

Nondual Science Theory

A candidate theory of a nondual science

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Philosophy of a New Science

A nondual theory that would lay the foundations for a nondual approach to science would be a very special kind of theory. It cannot be a full theory in the normal sense of the word because it must be both a theory and a nontheory at the same time. In a sense then such a theory is itself an anomaly, i.e. a certain theoretical position from which nonduality becomes a possibility in a world dominated by Dualism and Monism and from which world nonduality is in principle barred. In other words such a theory must violate the bounds of traditional theory by bringing nonduality into play in a realm that it should be banned from the beginning. As such this anomalous theory is by definition expanding the bounds of science and thus causing a shift in our thinking about science itself.

The philosophy of science has been a hot discipline since the sixties and seventies. A lot of ink has been spilt over the problem of methods in Science. Finally the quip of

Feyerabend that when it comes to method “anything goes” reveals the nihilism inherent in the argument. In other words if we posit a method for science then we are automatically limiting ourselves and the discoveries we might make. But it is so clear that the inverse that Feyerabend champions is nihilism. So in the end philosophy of science itself is lost without having a nondual alternative.

One of the things we should do is ask about the nature of theory itself and of course its relation to experiments that allows us to build up something we call science, even though we have no idea how we do it. The fact that we do not understand the nature of science is a bit scary because how would we know if it ground to a halt and suddenly we could not do it effectively. What if suddenly there was substituted a pseudo-science for real science. How would we know? In fact, how do we know that what we now have is not a pseudo-science masquerading as a real science. It is very problematic if you do not know what science really is because for this worldview it is as if you did not know yourself. Apollo advises that we know ourselves. But to do that in this worldview we have to know science and its hand maiden technology. The problem is that we cannot even ask scientists and engineers because they do not know, they merely have a variety of often ill formed opinions of what they are doing. One of the interesting things is that we have a whole discipline asking about the nature of science, but no one cares to ask about the nature of engineering¹ that produces the technological infrastructure that science depends on. It is as if we were blind to the role that Engineering plays in scientific discovery. We think of engineers as the slave of the scientist. But actually science and engineering go hand in hand and are inseparable. Both build on each other's work. But for our culture engineering is the underworld of science where all the glory is to be gained. But it is engineering that makes use of the discoveries of science to

¹ My Second Ph.D. dissertation is an exploration of the Mathematical and Philosophical Basis of Engineering. See <http://holonomic.net>

either improve things or destroy the planet. For instance it is engineers that give us the Internet or Cellphones, but it was also engineers who designed automobiles based on carbon based oils that create green house gasses. So it is just as important to understand the basis of Engineering as it is to understand the basis of Science. And splitting Engineering from Science is in many ways a false distinction even though it is culturally upheld.

But lets return to the point concerning pseudo-science. If we do not know what science is then we cannot readily tell it from pseudo-science, and thus the motto, anything goes which is nihilistic, because a fundamental discovery can come from any direction. But also it means that we do not really know whether the science we are now practicing is a pseudo-science of a sort as well. Now, what if the real science was a nondual science, and in fact Modern Western Science with all its pride and self-righteousness were in fact a mild form of pseudo-science? In other words with the philosophy of science in such a nihilistic mess there is plenty of room for some other form of science, perhaps an anti-pseudo-science like nondual science to come in and lay claim to the central axis of Science itself that Western Science cannot seem to find on its own. In this way Western Science is not just liable but prone to be unseated by a rival science if that science can itself prove to be more "Scientific" what ever that is. And so if we wanted to make a big claim this is what we would claim, that Western Science as it is now flawed because even if everything else is perfect it still does not know its own foundations. On the other hand Nondual Science is a transformation of Science that realizes that it has no foundations, and that foundationlessness is the norm, as philosophy has discovered already after Nietzsche and Heidegger. We now talk about foundationless philosophies with no first principles. But we have not yet started talking about foundationless Science. Science assumes that Philosophy will eventually provide a foundation for it, and has not realized yet that Philosophy has essentially given up that project. Science itself has not yet entered into a

