of both General Reasoning (sometimes) and all the Sciences (always): it was, indeed, wholly illegitimate to do so! For, the Fixed Law Limitation of Mathematics, could not be legitimately applied in these evolving areas, without also drastically limiting their Real World Scope by NEVER allowing a handle on Qualitative Changes within that supposedly legitimising Rationality.

Absolutely NO Qualitative Change explanations were possible within Mathematics or Formal Logic. And, though such changes were acknowledged outwith Mathematics, they could never be rationally-explained, for they were removed from any systematically developed

Causal Theory, into being introduced by other means - Religion or some other Belief system being the usual backstop!

But in Modern Sub Atomic Physics, there is still included, in a totally Random Way, an extension of Mathematics deep into Ideality! Clearly, Mathematics, either as it used to be, or as it has subsequently been extended, cannot be a legitimate Rationality for a Real, Concrete and Developing World.

It illegitimately was established, as such, by artificially making isolated and local situations conform to its various requirements - which, for millennia was achieved by constructing artificial and local Stabilities, within which to merely rationally-and-predictably manipulate a maintained stable version of Reality, which, indeed, DID conform to Mathematical Rationality.

And, not only could Fixed Laws be so extracted, but also, as long as that imposed Stability was rigidly maintained, the Law could also be successfully used. A Pluralist Science was possible, including successful Production!

But each Law had its own Different Required Context, for the forming of useable situations didn't only require Stability, but also a severely limited, yet significant-and-sufficient set of required contents for each particular individual Production.

Yet, the World had NOT been completely transformed, to conform to Mathematical Rationality - although this seems to be Mankind's increasingly technology-led aim! - but only limited sets of entirely separate extremely-local contexts - with different requirements for each and every different one to play its role in any overall objective.

This is not Real Science: it is Pluralist Technology!

And, of course, for most of our history, such was more than sufficient to energise a remarkable period of advances by Mankind. But behind that history - as well as for an even longer pre-history, with the whole World of Living Things evolving - there has also been a veritable galaxy of very different and clearly Qualitative Changes, that the very restricted Pluralist Approach could only inadequately expose, and never causally explain, as such occurrences were wholly outside of the capabilities of Plurality to address. Indeed, literally ALL of these developments seemed "to emerge as if from nowhere":

for, there were NO Pluralist explanations of change possible.

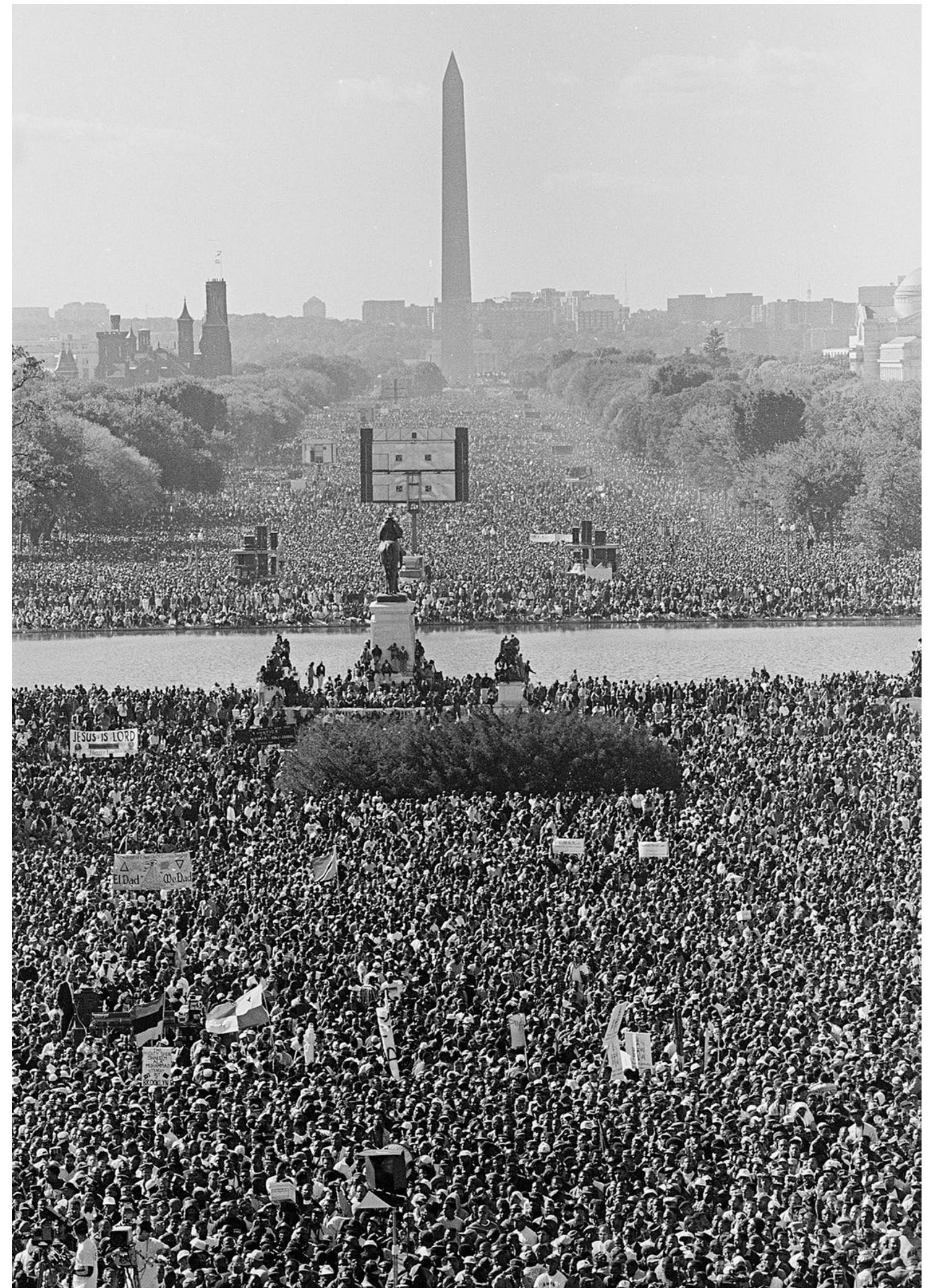
When huge transformations take place they seem to do so totally outside of any consistent Rationality. So they were often endowed with religious origins, until the total lack of any explanations, based solely in this World, were temporarily described as Emergences, but still without any real explanation whatsoever.

