DOI: http://dx.doi.org/10.26247/theophany.2382

TRANS-MODAL UNDERSTANDING:
The new language of science.

By

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"*When any physical process first starts functioning, it sends out 'feelers' in all directions. Thus, time may be reversed, accepted laws may be violated, and unexpected things may happen*" **(Henry Margenau)**

"*The individual seeks to experience the totality of existence as a unity full of significance*" (**Albert Einstein)**

"*There is a subtle difference in the separate operation of the two [brain] hemispheres. They determine the [internal] balance of a person and indeed of an entire civilisation. The right hemisphere is the intuitive unifier and the left is the rational analytic operator. Both are necessary. But the proper balance between the two [only] happens when the right hemisphere is the master. Our Western civilisation suffers from an excessive domination by the left hemisphere*"
(Iain McGillchrist as summarised by **Max Payne**)

Abstract

Science is currently facing many challenging conceptual problems. The most serious thing is that we are not considering the facts and the way in which they are understood. The average scientist does not see that there is a conceptual problem in the way in which he approaches, executes and interprets his work. Therefore, there is a problem regarding the awareness of non-deeper on the part of modern (positivistic) science itself of the structure, nature, opportunity and meaning of the world and life. In this article, the holistic model is proposed, i.e., experiential participation and interaction of the scientist as an entire man (right and left-brain hemisphere) with Nature. The inter-modality presupposes a state of mind which enables us not to be too impressed and not to stick to what we perceive. It is possible only if the desire for exclusive spiritual conception is combined with the desire for immediate personal experience through the integration of the self-reported unit of events and situations that unifies space / time without space / time. Preventing confusion makes it easier to understand the world's presence and feel it work.

Introduction

It is a fact that many intellectuals all over the world make judgements that science today faces many delicate conceptual problems. Most seriously, it does not take into account the real f a c t s and how to understand them. Science sees no need to change anything in its conception and studies of *reality*. The only need it perceives is the one that governs ever more the knowledge of reality along with current knowledge. But while, for example, Quantum Mechanics, already for some years now, has offered us new ones (in many cases, completely contrary to the old Physics), the central theoretical and ideological axis of science seems as if it does not want to move. Today, for example, in both Philosophy and science, in particular Psychology and Sociology, we know the three types of "reality": *reality*, *actuality*, and *factuality*. But the average scientist only considers the oldest paradigm (of Voltaire's time) that he successfully conducts scientific research. He does not see that there is a conceptual problem in the way he approaches his work, he carries it out and he interprets the results. Or if, occasionally, he perceives such a problem, the scientist expresses it quantitatively; quality considerations are usually avoided. In his view, what he needs to do is to perfect the existing scientific language, so that it reflects the truth of the research subjects more precisely. He considers sensory perception, object-based understanding, the specificity of terminology, calculability, and reductive (q.v. *Reductivism*) frameworks as the quintessence of what scientific language should reflect. He does not suspect that there may be something in nature that cannot be illuminated by the way he uses the available communication tools regardless of the extent, expansion, enrichment, or deepening of their denotative potential.

Trans-modality presupposes a state of mind that does not allow one to be too impressed and caught up in what one perceives. Such an attitude is possible only if the desire for exclusive intellectual grasping is coupled with a desire for direct personal experience, which embodies that self-referring oneness of events and states, and which unifies space/time with no space/time. We want to *intuit* its presence and feel how it works as it does. It comes down to the following: just as there is more to things than the atoms that compose them, there is more to words than the meaning they bear. That ‘plus' is woven into the use of signs in such a narrow way that you can't engage one without engaging the other. The meaning and that which goes beyond, are entangled as particles in the nuclei of atoms. You can't have meaning without something that goes deeper and deeper than it, no more than you can have matter without the shapes and history behind its current structure. One comes to view due to another, and vice versa.

However, there is a condition: you, the student of reality, must be mentally prepared to recognize the enmeshment of meaning with what goes beyond it on its *own* terms, not on *yours*. Boundness, depth, and elusiveness are part of “*hereness*”. Both modalities need each other to be what they are in the framework of a whole that is both divisible and omnipresent. The mind has grasped this capacity for reality generally. It integrates the tendencies towards abstraction, logic, factual information, utilitarianism, and the expressiveness of the left hemisphere with those towards contextualization, intuition, implied information, interpenetration, and the feeling of the right hemisphere. The thrill of living something is that it puts us in contact with the catalytic power of the whole behind the forms. Things now appear to us as "new" though we realize simultaneously that we have always known them. As Iain McGilchrist formulates it: “*The right hemisphere deals with the world before...separation has transformed it into something else, before the left hemisphere has re-presented it. It is not*

that the right hemisphere connects the pieces of reality – because the entities it reveals were actually never separate" (McGilchrist, 2009, p. 179).