reflexive phase, as say Sociology began to do in the Seventies with the work of John O'Malley and Barry Sandywell. Reflexive Sociology is a glimpse of what a reflexive Science might look like. It is a science where the philosophical ramifications has become of primary interest. It is hard to sustain that kind of soul searching as we can see by the fact that Sociology as a discipline more or less has become merely a shadow of itself since it hit the reflexive wall. In other words, when you cannot answer the reflexive questions then the discipline cannot literally face itself in the mirror any longer. The progress born of Will To Power vanishes when it looks into the mirror of Eternal Return, and does not see any image reflected back. The rest of Science has not really hit that wall which is actually a mirror as yet. It is still barreling on as if there were something under its feet holding it up as it makes progress. It has not gotten to the stage yet where as Zarathustra did that when he saw that the mountain being climbed created earth to hold his feet as he puts his food down and then the mountain vanishes as he picks up his feet again. Science like Zarathustra is acting as if it were studying the world from a headland above the earth, which unfortunately does not exist. Science eventually will like Zarathustra seem to keep on climbing above its own head. And at that moment the reflexiveness of its situation will become apparent, and it will realize that the Mountain it thought it was climbing is really an Abyss into which it is falling like Heidegger's Dasein, into an endless groundlessness.

The groundlessness within Science itself, that haunts it but which it vehemently denies is the taint of Pseudo-Science within Science itself. The inability to make a non-nihilistic distinction between science and its Others, is the clue that Science itself has its own taint of pseudo-science, giving us such precious phenomena as cold fusion and phlogiston. In fact after each paradigm, episteme or ontological shift the old science appears to be pseudo-science in relation to the new science that is designated as real. Many of the Others of Science are merely its old mirror images.

And in this sense we know that Science itself as it is now will in the future be shown to be a pseudo-science because it will be replaced with the next monumental shift in scientific thinking.

So even though science does point its finger at its Others and say that they are not science, we know that this is merely a defensive maneuver for a displacement that will come to make it an Other to itself at some point in the future. But it also means that Science should be able to learn from its Others. The whole picture is not just Science, but all the Heresies of Science together as a structural pattern. And also part of the picture are traditional sciences, especially ones developed under the auspices of nondual traditions that we might mine for glimpses of the blindspots that prevent us from seeing things that our own assumptions hide from us. It is out of this exploration of the Otherness of Science and looking carefully at Traditional Sciences guided by Nondual Traditions that much of the viewpoint presented in these essays come from. In particular I have looked at Homeopathy and Acupuncture for clues as to what the difference is between a Nondual Science and Modern Western Science. These have been selected only because they are two of the best known and documented examples. But it is fortuitous that it turns out that they are in fact conceptual duals of each other and that their conceptual duality tells us something more than either of them by themselves can tell us. By studying these Others of Modern Science carefully and within the context of their connection to models of nondual science within our own tradition, such as Alchemy it is possible to see that Nondual Science has features that Western Science lacks which tell us something about its fundamental assumptions that produce certain blindspots in it. It is by filling in these blindspots that we turn Western Science which is ignorant of itself into a science that is reflexively aware of itself which we can call a Genuine Nondual Science.

Anomalous Science

Now I think we are ready to sketch out the strategy for introducing an example theory of Nondual Science. Western Science based on Aristotle sees Science as a discipline of the common. Thus we study phenomena that are common as they are seen in common by an intersubjective cohort. This science produces theories based on mathematics that describe, explain or predict (prove) the phenomena as such. When the Theory has a good fit with the phenomena through the math then we say we have an adequate theory, which covers everything except the anomalies. It is the build up of anomalies that causes the factual, theoretical, paradigm, episteme, ontological shifts which lead to more comprehensive theories. In the process certain aspects of the old way of looking at the phenomena can become uninteresting or even falsified by the new way of looking at the phenomena. Thus Anomalies are seen as Other to the current theory. It is the build up of the Anomalies that cause the shifts in scientific thinking big or small over time we call progress. In this model the common theory of the common phenomena is central and the anomalous phenomenal and crackpot or odd theories are peripheral.