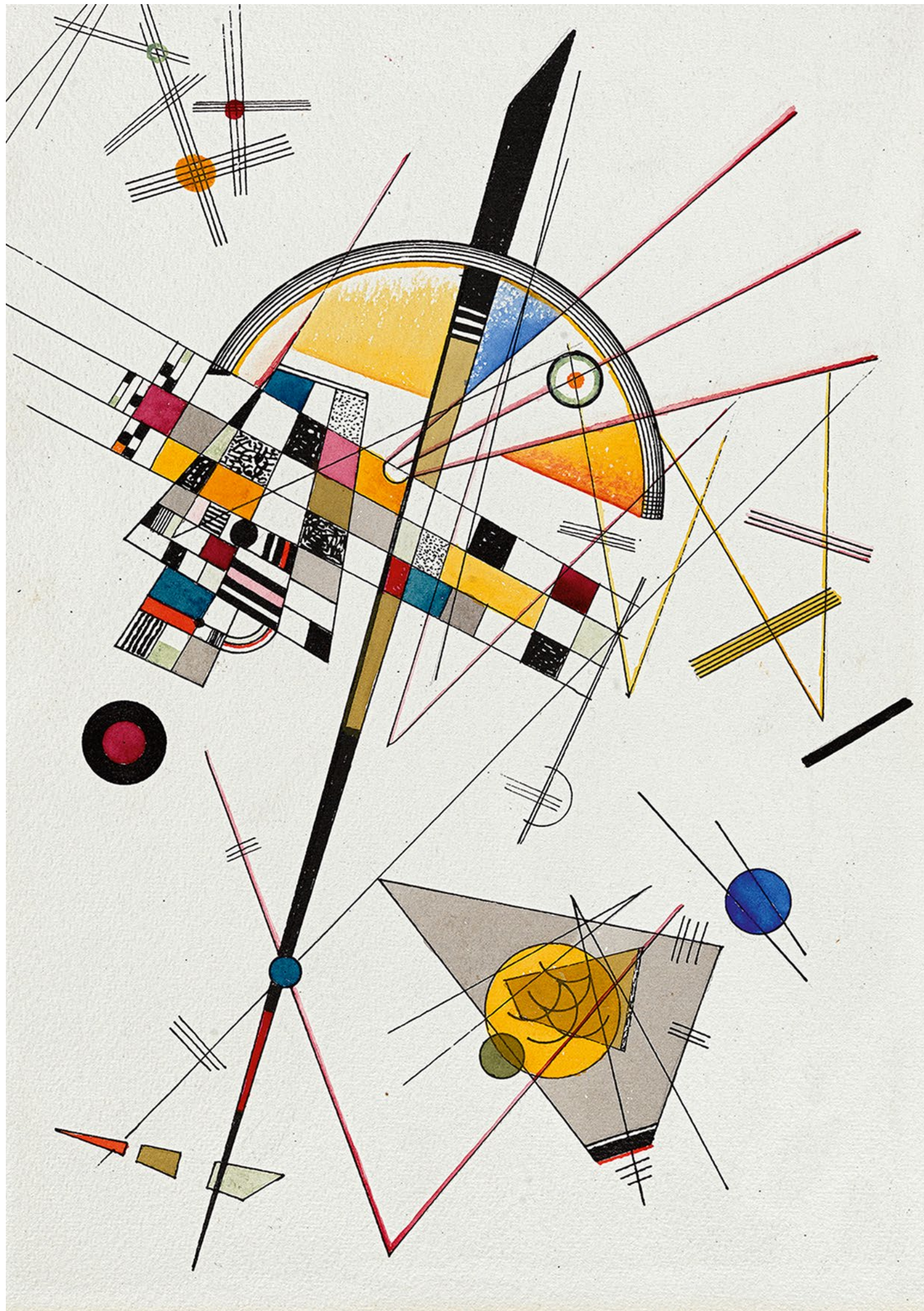
Clearly, these were both neither trivial nor incidental, but, indeed, were the exclusive Engines of all actual Qualitative Change, so the damaging straight-jacket of Plurality, just had to be replaced by an actually-delivering alternative Rationality, wone hich could explain all functions beyond some Lego-like Plurality, and proceed instead into delivering the potentially Revolutionary Changes, that do indeed occur at all levels of Reality. After all, the real epitome, and major revealer of this Process must be available in the actual Emergence and Evolution of Mankind itself!

So, as soon as the well-trodden-and-misleading-path of assuming a universally Pluralist World was being threatened, the obvious alternative had to be an as-yet undiscovered Rationality, based instead upon a new Modern Version of Holism.

But, of course, the universal subscription to both Stability and Fixed Laws in Science, with the obvious Rationality of Mathematics as the only solution - would need to be replaced somehow, by a Holist alternative, without such *simplifying* assumptions: and instead be re-developed around the dynamic study of Emergences and Revolutions, and the regular appearance of the wholly New.

And this, quite evidently would instead involve Holistic *Varying* Laws, which alone can initiate Emergences, along with wholly New Modes of Existence, often moving things into a wholly Different Level of Reality. BUT, and this is important, consequent Qualitative Changes would radically alter all future possibilities too, and the future direction of Developments, which as distinct from Plurality, could involve a whole range of different possibilities from one extreme to its Direct Opposite, via even a possible total cancellation of them both! And, such diversity could, in fact, actually lead to a wholly new kind of Temporary Stability, or even novel future developments in a significantly different direction.





Instead of only linear developments, as can be addressed with Plurality, the new Holist World would present its family of Developments in a kind of increasingly Multi-branch Tree!

And, to get an idea of the complexities involved, the necessarily limited components of Pluralist Processes, will be everywhere replaced by these Tree Structures, due both to multiple, simultaneous processes literally naturally-occurring everywhere, and the consequent wider Ranges of possible interactions within a Holist situation.

Now, though still very early in this important endeavour, it has indeed begun! And, a very different world is slowly being revealed, which cannot be other, at this stage, as all the Sciences are still intrinsically-wedded to Plurality, so the only universally legitimised forms of investigation, require the achievement and maintenance of severely-limiting Stabilities, to enable the current methods of investigation.

So, until a thorough-going Holistic methodology is devised and sufficiently developed, such current methods will always exclude the very things that need to be causally revealed, and implemented into that essential Development.

Now, the problems to be addressed are evident!

Knowing individually-isolated-effects, will never be enough: for all the many factors involved in Natural Reality-as-is, will also affect and indeed change one another, producing a rich range of differing overall Effects - none of which will ever be revealed by the current universally applied Methods. For they do NOT merely SUM!

However, going directly to a natural Holist situation will NOT help: for the overall Effects could never be allocated to the many actual causes involved: for they will be a totally hidden qualitative combination of many different components - NONE of which will be the same as the isolated Pluralist Forms we can access.

In a Holist World investigations will have to be:
FIRST many separate Pluralist methods - each with a single cause!
SECOND, a series of versions involving two at a time!
THIRD more complex versions using modified and adjustable forms.

NOTE: Technologists will no doubt jib at such a messy and demanding set of requirements: and will prefer to stick to their effective current methods. But there are two important reasons why they will be wrong in taking such a position.

ONE: It is vital for the Development of Theory.
TWO: There will be many new useful Effects involved.

Holist Science IV

The Real Engines of Development

What has now to be revealed, to significantly Revolutionise The Sciences, initially appears to be totally totally impossible!

We all too easily commence all our thinking, without ever realising that Mankind's intellectual journey must have involved innumerable such wholly New Changes, to arrive at our current remarkable capabilities. Indeed, it is so normalised, that commonly-held beliefs always see Mankind, now, exactly as they always have been, ever since their miraculous creation by some Supernatural Diety! And, within the present universally employed Rationality, such a stance, if not the initial cause, is most certainly taken as unquestionably true.

And, that is because the generally-employed Rationality derives solely from Mathematics. And what occurred within its creation, really was a Significant Revolution in Human Thinking, that undoubtedly greatly and extensively empowered what we could do, via an entirely new kind of reasoning.

Now, such transformations had occurred before, many times, but none as wholly New as what had occurred then, and as rapidly developed as this one. It was certainly an Emergence: which is a remarkable kind of development, that before this Event, could never have been arrived at by means of any pre-existing forms of Thinking. Its appearance was indeed rationally impossible!

And, this was the case because it was achieved by an previously unthinkable process! All such Emergences, would display the very same property of being beyond prior prediction.