There will not be, of course, any attempt here to deal with the conceptual intricacies involved in this kind of information and the science or Philosophy it encourages; that alone would require a whole book! But the extent of the problem will hopefully become clearer when some of its implications are discussed in this article. Thus, it may be possible to convey a more gratifying concept of *trans-modality* and how it overturns our contemporary alienation from nature and truth. The more we sense nature, the better we understand it; the better we understand nature, the more we see that its most crucial function is keeping its various manifestations connected; and the more we consider the role of connectedness, the better we appreciate (and handle) these manifestations.

We will discuss this way of functional and dynamic integration to try to give a practical definition of the trans-modal reality. The definition will not be exhaustive; the *trans-modality* reflects a reality that cannot be understood by a simple precise description. Neither the trans-modal reality can be known just by choosing to do so. *Trans-modality* presupposes a state of mind that allows one not to be too impressed and stuck in what one perceives, whether positive or negative.

Such an attitude is only possible if the desire for an exclusive intellectual grasp is accompanied by a desire for direct personal experience. Of course, the subject of uninspired (cerebral) and experiential knowledge is nothing new. Epistemologically, it has been presented by Italian philosopher, rhetorician, historian, and jurist Giovanni Battista Vico (1668–1744)[1] and was later applied to the dual division of the sciences into theoretical (*Verstehen*) and practical/positive (*Erklärung*) by the German theologian, philosopher and historian Wilhelm Dilthey (1833-1911). Exclusiveness in any field of interest is the only attitude that does not correspond to trans-modal perception. Similar to modes of perception, inter-penetration and/or co-regulation of other modes of perception and thought complement and/or inform other attitudes.

What is trans-modal reality?

How should trans-modal reality be defined? We can try to do it in two ways: one negative, the other positive.

In a negative way, trans-modal reality is seen as a loss of known conceptions of reality. Objects are usually believed to exist in space-time as constructions, relationships or situations that have emerged through linear and deterministic processes. However, when discussing the negative trans-modal reality, the opposite approach is used. Objects, states, and relationships are now seen as de-conceptualized, de-objectified, de-constructed, de-located, de-timed, and de-compartmentalized "objects". Once you de-characterise the modes of nature's being as they appear to you, they emerge to view more as what nature is itself is, i.e., with no cultural projections.

The reverse holds true for the positive description of what exists. Here we just conceive of a model of action in nature that is articulated dynamically through the different systems by which objects, events, relationships and mind come into identifiable form. Physical operations occur at different organizational levels using specific qualities: in time, space, shape, distinctiveness and categories.

Localization, linearity, and the rest of the modalities currently used by scientists apply to these particular operations that require planning, realization, reason and

[1] G. B. Vico, *Theory of Knowledge*, Shoe String Pr Inc., 1969.

structure. On the other hand, non-locality and non-linearity apply to those particular operations that require intuition, tendency, indirectness, and in between. All objects, conditions, and systems are local and time-based. But bringing them together as objects, states, and systems is not. The whole is bigger than her parts. A need or occasion prompts a locus or moment to elements of other loci or moments.

Visual anti-mirror effect of spirit and matter.

Let's see how it works out. Physicist Sir James Jeans (1877-1946) used to maintain the following: To say that the mind cannot influence matter today becomes as absurd as to say that matter cannot influence "ideas," as he called what in this task is described as 'dynamic patterns.' Physical existence must be of the same general nature as these ideas or dynamic patterns. Reality beyond the mind produces dynamic models within.

If the concept of Jeans is correct, it is also necessary to be able to reverse it. Just as matter outside the mind produces dynamic patterns within it, dynamic patterns inside the mind produce results outside of it. Experimental evidence exists to support this conclusion. There are also three compelling theoretical reasons for why this is true:

First, above all, matter is energy, therefore form. It means that matter embodies a process rather than a structure, and processes cannot be regarded as physical entities. Things are finally made of sub-particles, or fleeting electrical excitations of the only field, as Einstein called them. But that just describes how things exist in their composite structure. It does not describe how matter operates. It depends entirely on what the material has become, thanks to the empowerment offered by dynamic models.

Secondly, in the final analysis, matter is not static; all appearances go in the opposite direction. On the one hand, matter reflects the dynamic patterns through which sub-particles interact with each other not locally and not numerically in the nuclei of atoms. On the other hand, matter reflects how these dynamic patterns interact with other more complex assemblages on a more composite level of organization to produce even more complex physical entities.