The opposite of this is Anomalous Science. This is the kind of Science championed by Plato instead of Aristotle. In Anomalous Science the Anomalies in terms of Theory, Math and Phenomena are central and the common understanding of common phenomena are peripheral. So we can imagine a transformation of Normal Science that instead concentrates on the Abnormal instead of the Normal and displaces the Normal to the periphery. This is precisely the sort of Science that Plato championed as against the Normal Science of the Common of Aristotle. If we make this move then we have made a fundamental alteration in the focus of Science itself. It is a move that accepts the Other at the center of Science rather than always pushing it to the fringe. In a way such a move does away with the purity of a science that is always distinguishing itself from pseudo-science. And instead it brings up new criteria for the coherence of Science itself. We join with

Feyerabend in accepting anything at the heart of Science, so that it knows its other intimately, but we do not give up distinguishing science itself, rather we bring in a new criteria, which is the criteria of nonduality which allows us to make non-nihilistic distinctions internal to science itself. We ask ourselves critically what the relation of monist, dualist, and nondual elements of our new science are and we reflect on the answers to this question fervently. Instead of looking at an external mirror we bring the mirror inside by which we know ourselves as scientists. Thus we do not see merely distortions of science in warped external mirrors. Rather we see the distinctions between the monistic, dualistic and nondual features of our theories, mathesis, and phenomena, and we endeavor to make non-nihilistic distinctions within science itself, rather than between science and its Other externally.

Now here is the secret that makes nondual science possible. The anomalies in Theory, Mathesis and Phenomena are in fact representations of the Nondual itself. In other words when we bring in anomaly to the center, we are in fact bringing in a representation of nonduality to the center. This fact is one of the wonders of the universe and ourselves as the mirrors of the universe in consciousness. In point of fact the universe and ourselves as part of it are encoded with a model of nonduality that appears in the anomalies of things. The nondual spiritual traditions and their associated traditional sciences have images of this nonduality encoded in anomalies, but the images are rather vague for our tastes. But the fact is that we have greatly expanded the sophistication of theory, mathesis, and phenomenal description such that we have uncovered more anomalies though our science than have ever been known before. These anomalies, that cannot be pushed under the rug, that become clearer the more we know about them, are in fact in many instances, merely more precise images of nonduality at the core of everything. Because of their precision they take on the aura of being scientific. They are theories based on math that

exemplify phenomena that have been discovered by Modern Western Science in all its glory. Modern Western Science can find these anomalies and study them but ultimately it has no basis to interpret them because it has no grounds itself. Anomalies that will just not go away, that become more entrenched the more we know, these are the anomalies that are brought to the center axis of our new science, and these are the theories, mathesis, and phenomena that make our science Nondual intrinsically from the inside, i.e. in its core. Nondual Science is really the science of entrenched anomalies embraced. Our ability to make non-nihilistic distinctions within this new science is dependent on whether those Others of modern science conform to the strange signature of these anomalies. If the signatures of the Traditional Sciences inspired by Nondual teachings have that signature then they are admitted as genuine into the inner recesses of Nondual Science. If however that signature is missing then they are rejected as fabrications. Thus part of Modern Western Science would be accepted as genuine in such as critical analysis and other parts would be accepted as artificial fabrications which are merely nihilistic. In this way a nondual core of science would be discriminated. Outside this nondual core among the fabrications there will be the Others of Western Science and parts of Western Science itself. So strangely nondual science cuts both the Others and Western Science itself in two. Some of the Others are based on images of the nondual model. Some of Western Science offer images of the nondual model. But the rest from both offer only fabrications which might better be labeled pseudo-science then the way that the label is applied today.

To the extent that the nondual science is based in anomalies it cannot claim to be a complete theory, it is more like a metatheory that would allow a reflexive look at science from a completely different angle than usually appreciated. As such it is a theory to the extent that it offers an interpretation of the anomalies found by modern science and that appear in traditional sciences. But to the extent that it

holds that the import of the anomalies point toward the nondual and thus nonconceptual and nonexperiential then it is a nontheory. The nontheory part appears as the assumption that the nondual is the ground of all science, as well as everything else. But it is an assumption that is at the level of existence, thus beyond shifts in facts, theories, paradigms, epistemes and ontologies. Because it is rooted in existence, and existence is interpreted as empty or void primarily, then it points to the suprarational nondual as the basis of it's non-nihilistic distinctions. These distinctions are made within Science as well as within the realm of the Others of Science without prejudice. As such it provides a firm foundation on the bedrock of existence which is what we see beneath the projections of Being when Being itself has blow away as dust particles in the shifting sands of the great desert of existence that is the universe and ourselves embedded in that universe conjuncted.