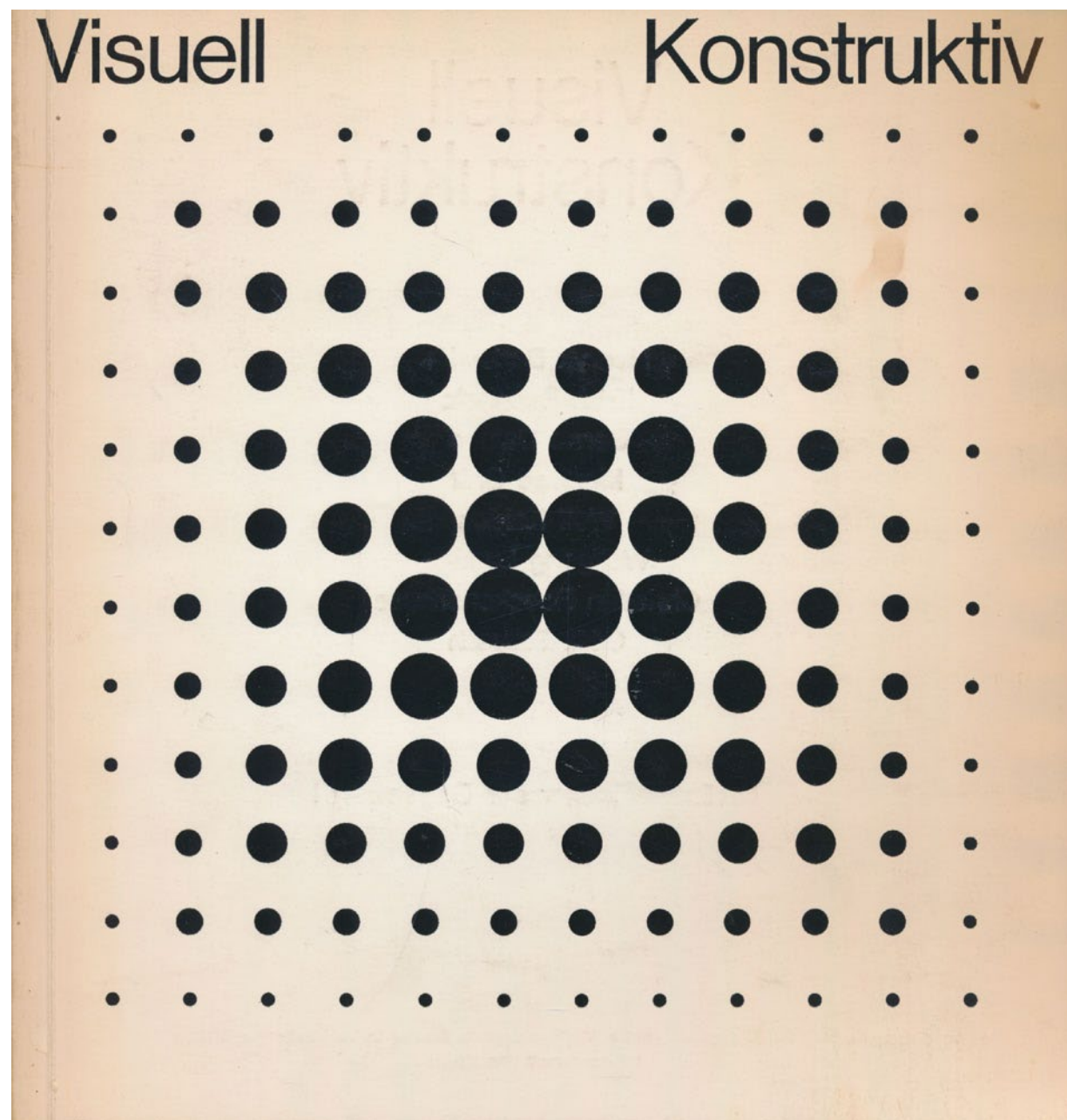
And the reason for this was that absolutely NO prior process could possibly arrive at such a conclusion!

It had initially to be a *discovery*: and in a specialist area, which once its power was regularly displayed, was successful enough to be tried more generally. This discovery occurred first in Geometry, and was then correctly extended to all of Mathematics: and then *wrongly* applied to all Reasoning-in-general.

Now, the main illegitimate use of this Emergent Conception, apart from in General Reasoning, was in its energetic application to all of the burgeoning Sciences, which meant in all such illegitimate uses, rational developments were all based upon a severely limiting premise, embodied in their common subscription to The Principle of Plurality: for indissolubly included by such a limitation was the idea of Eternal Natural Laws - always totally Fixed in Quality, which most certainly was a major and incorrect limitation, severely truncating the real Rationality involved in all those important areas. And, that remained the assumed wisdom in all those categories for many hundreds of years.

Both General Reasoning, and every single Science, was severely limited in the cerebral side of rationally developing Theory, and was only kept moving at all by the still involved artisans and technicians involved, who, via experiments and pragmatic constructions, kept things going via further discoveries - but their employers, the scientists, wrongly amended those discoveries into entirely pluralistic incorrect, but achievable "theories". It was a wholly illegitimate amalgam, in which the ultimate deliverers were increasingly unhappy!





But, it did NOT accurately represent Reality-as-is, and instead necessitated a substantial limiting of all Investigative Experiments and Production Systems, in order to effectively restrict the situations to conform exactly to Plurality.

The strange thing is, they NEVER dealt with Plurality-as-is either, for they didn't always know what was actually involved and had also to be kept constant!

And, it was in these interstices that glimpses, and only partly curtailed contributions, revealed the Key Inadequacies, in the lauded Pluralist versions of the Sciences! No matter how they tried, as the scientists delved ever deeper into their Disciplines, the complete restriction to a completely Pluralist Situation, became increasingly difficult, and then finally impossible.

And to accommodate these diversions, the scientists had to depart from a simple Pluralist Stability, and allow integrated divergences, which they originally put down to *random* variation - from outside their achieved Stability - and then, quite wrongly, they allocated them to a built-in natural variability due to Reality-as-is itself!

Indeed, the usual determinations of such Effects, due to so far unconsidered extra cases, were replaced by a major re-defining of what Reality is, as actually being naturally randomly-varying, so instead of using *determining* Laws, Probabilities then had to be used instead.

Now, this was wholly New! Previously such variations were always caused by existing oscillations occurring in matter due to Laws at a lower level than the usually evident Effects being studied. But, that was not the case here: for the more obvious attempt to reveal that currently undetectable level was dismissed out of hand, so that along with other also-inexplicable effects elsewhere, they could all be coupled-together, by a universal Random Nature of the same common base throughout, with these unique "congenital" properties.

Now, this was merely a trick, as demonstrated by the facts of other anomalies, appearing as unexplained Qualitative Changes, and the increasing evidence from Plasma Physics, wherein major Electromagnetic effects were increasing in importance, and even challenging the total Dominance of Gravity in Cosmology.

Indeed, the dissatisfaction of the pragmatic Technicians and Engineers of Science, with the increasingly exotic stance of present-day Physicists, has led to Alternative Stances, one of which is termed The Electric Universe, and which in the hands of theorists like Eric Lerner, have presented a wholly different explanation of Cosmology based majorly upon Plasma Physics, involving NO Big Bang, NO Expanding Universe and NO Dark Matter or Dark Energy.

And, even leading the Field in making great strides towards a successful Focused Fusion Process, for generating Nuclear Power directly as Electricity! But, at the same time NOT abandoning Plurality.

While, in addition, the possible effects of a Cosmos-Wide Space-filling Universal Substrate elsewhere, was also challenging the usual arguments put by the supporters of universal Plurality.

Cosmology

Though this is not the place for a thorough-going inclusion of full details of the revolutions taking place within Cosmology, based alternatively, and almost entirely, upon Plasma Physics - there is no way that these developments, intrinsically-and-rationally-linked to the same Emerging Theories concerned with Plasmas on the Cosmic Scale, can be left unrelated, as they address the most glaringly speculative and unaddressable theoretical ideas, particularly concerned with Universe Origins, like the Big Bang, Inflation, Dark Matter and Dark Energy, and the expansion of the Universe.

Eric Lerner's Plasmas Theory of Cosmic Origins, along with his increasingly successful attempts at Nuclear Fusion, for the direct production of Electrical power from relatively small reactors, confirms his underlying theories concerning the Evolution of Plasmas, at these two immensely-wide Levels of occurrence.

The diametrical opposites involved could not be more contrasting than as they present themselves in Cosmology. For, the mainstream description of the Origin of the Universe actually commences with literally Everything compressed into the tiniest locality, at very high Temperatures and Pressures, and has effectively spent the whole History of the processes involved, being initially of that extreme situation just gradually running-down, with finally an unavoidable ultimate "Heat Death

of the Universe” as the final terminating result!

While alternatively it could be that a Plasma Origin commences with a Space-filling Gas, (assumed to be Hydrogen) sparsely ionised in places, with separated Protons and Electrons, to create fragments of Plasma, which due to their different electrical charges formed short pairs of Plasma strands, and became something like short separate streams of electrons, along with similar streams of protons. which twisted around one another in helical strands, with the different strands kept apart by their “orbital or naturally-twisting” speeds, yet kept together by their opposite charges.