In the hierarchy of complexification, these ever more complex entities can range from sub-particles to particles, atoms, elements, molecules, etc. up to the complexity of the human brain. There are more electrochemical interaction points between the 100 billion neurons and their billions of synapses in the human brain than there are individual particles in the universe.

What is the practical effect of this exercise on increasingly complex assemblies of dynamic models? Change the dynamic patterns in the interaction of any number of physical units and you end up not only with a different material entity, you have a different order of material entities. The power and potential of physical existence lies in how matter is put together. It's not about what the material is composed of. As Iain McGilchrist (2009, p. 196) writes, we have "*a world where nothing is ever fixed or fully known, but [is] always becoming something else*".

Third, dynamic models can be modified by other dynamic models, provided that the most general of all, nature itself, that triggers change. As Jean underlines, following in the footsteps of Plato and Goethe, the causes must be of the same nature as their effects[2].

[2] This may apply to a "closed" universe, speaking rationally, but not necessarily theologically.

"Whatness", "Howness" and the "Cosmic Law"

The important point here is that, strictly speaking, the similarity between causes and effects *isn't* anchored in the sub-particles making them up as such, i.e., it isn't based on the 'whatness' of matter. It is based on dynamic models that mould sub-particles into particles and then into all other increasingly complex entities. Without such complex dynamic patterns, physical existence would not have the essential qualities which appear as its "whatness".

In this way, nature, as we know it, embodies a hierarchy of "hows". The 'how' on one level or mode of physical expression invites another level or mode of 'how' to take shape. In the end, we don't have a fixed scale of 'whats'. We have an auto-modifying, or auto-adjusting, "hows" process. No "what" can exist without a "how" which has turned it into what it has become.

This state of self-regulating and self-organising interaction is here called '*trans-modal reality*.' It embodies the "essence" of Einstein's and German logician, mathematician and philosopher Kurt Friedrich Gödel's (1906–1978) "block universe". Since "*everything is everywhere at all times*" (Whitehead, 1967) ―a phrase that reminds us of the "sympathy" of beings, as taught by the Stoics― as English mathematician and philosopher Alfred North Whitehead (1861-1947) summarily describes the block universe, any one thing can also be contacted by any other, and any piece of *information* can lead to any other piece of *information* at any one moment.

It depends on the specific circumstances and the awareness of their limitations and potentials. The lowest or simplest "how" does not lead to or determine the highest. There is no such thing as total Determinism. This conclusion simply creates a new milieu where the different physical possibilities allow new dynamic models to emerge (q.v. *Emergentism*) when certain requirements make it essential.

Behind all this, we can discern something which, from a certain point of view, resembles a "law" of cosmic differentiation through inter-penetration. This "law" is incomprehensible. Iain McGilchrist again explains why: "`*Grasping' elements ... won't get us as far as we would like to, because the most important things in life refuse to be grasped ... Like Tantalus' grapes, they retreat from the reaching hand*" (Whitehead, 1967, p. 179). So, the only thing that can be said about the law of cosmic differentiation through inter-penetration is that different dynamic patterns of physical existence emerge and change, some for longer periods, some for shorter. The law is enacted as formations find opportunities to spread, not spread, semi-propagate or diverge entirely according to their experience of opportunities. What is seen as an obstacle in one case is seen as an opportunity in another.

Space-time unifying with no space-time

In this sense, trans-modal reality (a general modality emerging through more particular modalities) qualifies as a synonym for the *block universe*, when this is perceived as reacting to its own self. Trans-modal reality embodies this unity of events and states that unite space/time without space/time! Thanks to the c o n s c i o u s n e s s which is creation itself, all entities, events and relationships, which hitherto existed only beyond space and time, are focused in space and time. The two general modalities are interwoven to give nature a more complete expression.

The notion of creation in general gives rise to a major conclusion. It is not man himself, who catalyses entities or events into manifestation through his measurements, as contemporary popular idealism has it and Quantum Mechanics tentatively suggests; it is the block universe or trans-modal reality itself. A quantum physicist can be seen

to be collapsing some phenomena in manifestation. But the collapse takes place *via* him, not *by* him. He does not want particular phenomena to break down to be of this or that. By acting in this way, he does and being the person he is, he just helps the block universe to continue its local manifestation of self. He becomes the unconscious agent who "materializes" what needs to happen at that particular moment and place.

Particular entities or events existing in an overlay as endless possibilities in trans-modal reality (or the *block universe* itself) come into manifestation by the specific observer. But being the person he is at that particular manifestation of space/time, the observer measures into actual appearance only that which needs to come to the foreground for trans-modal reality (or the *block universe*) to continue being what ―and *as*― it is. Something that exceeds space/time is prompted in space/time. From an innate possibility, or virtual status, it becomes an expressive entity. The actor plays his particular role so that the cosmic play can unfold as it must.