So you can see how radical nondual science is in as much as it uses the nondual to cut through the fabrications and illusions of both Science and its structural Others as a single pattern hidden within which is the image of nondual science that appears when we separate the chaff from the wheat. Nonduality plays this role as it always has in all traditions as the vajra sword of discrimination. Conceptualization and Experience can only imagine Oneness and Manyess. In Kant they are categories, i.e. the highest possible concepts. Kant sees them mediated by totality which gives a dialectical combination of Oneness and Plurality. But what Kant does not see is that this forms a Greimas Square that points toward the nondual alternative of wholeness, which is neither unity, plurality or totality but something else. All of Kant's categories have these indicated nondual positions implied within the categorical dialectics. The point is that if we grasp wholeness we realize soon that wholeness is itself not whole, and this causes us to search for the amorphous wholeness that will give

wholeness its own wholeness back². Nonduality offers a staging area that is neither unitary, plural or total from which wholeness can be gasped as something else, something noncategorical but which we see everywhere in nature, for instance in organisms. While the staging area is nonconceptual and nonexperiential that does not mean that the alternatives offered from that staging area such as wholeness in this case are not precisely graspable in their own right. Wholeness is something we grasp naturally even if we cannot conceptualize it fully. It is a nonrepresentable intelligible. Nonduality offers up these nonrepresentable intelligibles to us as meanings when we allow them to arise. But often they are suppressed by the nihilism of the ideational machinery of our overburdened thought processes. Nonduality comes in with a precise answer to our problematics if we allow them to arise spontaneously. Their spontaneity is the opposite of the fabrication of most theory. But if we think of the nonconceptual as a staging area for discriminating thoughts that spontaneously arise and provide meaning then we can see that the nonconceptual and nonexperiential is offering us support exactly like the mountain that comes into existence as we put our foot down and vanishes as we lift up our foot that Zarathustra glimpsed. In other words the void itself as the bedrock of existence gives nondual science the support for making meaningful distinctions amidst the fabricated nihilistic distinctions that abound. These meaningful distinctions are noncategorical in the Kantian Sense because they come in from outside the dialectic of the categories as spontaneous thoughts which though determinate offer some perfume of the nondual itself. Of course, when we latch onto Wholeness as a Concept and create a dual with Reductionism then this meaning disappears again into the morass of signification generated diacritically. But for a moment when you turn from what ever dual that is being constituted nihilistically toward another direction and when at that moment another

² See my book on Amorphous Wholeness.

concept arrives that confers meaning then you know the nondual staging area is there and offering support. But of course that support is fleeting and if you try to grasp it then it vanishes because conception and experience cannot capture any of it.

However, Anomalous Science is the key to the transition into Nondual Science though the secret indication of nonduality by entrenched anomalies. Anomalous Science turns Science as it was understood by Kuhn inside out by making the anomalies central and looking for their meanings, rather than making common experience of the common man central as Aristotle has persuaded us to do for so long. Instead we should listen more carefully to his teacher Plato.

Plato's Cities

The ironic thing is that the basis of this nondual science has been within our tradition, out in the open, from the very beginning. It is there hidden in plain sight in the works of Plato. It is just so amazing that we have the complete works of Plato, considering that we only have about 5% of the Greek corpus. That we have so much of Plato and Aristotle in that the extant portion of the corpus has meant a lot for the development of philosophy within the western tradition. And our philosophy from the beginning was always really natural philosophy up until Socrates. But astoundingly we lack most of the natural philosophy before Socrates. And of course Socrates himself had no works so we only have Plato's vision of him to go by in order to understand the interesting relation between Socrates and the Sophists, and Socrates and the Pre-Socratics. However, until the Renaissance all we had of Plato in the West was the Timaeus, and that seemed very much like Aristotle's Physics, so the Medieval tradition was founded on Aristotle's Physics and Metaphysics, which turned out to be a poor description of nature and even biology, because it was a projection of man onto both nature and biology. But it carried forward a lot of the assumptions that appeared in Plato's Timaeus. So it appeared as