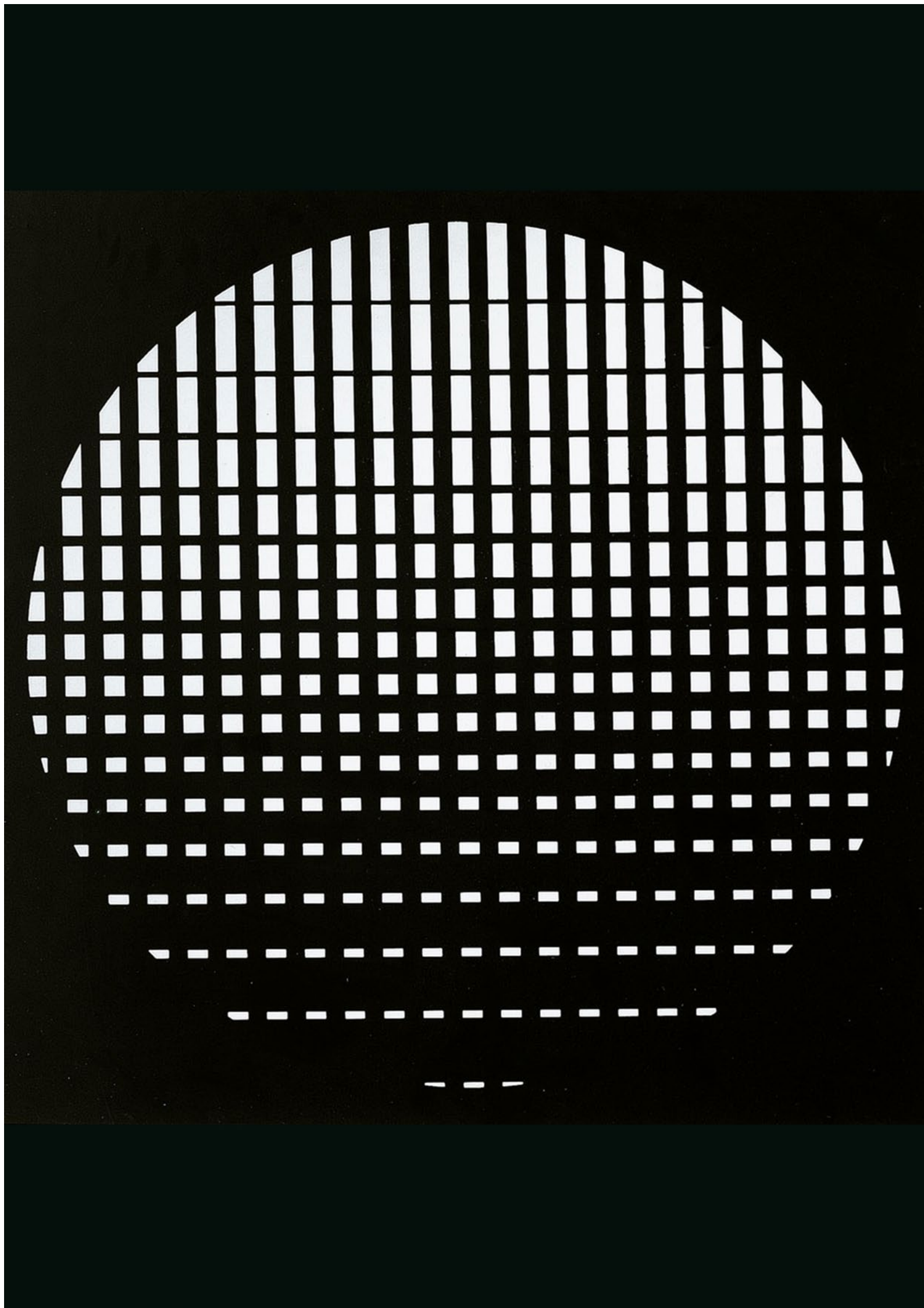
And, these are certainly NOT pure invention, as they have been observed coursing between our Sun and the Earth, in Birkekand Currents, and causing the famed Northern Lights in Polar regions, focussed there by the Magnetic Field of the Planet

While, in addition, in the laboratory these same strands have been produced, and even multiply, with one strand inside another, producing multi-strand “ropes” (like twisted electrical cables), due to increasing inputs of Energy, until they condensed into veritably concentrated knots called Plasmods, which then triggered Matter Fusion with the production of vast amounts of Energy.

And Lerner was able to show that the same things could have happened in Space, ultimately producing Stars, as Fusion generating bodies too! And they did so, having built up via alternate Electrical and Gravity Effects to produce vast rotating systems, that became galaxies, and within these monsters, produced the usual Fusion-Powered Stars.

In contrast to the usual Cosmological theories with their ever-declininng situations, the replacing Plasma-based alternatives reveal a diametrically opposite, increasing build-up of the structures of our Universe, forever further maximising energy flows, Emergence after Emergence.





Holist Science V

Modern Holism

No one has previously undertaken to do, for any of the Sciences, what Marx so magnificently did for Capitalist Economics, and what David Harvey continues to do now in that very same area.

But, contrary to what a simplified understanding of Holism might lead you to believe, Reality is not a single unified, and overall understandable System! It is multilayered and hierarchical, with its localities changing at different rates, and via different temporary interludes, rather than some single delivering and correct staircase to Truth.

So Mankind, in its attempts to understand, will unavoidably pursue different currently-promising-sequences, in various differently changing areas. And such an undertaking unavoidably faces a colossal, oft-changing climb, in order to subdue the diverse abstract complexities of the invalid, if highly useable, gigantic constructions of way-out Idealist Mathematics, that currently stands in place, and also in the way of the correct Dialectical Alternative, that is certainly now desperately required, and very long overdue!

Indeed, the steadfast subservience to this Pluralist Stance, welded indissolubly to its restrictively enclosed applications in Production, does, indeed, present a mighty monolith to be wholly dismantled, with as yet still NO comprehensive alternative to all of its achievements, readily available within Science.

We do, of course, have the brilliant contributions in Biological Evolution, achieved by Darwin and Wallace, as proof that Holist Science is possible and preferable, but even that remarkable re-direction has been halted

and replaced at the genetic and molecular level, with something more akin to what still dominates in all other Sciences - a reduction of the discipline to Pluralist mechanics.

So, we must initially address the conundrum that always terminates all efforts to look to Reality-as-is, namely The Principle of Plurality: and the accompanying congenital contradiction that both short-term and within temporary natural Stabilities, display Reality just as if it is actually and essentially Pluralist. For, only within *stabilised* situations, Plurality does reasonably well to deliver a kind of rational view, and also rational uses of such stabilised fragments of Reality!

But, of course, our intensions are only partially to describe such situations, while primarily we intend to actually qualitatively produce something else: so our first achieved stability is never enough to take any production process through to successful completion. And this is because it can only deliver the first necessary step, and each succeeding step will require its own different stability. This is because Plurality succeeds by producing only one extremely narrow stable situation at a time, capable of delivering only that single process. That is always its purpose, and overall, any production will therefore necessitate a whole sequence of different constructed conditions - one for each and every process.

Clearly for real understanding of Reality-as-is, something very different will be required - for it will have two objectives at every step: first, to achieve the transformation, and second, to produce the circumstances for the next process, when it must do two different things to continue to the next process.

Yet, though they do occur in Reality in a coordinated sequence, that mainly only happens within LIFE! Indeed the only capable approach of delivering Reality-as-is, is Holism.

While philosophically much closer to nature and natural systems, Holism was never developed as a Science, and does not have any of the tools required for detailed understanding of how things work - so such is usually left to Pluralist disciplines which did develop those tools. At the time The Buddha was first defining a Holist approach to the natural world, a general method addressing all simultaneously acting Laws within it was totally impossible, but subsets of that potential everything-included-case were certainly evident and studiable, and Buddha became renowned for his wisdom in tackling some of these.

What had been established was that Reality-as-is consisted of many simultaneously-acting Laws, which didn't just SUM, but actually affected one another constantly, and, thereafter, those modified Laws, continued to do so, but in diverse ways depending upon local preponderances!

Contrast this with Plurality: which, instead, only dealt with single eternally Fixed Laws, in carefully maintained environments, that always kept contexts and applications exactly the same. And, of course, this was only ever possible in drastically limited environments, which were only ever artificially achieved by Man and his developments with technology.

Now, clearly what Reality-as-is and Mankind could do with now, is a genuinely Holistic but Modern World View - and this could be very different indeed!

With their short lifetimes and their initial cognitive capabilities, Mankind could do very little: but with many millennia available to Reality-as-is, it certainly could totally unconsciously arrive at complex systems (that we call Life), and which was also able to build and maintain structures that could indeed involve Holistic Reality in complicated and maintained Systems too, which totally unconsciously coped with Reality-as-is, via their own built-in responsive structures.

But, of course, absolutely NO conscious intelligence would have been involved in such a natural development, and only by the imperatives of successful, if chance, occurrences were these actually established by their

increasing dominance. So, when Man appeared on the scene, unaware of his own causal development, the only intelligible system available to them, which they could use, had to, at least commence, with the easy Pluralist way-in. And, for literally millions of years, conscious Life, in the form of Man, restricted their *Thinking* to small, manageable, stable situations. The rest was left to God.

And, it wasn't until the early 19th century that first Hegel, and then Marx, alighted upon Contradictions associated with Opposites, that began to suggest an alternative to Plurality in Reasoning! And, the differences in complication, as well as the Completely New possible Transitions involved were realised, that things began to be addressed in wholly new ways.