The conceptual problem of today's science

Now let's go back to the question posed in the first paragraph of that article. What are the three aspects of the conceptual problem facing contemporary science? What makes them so important?

The first aspect of the conceptual issue is the way scientists look at reality. The second is the manner in which nature is objectified. The third is how scientists understand and manipulate reality in the light of both modes of "objectivation". To find satisfying answers to these three questions, conceptual questions are the greatest challenge of our time. The task is not just to recognize how we think and how nature works. The task is to become aware of why the important breakthroughs of science in the last 130 years calls for such an exploratory conceptual exercise to begin with, for example, why what we have discovered calls for ways of doing and thinking that qualitatively reflect it.

We will not attempt to achieve this with the categories presented in the above paragraph. An interpenetrative world calls for an interpenetrative presentation! Over-systematic analysis and categorization will be counter-productive. Clarity is always acquired to the detriment of truth. In the objectification of entities, facts, situations or relationships to better understand their transactions, we affect them in two ways:

On the one hand, we remove them from their interconnected reality, allowing us to isolate them conceptually.

On the other hand, our treatment of the objectified entities, facts, situations or relationships as isolated ‘things’ obscures their connectedness to the enveloping world – particularly in more subtle and indirect forms of existence. As a result, we are caught in our own clarity. As Cantor, Merleau-Ponty, Whitehead, and Heidegger all discovered in their own unique ways, the more solidly we abstract the domains, aspects or relationships of nature, the more arbitrarily we conceive their interaction with another objectification. We are distorting both the image as well as the dynamics of physical reality. Rather, we need to understand our understanding more than the "things" we try to understand!

Rediscovering hidden treasures

We now come to a few suggestions as to how this delicate exploratory task could unfold. The propositions will not be limited to the recognition of what Biology invites us to objectively and which Physics offers us to contemplate. The proposals will touch on epistemological considerations, the brain operations involved in perception, the

biological structures filtering incoming information, as well as the structure of reality that the above conditions suggest.

Getting informed about how the brain apprehends things and how they show up in its light, pushes one to investigate how the brain reaches into the outside world, from where and for what purpose. We can't just become familiar with what happens in nature or in the mind. We can afford to work with the situation.

In this way, we discover a number of mechanisms that have been neglected until now. There's the right hemisphere or the limbal brain. Another is the emotional interaction of these two centres worldwide through neurophysiological excitement. As a result of re-activating such mechanisms, it is possible that instead of continuing to adapt the inside of our brain to the forms of the outside world, as we do today, we will start to adapt it to the deeper layers informing the same.

Buddha was right when he stated that "*we are our thoughts and through our thoughts we make the world*". We are, in fact, what we believe. This does not mean that the thought is completely arbitrary. Nor does it mean that thinking cannot change when it reaches a point where the person realizes that it must. The will to bring about such a change must come as a powerful impulse. A simple philosophical conviction does not mobilize enough energy to do the work. It brings forward-looking connoisseurs to imaginative rather than intuitive ideas. And this is a major confusion that needs to be recognized.

We're not trying to imagine a new world. We want to understand its presence and feel how it functions the way it does.

Rehabilitating the limb brain

To obtain the qualitative change suggested above, it is first necessary to inform future connoisseurs about four important points. The first is how and why potential connoisseurs had permitted themselves to stop considering the right hemisphere. The second is how prospective experts will not confuse the underlying integrality informing the right hemisphere with the conceptual, logical and conditioned interpretations of it by the neocortex. The third area is how foresight experts will avoid becoming bogged down in future interpretations. Finally, the fourth area concerns the manner in which intellectual acuity can be maintained (and even increased) in such circumstances.

It will be far from easy to give a coherent description of the ins and outs of this radical re-education programme. The issue is not just what disciplines need to be taken into account in the discussion. Nor are there any methods of investigation to be adopted. The question is which responses are really relevant and for what reasons.

Moreover, the individual must find out if he has the courage to go beyond the answers he obtains. Such an attempt will allow him to sink once again into the actual experience of wholeness that used to line, from within his understanding and feel its catalytic effect on his perception.

The last question is what can best facilitate the above-mentioned process. An old Chinese proverb puts it in one word: “*If you don't look where you're going, you're likely to end up exactly where you're going*”!

Awareness that modern science works.

The question now arises is whether the ancient Chinese warning, with which the previous paragraph ended, be discussed from a scientific and philosophical angle? Is there language capable of formulating an appropriate response?