if there were a unified tradition for science, in spite of the fact that we had lost most of the precursors who studied natural philosophy before Socrates made the turn from nature to the study of virtue in man. As we have said the science of Aristotle was a science of the common experiences of the common man. And Modern Science despite the break with religion is still mostly following the broad outlines of the Aristotelian approach despite the destruction of the notorious conclusions of Aristotelian science. It turns out that nature is very different from men and it has taken us a long time to break with the conclusions of Aristotelian science because they became intertwined with religious orthodoxy for so long. But eventually with the help of Bacon and others we learned to torture nature into revealing her secrets. And this is what turned out science into a paradigm based approach in which the common experience of the common man is taken for granted until anomalies force us to change our way of looking at the phenomena. Slowly one by one the conclusions of Aristotelian Science have faded as we have learned to hear the voice of nature as different from mans voice through the explorations of anomalies that our theories cannot explain.

The science of Plato is the very opposite of that of Aristotle. For Plato the anomalous and singular is everything, and by looking into the meaning of the anomalous then one discovers the meaning of everything else. This means that beyond the Irony of Plato there is a profound understanding of nonduality which is little recognized by the Western Tradition, caught up as it is in Dualism or Monism. But in order to see this nondual basis for Plato's writings one must already know that he is writing from that point of view beyond the utter irony of every statement. This way of reading Plato is very hard to prove because the irony is so deep and the non-duality is so subtle. But there is something that is not so subtle that we can focus on in order to get a clue about the nondual science that is expressed in Plato that must have come down through the Pre-Socratics and then continued

on within our tradition as Alchemy.

As a sociologist I was interested in the Cities that Plato described in his various works. I began to consider each city and noticed that each one was anomalous in strange ways. Once you start to piece together the mythology and drama surrounding the dialogues you begin to see a subtle patterning within the dialogues that seems to intricate for anyone to actually plan out and execute consciously. One of the things that is amazing about Plato is how the references in the corpus of his works reinforce each other in unexpected ways. Thus it is with his descriptions of cities. So we see that the Republic is repeated in the Ancient Athens. So that this city which represents hell on earth is paired with its opposite the enemy city established in the middle of the ocean, which is described to be much like Scheria of the Odyssey. But the Republic is also opposite in many ways the city of Magnesia in the Laws. It turns out that the Laws is a book that is little read. Philosophers have given it to the Political Scientists and they have consigned it to the dustbin of history. I decided that I should read the Laws carefully in order to try to understand the relation of that city to the one in the Republic. All of these cities have strange anomalous features that are hard to explain. They have interesting relations to each other, and no one to my knowledge has explored them thoroughly. I set my reading in the context of the Western Worldview and conducted it in a long series of fragments called The Fragmentation of Being and the Path Beyond the Void. In the process of this close reading of the Laws in the context of the relation between the Republic/Ancient Athens and Atlantis, I began to get a picture of the differences that Plato had built into these cities. We can think of these descriptions as the first works of Systems theory because they described whole cities by looking at their laws and cultures and social structures, all on the background of Ancient Athens itself. Fortunately there is a book that describes the Laws of Athens at the time and the differences between the Laws of Plato and the actual laws of Athens. So the imaginary cities exist on the