Even limiting himself primarily to Capitalist Economics, it still took the rest of Marx's life to develop the new Holist Rationality to a suitably sophisticated Level.

But, the normal span of prior Human Thinking was initially very narrow, and jibbed at such variable and hence ever-changing Systems: for the objective was always to alight upon simple, useable, Eternal Truths, which, once revealed, could lead the discoverer to success-in-stages, and accumulating small gains were considered the only, possible route to general success!

It was, after all, the general successful method of all living things, from their emergences, in order to survive, long before intelligence of any kind had become established.

And, that was because *Thinking* originally emerged, mostly as relevant memory of similar previous circumstances, and only very much later evolved into more extended sequences of Events, and even the then consideration of alternative intentions as Planning! Significant limits were soon set upon even that, as wholly natural Temporary Stabilities were clearly "the norm", and both the easiest to understand, and attempt to re-establish, when things, as the often did, got too out-of-hand!

So, very early in the Development of Mankind, instead of a simple repeating of cycles of unchanging events in the activities of Man, there was a tiny but uniquely different gradual series of small but significant changes in the behaviours of People that were soon noticed! But, remember, their Trajectory of Development was Wholly





New: they did things for the first time ever, in the natural trajectories of development of anything in the World. And, they didn't all "have legs"! Many would fail and die out, but the successes would become established by their successes, and be increasingly repeated and copied.

Thinking did NOT come either ready-made or even complete!

And, for most of its History, Mankind's most significant achievement was a highly developed Pragmatism! Through observation, perseverance, trial and error, we managed to crack many many things. And that key gain was only finally superceded during the Ancient Greek Intellectual Revolution, with the establishment of the first sequences of ideas made possible, via Mathematicis, with The Principle of Plurality! Finding Fixed Natural Laws rapidly became the objective throughout Mankind. Until, that is, only 200 years ago a modern update of The Buddha's Holism led to a Developmental Approach to absolutely Everything, in what ultimately became Dialectical Materialism, predominantly established by Marx.

Now, the essence of Holism is, of course, the incessant presence of multiple, interacting and simultaneous Laws, which definately affect one another, and hence absolutely NEVER fail to change-one-another, unless they are rigorously suppressed: which was always, of course, the way that Mankind brought selected Pluralist Laws under fruitful control as embodied in the consequent Pluralist Experimental Science!

But, of course, such highly controlled situations, as are pursued in Pluralist Science, are never really Reality-as-is, which is what must be addressed to both understand and fully explain all things NOT under such all-embracing Controls, that will most certainly deliver an enormously wider range of processes, AND absolutely all Qualitative Developments.

So, Pluralist Science, from the outset, could never deliver either current properties of Reality-as-is, OR its developments into wholly new areas. It could only deliver static situations, so any changes in things, other than purely Quantitative, would be outside of Pluralist Science's capabilities.

And, if ever Qualitative Change crept in, it was never explicable in terms of Pluralist Science: it must occur

naturally due to non-fixed down situations, still influencing Pluralist Set-ups, but totally inexplicably via the Pluralist Laws, otherwise in place.

Now, what must now be attempted to be addressed are the Holistic Laws governing Reality-as-is, and these display a very different World, for absolutely none of them are Fixed; as none of them are independant of one another, so the results will vary over the whole range of the joint causative factors involved, and their relative contributions in any situation, and even to any givrn moment.

Clearly, at first, therefore, any predictions at all appear to be impossible to make! How could it possibly be done?

But, while NOT ever controlled by any in-charge, experimenter, different Laws can, to various different degrees, control one another!

The most famous of these are those with diametrically opposite Effects, in which one can totally dominate its opposite, more or less limiting its contribution drastically! And, if they are both of equal weight, they could exactly cancel each other out completely, leaving absolutely NO effect of either extreme. Indeed, the control of laws by the amount of a necessary component will also be significant, so that two different processes requiring exactly the same component, could be kept at constant levels by the common availability of a single contributing substance.

Indeed, populations of simultaeous processes can affect one another in various ways, as will be evident, later, when we explain how such collections can result in what are called Temporary Stabilities, which can persist for surprisingly long interludes. Indeed, so much so, that they are often mistakenly misdiagnosed as Permanent Sitiations.

This whole area is so important, that a few examples here would generate more questions than answers, so they will bemore comprehensively addressed in the next paper in this series.

Holist Science VI

Dialectical Laws and Holistic Physics

I must necessarily preface this paper with a vigorous re-statement of what takes the New Holist Physics away from the current Pluralist Restrictions presently dominating both its uses in Production, and its necessary enabling Investigations, along with all its consequent ground-establishing Education in the Subject, which, in so many different ways, turns out to in addition be Fundamental in most Human Thinking and Understanding too! It is no mean task!

So, what is it, exactly, that so distorts all of these seemingly crucial attempts to understand the World, and that instead, and in spite of its successes (of which there are many), in most things turns out to be a wholly inadequate method of understanding this Developing World, as well as Mankind's transforming place within it?

The problem is that it does not address Reality-as-is, and never has! Instead, it greatly simplifies the problems, by extending naturally occurring, and always temporary occurrences, into supposedly Permanent Situations, which nevertheless, can be maintained as such with local situations, as "the sole means" of revealing supposedly Natural Laws from their always complicating, and usually-encountered Contexts. The killing assumption is that the usually-confusing-Context is merely a "SUM of many simultaneous Naturally Unchanging Laws... And that is certainly NEVER true!

However, for well over two thousand years, by our ever increasing abilities to "hold things relatively still", especially by also significantly reducing the overall contents of situations, we have been able, both in Investigations and in Productions, to regularly achieve

the conditions to Transform a Reality-as-is, into that required Reality-for-us, a consistently Pluralist set of versions of Reality.

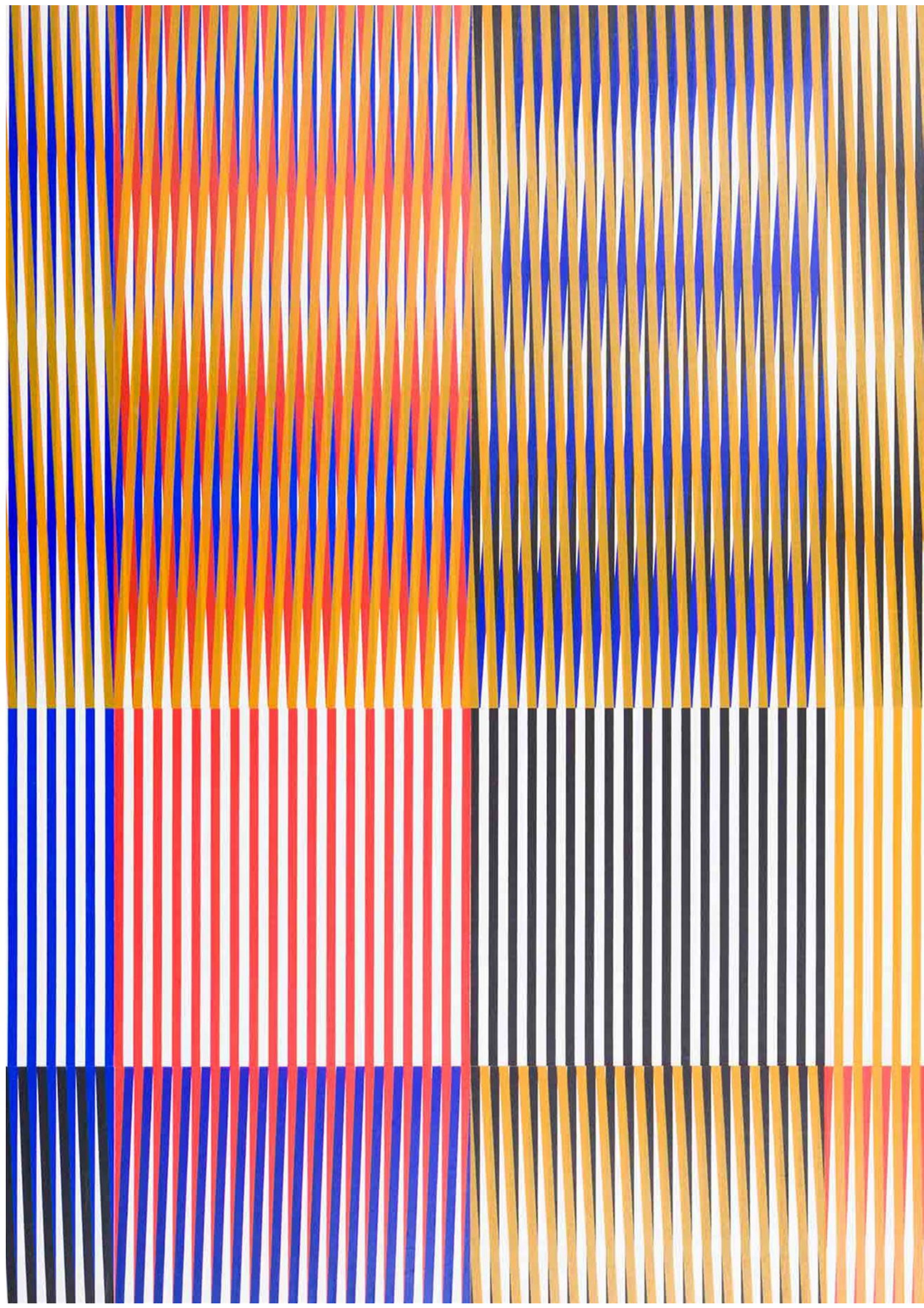
Now, let us be quite clear! That did not enable our ever-deeper understanding of Reality-as-is, but only a view of its severely restricted Pluralistically modified versions And, these versions included absolutely ZERO Qualitative Changes! For, though they did occur, they were never causally explained as such, but, on the contrary, merely described without any actual means for such majorly-defining changes being revealed.