In this paragraph, as in the next, we shall attempt to find suggestions for a possible answer. This is not going to be an easy task. In our time, science, humanities, social thought, and studies of consciousness are becoming more and more autistic (q.v. *Solipsism*). So, long as these disciplines remain locked into a specific pattern of thinking, they will not offer suggestions on how to exit from the labyrinth in which contemporary man has been stuck. For that to happen, there has to be a radical shift in heart and mind. We need to better understand why the Lights of the eighteenth century happened in the first place, and we need to turn them around to shine on its own basic assumptions.

If this is to happen constructively, the experience of fullness must become as functional in our time as the raison d'être of fragmentation. We can no longer afford to blindly enclose ourselves in our objectification, as the Enlightenment has done. It has already been emphasized elsewhere that nature also objectify his creatures. But it does so in an attempt to establish sufficient stability to be able to change in the future without slipping into chaos. Our society today is doing the exact contrary. We are in the process of establishing a natural stability in the conceptual mechanism of science. Thus, we can then channel change in one direction, that which suits our current understanding of things. We have to figure out how that happens and circumvent it.

To the protean age

Since the 1880s, the previous certainties of the left brain have become increasingly tenuous. The German mathematician Georg Cantor (1845-1918) discovered in his honor that all mathematics was necessarily unreliable and incomplete. Austrian physicist and philosopher Ludwig Boltzmann (1844-1906) has shown that no system is perfect on its own. Albert Einstein maintained that if there is no feeling of admiration or wonder, "*science degenerates into insane empiricism*". Danish physicist Niels Bohr (1885-1962) introduced probability as a major actor of quantum physics. The German physicist Werner Heisenberg (1901-1976) discovered uncertainty at the very heart of the objectivation of physical existence. Kurt Gödel not only corroborated Cantor by proving that incomplete character is the rule of mathematics. He showed that mathematics is not actually an objective science, as everybody accepted until his time.

These provocative departures from the "normal" world view show that since the 1880s we are increasingly moving towards a protean attitude in both science and society. Proteus was a Greek god who abhorred contact with others. If you spotted him somewhere, he would change his shape and disappear. Nobody was able to touch him or establish contact with him.

Protean behaviour is a reaction to the rigid way we have objectified the world since the introduction of agriculture (10,000 BC) to begin and write later (3,100 BC). Today our self-blocking practices in objectifying reality have reached the limits of their possibilities. If we manage to abandon them, this will be reflected in the way we discuss science and manage it.

One of the ways we could use for achieving this is to become more aware of our own expectations from the practice of conceptual objectification, its usefulness for predictive theory and its applicability to actual research. Max Payne takes a lucid look at this extremely important issue in a journal by Frank Parkinson Science and Religion at the Cross Roads. "*Dark matter and dark energy*", writes Payne, "*show that we do not know the full range of the properties of matter. But the same applies to the open quest for improved thinking. It suggests that we do not know the full range of the properties of mind either*" (Payne, 2009, p. 54).

There is a paradigmatic failure in the reasoning which these words reflect, and this applies to the understanding of physics and spirituality. Since the dawn of civilization, we have taken the way we "objectify" reality (secular or holy) as given. We have not seen this as just a filter through which feelings are activated, reality is grasped, and thoughts are put together. Even less have we seen the limited applicability of this system of objectification to reality, physical or nonphysical, measurable or not. We stand convinced that we can use the existing conceptual filters to apprehend the far ends of the self-organising physical continuum as much as we use them for apprehending the middle section that is perceivable through our senses. In other words, we have ignored a fundamental law of pro-epistemology. He says that while everything may interpenetrate with everything else, everything cannot be viewed in the same way as everything else. Each object must be seen sensitively to the demands of the particular bar of the self-organization scale from which it operates. For example, we are unable to study microbes with a telescope. Nor can we analyse the chemicals using a stethoscope. It just isn't true that because our objectification-filters work adequately for making sense of the section of reality perceivable through the senses (or their technological extensions), the objectification-filters work equally well for making sense of other sections not perceivable by the senses or fathomable through the logic they dictate.

Relevance vs comprehensive knowledge

If we do not know "*the complete range of the properties of matter*," as Payne continues, it is not due to some current ignorance of them. It will not be dissipated at a later date as we refine our survey technologies, broaden our objective knowledge and improve our computer capabilities. Our ignorance is due to the fact that the conceptual filters we use for objectifying what happens to the rungs closest to where we are standing on the ladder of physical organisation, cannot be used for apprehending properties on the far ends of the same ladder. For example, the physical organization is quite different in terms of particle physics and chemical interaction. The one level that is not applicable is the lowest. No organization exists at all. No concept filter is required. Reality is alive, not abstract. A holistic wave takes over, ending all self-blocking objectification and mental activity.

Could a more flexible approach to understanding be developed, capable of understanding more closely the properties linking all levels? Can we develop a new way of thinking that draws selectively on other rationalities without ending up with a call to irrationality? Is it possible to invite nature to reveal its functioning through various modalities, conceptual systems and organisational levels? Maybe it will be. But there is one caveat: we should not lock into objects that we become aware of nature. Reality needs to be both abstract and lived. There are situations on the fringes of existence where the truth can in no way be understood in terms of objects, or wrapped in certainties of any sort. These situations have to be complied with for what they are. They must be perceived for what they do both within themselves and within the global framework of reality.

Starting to understand trans-modal reality.

Two basic findings are important here. The first was mentioned earlier. This concerns the mutual penetration of compartments, tendencies, levels of expression and modes of action of nature. This is a sort of synesthetic state of a much wider (and deeper) scale. The mutual interpenetration in nature has been discussed by many wise elders.

It is also strongly supported by contemporary science. Five examples demonstrate this.

Firstly, there is the correlation of two distant events without any transfer of energy from one to the other. This correlation is referred to as non-locality or entanglement, depending on the appearance of the particle operations being investigated.

The second instance is the ability of children, well tested by Noam Chomsky (1988), to know more about what words mean than grownups or other kids may tell them they do.

The third instance is that the body as a whole, rather than the brain alone, functions as the source of most of the information and knowledge acquired by an individual (McGilchrist, 2009, pp. 118-120)[3].

The fourth example is the collapse of Schrödinger's wavefunction in quantum mechanics. He converts a simple possibility to the real through an act of measurement. Ultimately, what is born is what is conceivable. As it becomes wider and deeper, so too is the reality brought into existence.

Lastly, we come to the fifth example; this is the work of the physicist David Z. Albert (1992) on the blending of quantum mechanics with special relativity. Albert and his academic colleague Rivka Galchen (2009, pp. 32-40) treat this huge problem of theoretical Physics in a highly illuminating article: "*Everything there is to say [about physical existence] can be packed into an infinite set off propositions of the form 'at t1 this is the exact physical condition of the world' and 'at t2 that is the exact physical condition of the world,' and so on. But the phenomenon of quantum mechanical entanglement and the space/time geometry of special relativity – taken together – imply that the physical history of the world is infinitely too rich for that*". This means that places have intertwined. The timeframes are also tangled. The past remains active in the present like in the past. The present is active in the past and the future as well as the present. Schrödinger's wavefunction manifests as a state in which object-mediated thinking encounters reality with a non-object structure and non-object-mediated thinking encounters object-mediated reality. As Albert and Galchen (2009) explain in their article, "*it is from wave functions that physicists infer the possibility (indeed, the necessity) of entanglement -- of particles having indefinite positions, and so forth*".

If the trans-modal picture of physical existence outlined by the above five instances is correct, then it stands to reason that each of nature's compartments, tendencies, levels of expression or modes of operation flow into, or evokes, every other compartment, tendency, level of expression or mode of operation. Like holograms, human beings are parts that live in entire parts and parts that live in parts.

Another point important here is the little understood ability of the mind to reach across nature's different compartments, tendencies, levels of expression, systemic organisation and modes of operation by contacting just one of them. This was announced by Whitehead when he declared that "*everything is everywhere all the time*." The interconnection of nature, which this access presupposes, allows us to get the best kind of information we need, even though the question was poorly worded. What counts is the authenticity of the intent expressed by the questioner.

[3] Of particular interest here is a quotation cited by the author from Lakoff & Johnson (1999).

A linear description of nonlinear

Let us now address the trans-modal reality (and the trans-conceptual understanding it entails) with three particular concerns in mind.

First, the desire is to create an approach to reality informed by the advancements in 20th century physics.

Secondly, breakthroughs must be used as a platform for the development of new epistemological sensitivities.

Third, if the existing approach to investigating nature can no longer be used for describing the new realities illumined by 20th century Physics, by Mathematics, and by consciousness studies, we need to search for a new Philosophy of linguistic expression. In that case, the question arises of whether we should eliminate time, grammar, and syntax. In the end, nature works without any of them.

The answer to the latter question is an unequivocal no. A non-linear language is in no way required to describe or comprehend non-linear reality. The very structure of trans-modal reality, which emphasizes transformative connections, renders this unnecessary. Grammar and syntax need to stay in place. Just by being interrogated in any language, the block universe collapses in manifestation all these qualities and local and temporal quantities that are relevant to the mission of the questioner.

The picture that emerges from the scientific and theoretical advances of the twentieth century tells us that nature is constitutionally open to the deeper questions involved in the superficial questions posed to it. It puts in the foreground any relevant event or fact; past, future, present, narrowly woven, vaguely woven, directly or indirectly put together, personal or abstract and any combination thereof. Both the specific and the general, the partial and the whole, the explicit and the implicit, can be drawn out in this manner from a state of latent to an active explicit state.