And even that reveals a great deal less than even showing what has also already, and being increasingly lost, every single Day, as the methods also cannot reveal ALL constantly appearing, wholly New features of Reality, that fail to be exposed in crucial investigations, entirely due to a strictly Pluralist approach and consequent apparent establishment: not least being revealed in the on-going fiasco of the Copenhagen Interpretation of Quantum Theory, and the many unprovable speculations throughout current Cosmology!

Now, the task of remedying this mess, apart from establishing an alternative approach to Plurality; also has to involve a wholly new area of revelations of Reality-as-is, about which we currently know almost Nothing, as the usual imposition of Plurality as a starting point, unavoidably suppresses any revelations of a Holistic Reality, by its imposition of Stability as Basis.

And, if and when we do attempt to consider multiple simultaneous factors - all affecting one another: we are always drawn to an "Everything of Equal Weight





Assumption”, which leads to random chance conceptions, and hence largely probabilistic solutions - as we see in Physics - for our imposed Pluralist manacles do not allow us to observe and reveal the relations between factors in a Holist World. They are never observed! But they most certainly exist, and without a wide-ranging, deliberate study of such relations, we will not be able to even begin our task.

Now, to begin such a study, we must immediately bury the pluralist assumption that all multiple simultaneous factors are independent of one another, so that they merely SUM, when present together! Indeed, we must completely replace this myth with the assumption that everything affects everything else, to various different degrees.

So, in a situation where the inter-relationships only happen once, some seemingly random trajectory would take things careering off towards infinity! But, of course, that never happens: indeed, alternatively, these will consist of multiple, different trajectories, which will constantly-and-variously interlink with one another - with repeated, if modified, versions of all possible interactions of the available processes, and the then following consequent reactions of the new versions. And these will be taking place absolutely everywhere in the context.

It sounds impossible to deal with, but it isn't entirely so! For all sorts of non-involved-substances will be present, all over the place, but in a situation of unavoidably constant repeats, these so-called impurities will be gradually eliminated, for they will not be involved in the various processes, so will be ultimately swamped by those that are! The many involved processes, will be going through consequently limited cycles of change, with all non-essentials effectively eliminated. What will have been effectively achieved is an overall unchanging System of Repeating Cycles - a Kind of Stability! And some new thing or process introduced into it will always perform in the same way.

And, clearly, because Time has, necessarily, been incorporated into its definition, not only will processes be constantly repeated, but as has already been explained earlier, so will the actual Cycles of Repetitions! So, what originally was considered to be one of a constantly developing Chaos, is now a situation involving constantly repeating Cycles of Processes - determined solely by what was present in a given defined area.

And, this delivers a revealing light upon Marx's discoveries, regarding the Trajectories of Qualitative Changes in his Dialectical Analyses of Social Revolutions, and, therefore, by Analogy, in all occurrences of what he termed as Emergences, at all existing Levels, but occurring at vastly different tempos.

Now, of course, these Levels differ so markedly, that the multiple interacting factors will be very different in what features are involved: but, nevertheless, it will not be the actual properties at a given level that are involved, but instead what determines the Character of what happens overall in such mixed circumstances, resulting in the nature of their on-going Trajectories-of-Change, which will remain very similar, no matter what level they are at.

And, at every Level, the key features will never be those particular properties within that Level, but, instead, they will consist of much more general features, such as whether they are diametrically opposite to one another, for example! For example, as already mentioned earlier, such Diametrically Opposite Processes can do everything, ranging from one of the pair being clearly dominant, to predictable flips from one to the other. Or even their persisting Total Mutual Cancellation.

Indeed, also, the defining processes, existing-and-changing within a Maintained Stability, will always be ones of purely Quantitative Changes, while those delivering the Qualitative Changes will occur in an inevitable exit from the that Stability!

Yet, contrastingly, at the heart of many unchanging processes, and also at the heart of a single long-lasting stable process, or multiple sets of such processes, in a created Temporary Stability within Reality-as-is, these frequently depend upon Balanced Opposites to ensure that nature!

So, with these ideas, we are moving from a Causality determined solely by individual processes, which as entirely separate, fixed and independent processes, can merely SUM, to collections of such processes that affect one another's results by changing the process, AND, most importantly, delivering in addition, overall affects, such as those described above.

And, if you think that such additions merely compound-the-felony, and make Theories and Prediction even more difficult, you would be damagingly mistaken.

For, it is just such features that actually fruitfully impose surprising, if temporary, Stabilities upon Reality-as-is, and allow real Understanding instead of the wholly misleading Rationality of Plurality.

So far, I have described only a small part of Marx's Dialectics, which for the first time in the History of Mankind, allowed the Real Holistic Features of Reality-as-is to begin to be developed and understood.