The prerequisite for such understanding is given here as trans-modal thinking. As has already been implied, trans-modality actually means that the universe and the contemplative mind form a set of modes of operation and rationalities. They can only be experienced, understood and utilized if the individual is not conceptually locked into them. Or if it is enclosed, that it can abstain from judging other modalities by the regularities appearing in its own.

The block universe and its trans-modal expressions

The concept of the *trans-modality* we are talking about here is based on the notion of the universe of blocks, which is considered an acquired. This is of the utmost importance.

Trans-modality can neither be defended pro nor against. It is perceived as primal and unquestionable. In this sense, it is like gravity, the second law of thermodynamics, the speed of light, and other data. A rationale or analysis is not required – or possible.

Of course, one can refuse the operation of *trans-modality*. But if we do, he will have to contend with the notion of the block of the universe put forward by Einstein and Gödel.

As explained above, the *block universe* was conceived by both men through waterproof mathematics. Both showed that, in the last analysis, *space* and *time* are creations of the mind at least as we perceive them as (scientists) people; they don't constitute aspects of objective existence. Space and time thus have no independent existence, especially when the universe is considered to be an organic whole.

Even so, Einstein and Gödel failed to deduce from this that if mind creates space and time, it probably also creates the logic inviting one to think in terms of space and time. Thus, the two friends created a deep conceptual problem for each other. The reason was that (like everybody else at the time) the mindset of Einstein and Gödel operated under the imperative of Enlightenment/rationality and the object-mediated approach it expresses itself in. Despite some references by Einstein to the mysteries of nature, neither he nor Gödel conceive of reality as something partially different which may be symbolically or metaphorically denoted. Still less could they envision a world where things, states, forces and relationships are not clearly defined and their modalities not infinitely extendable.

In fact, Einstein and Gödel quickly realized that the relative conception of space and time, which the bloc universe supposes, is incompatible with human rationality. For example, the science of the Enlightenment had given a static, invariable and accurate picture of the world. However, concepts as scandalous as non-locality, non-temporality and non-linear dynamics had appeared on the stage. They did not correspond to the well-groomed image or the idiosyncratic rationality propagated by the Enlightenment.

Einstein and Gödel realised that the new notions arising from their advanced cosmological Mathematics radically change the way we think in Epistemology, Philosophy, Physics, cognitive science, communication, and the sciences in general. The two wise men therefore adopted a two-pronged approach. First, they have distanced themselves from paradoxes, their own work has given way to. Secondly, in the cases they couldn’t do so, Einstein and Gödel worked out the paradoxes in such a way that they no longer offended accepted epistemological thinking and its self-locking principles.

A transrational logic?

The next question is, how do we deal with the trans-modal reality? Doesn't that demand a trans-conceptual and trans-rational approach? And if so, how can we accept a situation in which certainty can only be achieved in very limited areas under very controlled and specific conditions?

Modern research about the brain, general relativity, quantum mechanics and chaos theory can all help answer these tricky questions. But ancient philosophies in particular Taoism, Vedanta, primitive Buddhism, and Greek thinkers like Parmenides, Heraclitus, Xenophobes, Socrates, and others also offer answers. Indeed, their contribution is, in some ways, greater than that of more recent thinkers.

Ancient philosophy deals with more profound epistemological questions. For example, in one of its fragments Heraclitus remarked that "*nature loves to hide*" (Heraclitus, *fragm*. 211). He also hints that not understanding nature might be our own doing. As he explains, "*evil witnesses are the eyes and ears of people if they have souls who do not understand their language*" (*fragm*. 201). This saying implies that any type of logic informed by the senses is liable to mislead us; a stand that reminds us of the principle of falsifiability of the Austrian-British philosopher, academic and social commentator Karl Popper (1902-1994). Heraclitus says it explicitly: "*A connection that is not obvious is stronger than an apparent connection*" (*fragm*. 210) or: "[*People] do not understand how to be in disagreement [with itself, something can] be in agreement with itself*" (*fragm*. 212) or again: "*From [all] things come one unity and one unity [comes] all things*" (*fragm*. 206).

One way to understand what is really happening in our relationship with nature is to acknowledge that it works through mutual responsiveness. Fragment responses to

other fragments. But the fragment also answers to the whole and the whole to the fragment; and this point reminds us of the principles of the psychology of the Gestalt. They do this because, in the final analysis, we are so conditioned by our past objectification that we do not realize that fragments and integers are actually the same. Fragments represent the local and temporal shrinkage of the whole, while the whole represents the non-local and non-temporal extension of the fragments.