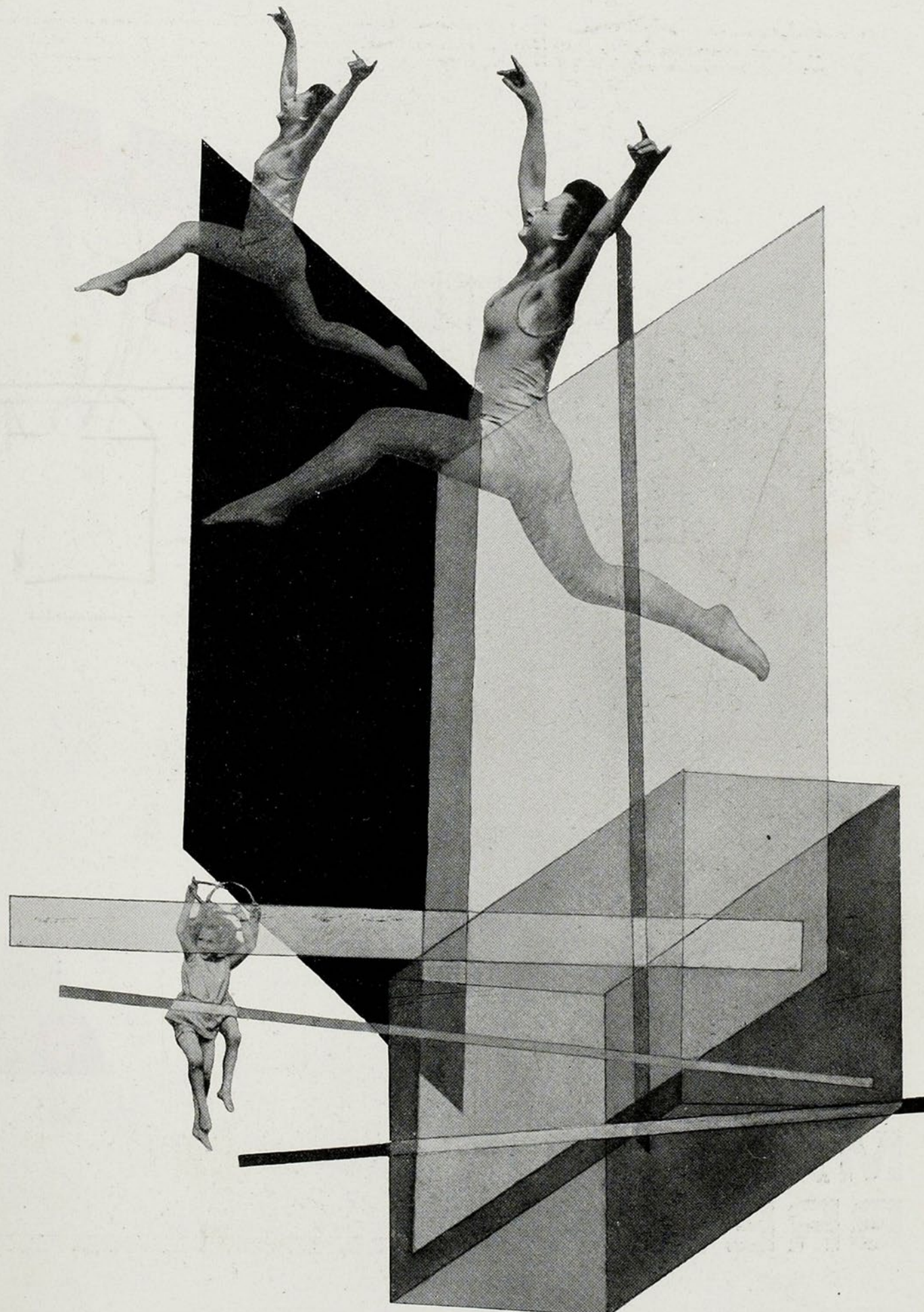
But Marx, only comprehensively delivered a Dialectical Materialist series of Analyses in a limited area of understanding - his ideas can be applied much more broadly, albeit with new theory needing to be developed alongside. And quite apart from all the other necessary Disciplines, including, of course All of the Sciences, and even his Analyses of Capitalism were NOT permanent features of that Discipline. For, the whole Essence of Dialectics is that it deals with the actual on-going Development of Reality-as-is: it is constantly developing into something New!

So not one single Discipline, and its consequent Rationality is ever a finally Constant Entity. It cannot be such as it has the built-in feature of creating the Wholly New.

But, of course, there is still a very long way to go! The Sciences have not comprehensively ever been given the necessary Dialectical Treatment until now, and, consider the still untrodden ground that will be involved in the study of Life, Mankind and Consciousness!

[NOTE: This philosopher has also spent the last 14 years addressing the failures of Modern Sub Atomic Physics, as he is also a qualified physicist. See his Holist Substrate Theory for his major intervention in this area.]





L. MOHOLY-NAGY

Menschmechanik (Varieté)

Holist Science VII

Balanced Stabilities

One crucial principle in a consistently Holistic conception of Reality-as-is, concerns a radically different view of Stability. The significant difference from the Permanent Stabilities that are routinely pursued exclusively within Plurality, is that, instead of a situation forever being “naturally unchanging” (as that is only ever true within the wholly mistaken and artificially-imposed Pluralist Conception of Stability), it is an always-potentially-varying feature of entirely-unfettered Reality-as-is - a balance of dynamic forces that persists for some time.

For in contrast, Plurality is an entirely man-made situation, both in its conception and in its actual-construction in experiments and the technologies we have developed, when it is wholly built from “making situations artificially Perfectly Fixed”, until it has achieved that unnatural situation, and been maintained as such by the imposing of wholly unnatural restrictions, so that, only thereafter, can it commence to be seeking to extract “its seemingly Eternal Laws”, which by then were acting within it - to ultimately “totally expose” a merely-assumed, and naturally impossible version of “Reality-as-is”, and its produced collection of “Eternal Laws”, in order to both “understand”, and then “use” those Laws, to deliver some required objective.

But, the trouble was, and always is, that such pragmatic objectives do NOT necessarily require the use of the supposedly-required Real Actual Laws of Nature, to successfully carry through such aims to a delivering conclusion. For the result, consistent with that restricted version of Reality, can be very easily achieved by first effectively holding variables still in order to easily extract such “a Law”, which will be unchanging within those arranged-for conditions, so using it, within those same

conditions, will achieve that same objective. So, for literally millions of years, first, the ancestral hominids, and later the actual species of Human Being to which we all now belong, did exactly that both increasingly effectively and successfully, until, in fact, surprisingly recently.

Indeed, even the profound Greek Intellectual Revolution of the 5th century BC, did not change this general approach: it merely put that old pragmatic approach into a newly-devised Method of Cerebral Reasoning, which could be effectively used to address and “solve” such problems entirely mentally “by Thinking”, as well as the usual, much more long-winded way also “by Doing”!

It also, for the first time ever, delivered a purely cerebral method to alternatively arrive at a host of further relations possessed by these pragmatic methods, to possibly precede the actual Doing, and thereby allow a systematic approach to studying, formulating and using such achievements, theoretically.

But, it also had its disadvantages too: for in a multi-stage set of processes and relevant Theories, every single step would necessarily require its own-and-always-different stable conditions to deliver its own “Eternal Law”. You could not do the whole thing entirely within a single collection of conditions. Absolutely every “Such Law”, had to have its own different fixed conditions for things to actually work!

Any purely consequent algebraic manipulations involving the Formulae of different Pluralist Laws, were not only wholly illegitimate, but also entirely wrong and misleading, as absolutely NO Pluralistic Laws could have

any Common Ground to allow such manipulations to be legal: indeed all such developments, "always-purely-theoretically" achieved, were wholly illegitimate as they were all from different, artificially-arranged-for contexts.

Clearly, to use such flawed Cerebral Methods, to "extend the Science" could only be possible, if all the laws involved, had been developed upon the very same ground - such as within Reality-as-is!

When watching Lecturers using long series of illegal substitutions of this very kind, between purely Pluralistic Laws, and the consequently illegal relations produced by such practices I was aghast! For, that could only be legitimate, if the laws were established entirely within Reality-as-is! The error is due to the entirely mistaken assumption of Eternal Natural Laws.

So, a Holistic Method of deriving such Laws, must be the necessary pre-requisite, though with present knowledge and methods, only the Pluralist Methods with their artificial Stabilities are currently known. And, these are only possible via the artificial Pluralist methods.

So, to do the same within Holism, we would have to use ONLY those Stabilities achievable there, and they have not even been sought, as yet!

Clearly, the earlier papers in this series, coupled with others of the same ilk, must be reviewed, to find out exactly how to extend the possibilities far enough to allow legal substitutions between Laws established legally only within the enabling Common Ground of Reality-as-is.

And, to do this we will also no longer be able to use Equations taken from Mathematics, which is, of course, entirely Pluralist, and thereafter fit-them-up via illegally-grounded experimental results: for, instead, we must take data only from legally-established experiments, and, only then, substitute them into the most general possible equations - BUT many that we will initially try, will not, and never could, deliver.

So, for this section, alone, we will necessarily have to involve one of many possible General Forms, and hence, wholly new means will have to be found, in order to decide which ones, though not artificially constrained to do so, are, nevertheless, delivering an always consistent set of results.

And to ever succeed in this task, we must effectively be seeking Natural Stabilities within truly Holistic Situations.

The problem is, of course, "How do we know we have a Holistic Situation?"

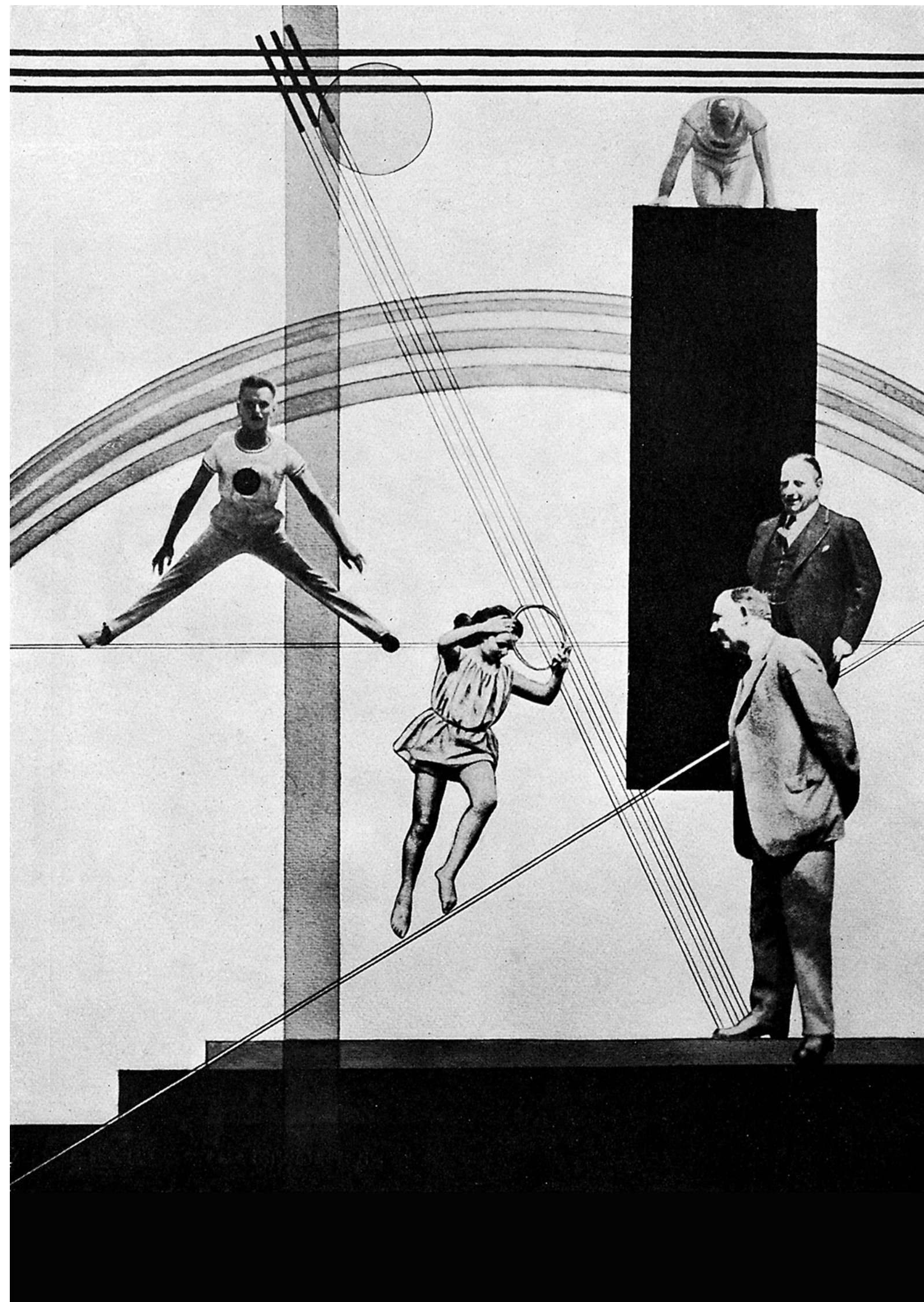
For, in achieving an extended range of possibilities, we cannot avoid selecting from seeming Stabilities, most of which will be in Pluralist situations - and hence illegitimate! Especially, as many obviously omitted factors were left out because we assumed they would be irrelevant in our targeted objective! And as, at this stage, we do not know how different simultaneous Laws affect one another, we have to invent a means of testing whether a situation is as required.

For, to choose the best one, will only become evident, by comparing how the many possibly-considered General Equations, that will replace those usually used in matching them to carefully arranged-for Experiments to see how they will perform, when substituted into, with valid, concrete data, from exclusively real situations of Reality-as-is!

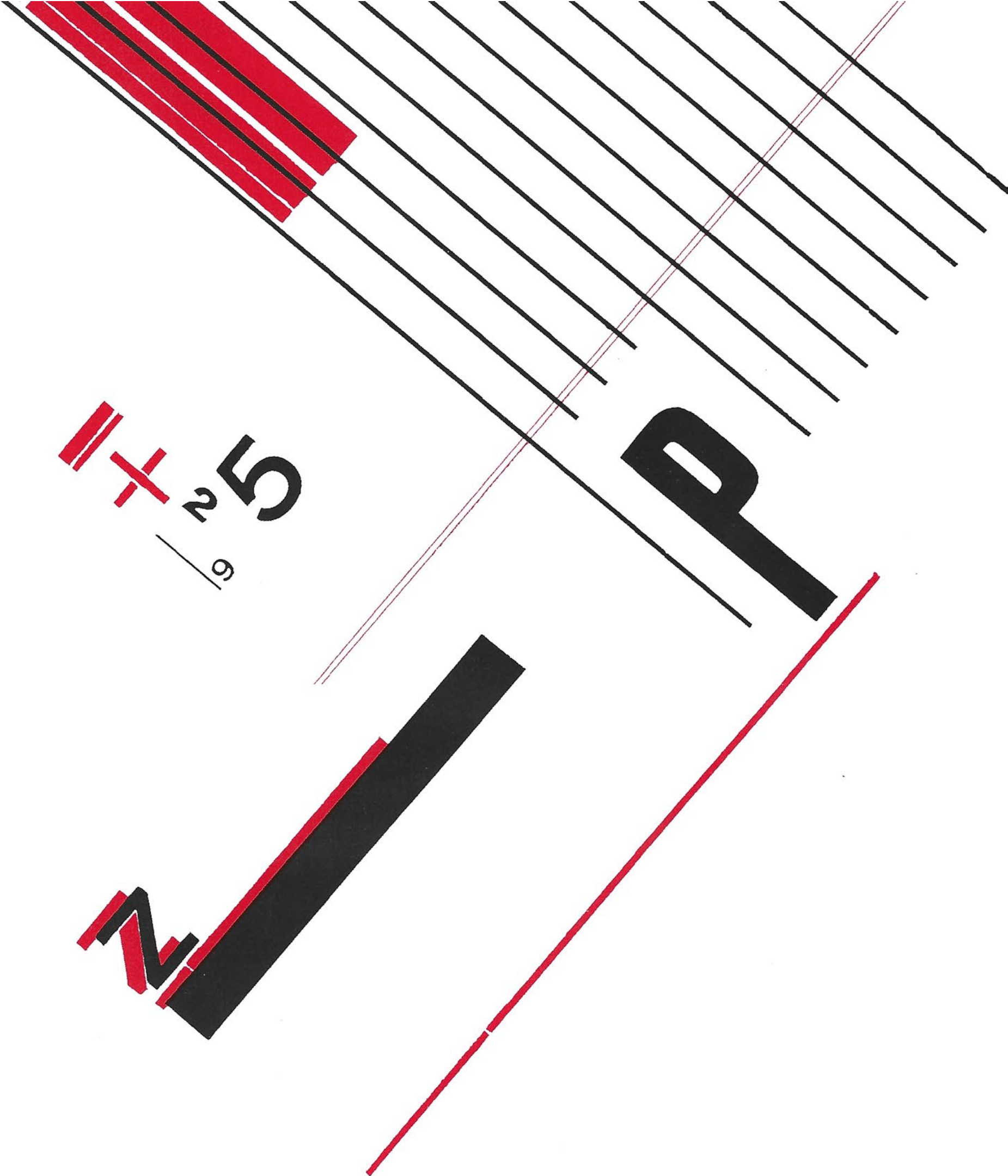
NOTE: It may well be necessary to devise wholly New special preparatory experiments to attempt to recognise situations that are stable within Holism, in extracting at least those relations with Holism's Temporary Stabilities, so that they could be safely used in valid theoretical manipulations to uncover real Holistic Laws,

But, of course, that implies that even-within Reality-as-is, only some forms of such valid Natural Stabilities will be achievable, so that along with totally-justified omissions from the given context, such may not affect the Holistic Laws aiming to be extracted.

So, such an initial task must be to discover those naturally Holistic Stabilities (which will, of course, be temporary - although certain situations might feasibly remain stable for many millions of years), but nevertheless will enable a reliable way of establishing any given Holistic Laws to be possibly be revealed from data by standard methods in real Holistic situations.



So, having removed the always misleading Pluralist Laws from the well established past method, we will be in a position to still use the old method, but necessarily with both a much more General Formulae than in the past, and with data from a Holistic Stability, FIRST to establish which are the proper things to be using; and THEREAFTER to then use Simultaneous Equations from an appropriate set of such Forms, to then evaluate the Constants, and reveal the required Holistic Equation of the Law involved.



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