Thus, the so-called reactivity here translates the ultimate completeness into fragmentation and the fragmentation into the ultimate completeness. In the light of this, it is no longer possible to lock fragments or integers into any objectivation. We realise that how we conceptualise and why represents the key to grasping what reality is on either end of the objectification scale i.e., the statements cowardly or strongly objectified.

Fragmentation and unifying fragments (*wholifying*)

What makes such reactivity so effective? To answer the question, we have to once more indicate the initial stages of evolution after the Big Bang. In the beginning there was only one all (or white or "empty"). Then, by some natural, random (?) fluctuating, everything blew up. The universe we perceive today is the final product of this early event. The minuscule basic units that make up matter are the fragments in which this whole thing burst.

At the same time, the core tiny units embody the restoration effort. In this exercise, the key to successful local operations is a balanced reactivity. Is the fragment more responsive to the whole, or to his ontological need to be a fragment? Is the whole more responsive to the fragment, or to his ontological need to remain a whole? Can they function simultaneously? The question, mutatis mutandis, resembles the strong (but paradoxical) co-existence of causation (determinism) with indeterminism (Tychism). When fragment and whole do, the *wholifying* fragment responds to a fragmenting whole, the fragmenting whole responds to the *wholifying* fragment and constructive responsiveness appreciates the merits of both in a mutually inclusive self-transcending exercise.

Here we have an unusual (absurd) way to strike the right balance. It doesn’t avoid seeming opposites. It grows to effectively absorb a pole in its apparent opposite. That, in the end, is inclusivity. That's why we have to avoid exclusivity at all costs. Tell me your answer and I'll tell you who you are! Tell me how you're not reacting to things and I'll tell you what you miss! The world responds to the manner in which its fragments, respond to it; fragments, respond to the manner in which the world responds to them. We must neither forget nor exaggerate it.

Trans-organizational reality and trans-rationally intelligent

Because fragments are thus compelled to restore fullness, c o n s c i o u s n e s s is present in all the operations, expressions and structural levels of the universe. This reflects a tendency to re-unite the basic units detached from physical existence produced by the Big Bang. It manifests itself in a palpable way by gravity and *negentropy* or *syntropy*. The role of consciousness is to seek unification within and across space and time (q.v. *relatedness*). Its effort is based on the same imperative of close ties between the basic physical units as prior to the Big Bang.

In light of this, peculiar knowledge functions as the local and temporal extension of specific events or physical states in the block universe. The collector perceives these physical prolongations in connection with his current needs. However, he does

so only to the extent that he is able to grasp the physical events and states on their terms.

This explains a fundamental epistemological warning generally overlooked by the scientists of the dominant society. What an object has been made does not take into consideration (or why) that it has become an object. In the first case, the object depends on how the various units of physical existence interact in order to form models. In the second instance, it depends on how the different models are interconnected. And in the third case, it depends on how the different levels of organization themselves interact on how they actually arrive at forming real 'things'.

This is where historicity becomes a scientific description of reality. It is quite correct to maintain that things are made up of basic units, both solid and energy consuming. But that can't explain what it is. Even less, he explains why they happen to be as they are at this particular time and place. The account of creation is just as important as the act of creation. In fact, the narrative and its logic constitute the creation itself.

For example, the Parthenon or the neighbour's cat are both made up of little physical units. But that doesn't tell you much about the difference between the two. The Parthenon as Parthenon and the neighbour's cat as the neighbour's cat are describable only in terms of the different ways in which the basic units, making them up have been put together and in which interacting levels of organisation. These cannot be broken down by base units themselves. The patterns of their interaction with and between these different levels are what enables them to be as they are.

Conclusion

Modern science should consider where it is going, with which i.e., new paradigm functions resulting from the quantum revolution. In this article, we propose the principle of "*trans-modality*". Objects are not conceptualized, not constructed, and not synchronized. Once you de-characterise the modes of nature's being as they seem to you, they emerge to see without cultural projections. The whole i.e., it is similar to the phenomenological method. Physical operations take place at various organisational levels using specific qualities. Ultimately, we want to show how the mind can influence matter. The sub-particles are based on dynamic models. Thus, Nature embodies a hierarchical "hows"; no "what" can exist without a "how". This state of self-organised interaction is called "trans-modal reality", that is, synonymous with the block universe. All this is manifested in the specific observer through the human conscience. According to this principle, the scientist-researcher must take into account every possible mutual feedback that his research will cause in the investigated nature, with all the possible results for the future survival of man on our planet. In other words, within a holistic framework of an approach, including the cooperation of the two cerebral hemispheres, science should each time take its moral responsibility very seriously into account.

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