background of the real city of Athens and also that of Sparta and their relation to each other which was brought to a head by the conquering of Athens by Sparta. But the relations of these two cities are seen in the context of all the other city states of Greece and also the Tyrannies of Persia which the Greeks had fought and beaten earlier in their history. So there is a very real pair of cities to compare these imaginary cities to and also a variety of other cities and empires that make up the background of the struggle of Athens and Sparta. But all in all none of these real cities bear the imprint of the strange features of the imaginary cities of Plato. In fact, the closest thing to these imaginary cities are the imaginary cities of Aristophanes in his comedies. Many of the ideas that are developed by Plato in his imaginary cities were first introduced by Aristophanes. Thus there is an interesting relation between Plato and Aristophanes that also needs to be explored. Thus the argument concerning the cities is complex and many faceted. But the key point is that when you work through these complexities you begin to see that there is a pattern within the cities that are each unique and a pattern between the cities that is fascinating. The imaginary cities have special properties that are difficult to explain but are related to general features of Greek and Indo-European Myth. You have to look at the systems of the cities in the context of an interpretation and embodiment of Indo-European myths. It is at that point that the patterning in and between the cities becomes clearest. I won't repeat that argument here. But the result was that I had a very good idea of the differences between the cities and the strange structures of the cities themselves. One of those differences are the distance from the Sea. Atlantis is built in the sea. The Republic and Ancient Athens is built on the shore. Magnesia is build far inland away from the influence of the Sea. If we see the Sea as change then we get an idea that these cities have different fundamental relations toward change. Plato says that in his Laws he was trying to create a city like those of Egypt that would last for a very long time. He says he is using an

Egyptian template for his cities. He suggests that Atlantis is beyond the pillars of Hercules. It is thus in the Stream of Ocean which is the ultimate context for everyplace in the world. From Atlantis we move to the Republic or Ancient Athens on the shore, and finally to Magnesia which is inland. And then the figure that exists on this ground is the real city of Athens as it stood defeated by Sparta in the time of Socrates. There is a clear line of development here in the cities that Socrates designed as the first well developed systems to be described from a theoretical point of view. The world stream is the universal background of flux and then within that flux there are three imaginary cities that mediate between the real city and the ultimate background of the Ocean Stream that encompasses all the places of the earth. Each of the imaginary cities have a different relation to change, and that relation to change and the internal mythologies invoked in each city give that city its peculiar qualities.

What I did was to take what I had discovered about the odd cities of Plato and begin looking for mathematical analogies for them. I figured that if I could find mathematical analogies then perhaps I might understand the structures Plato was describing better. It turned out that there were such structures in various mathematical categories that looked suspiciously like the structures that Plato was representing in his theory of the laws of various cities and in this associated mythologies. In fact, I found several candidate anomalies in mathematics that could be used to explain the differences that Plato seemed to be producing images of. Once I had mathematical models then the images could be compared to those models and a process of mutual elucidation began between the descriptions of the cities and the mathematical structures. This led to a generalization which I called Special Systems Theory. It was fascinating to think that Plato who could not have known about these mathematical structures had built images very similar to these mathematical models. And it is interesting to see how the mathematical model allowed the images to be expanded and refined in unexpected ways. By placing systems

theory between the math models and the images of the cities then a new kind of Systems Theory could be developed that I call Special Systems Theory because they have anomalous structures based on anomalies in Mathematical categories of various sorts. But this theory is not new, it is old, because it has faithful images in Plato of these special kinds of Systems seen as cities of men. So suddenly there was a bridge from recent mathematics to the past roots of philosophy. Between the physical world described by the pre-Socratics and the Human centered view of Socrates is the world of men in cities. Of course, this is precisely the world that sociologists are interested in and it is stunning that sociologists have not to my knowledge studied the differences between the imaginary cities of Plato before. But the move of looking for mathematical models of these images takes a truly cross disciplinary approach which is rare these days, so it is just a happenstance that I knew enough about mathematics to recognize the connection between what Plato was indicating and the models of mathematical anomalies that seemed to have a similar structure. But once both are in place then one can construct a new theory with the signature of the mathematical anomaly but with a basis in the tradition in the work of Plato which is so central to everything that has happened since in our tradition, from his influence on his student Aristotle if nothing else.

Recently I became interested in the mythology of the Egyptians, and discovered that the structure of their gods, in relation to each other bears this same signature. So I discovered that the references in Plato to the Egyptians who reported the feats of Ancient Athens against Atlantis was no random reference. It appears that the Egyptians were themselves aware of the structure of the special systems and that they structured their gods called NTR in such a way as to exemplify that signature as an image. It is interesting that the Egyptian gods who are called NTR can be related to our word nature. And this sheds a different light on the Egyptian cultural influence, if they are the original source of the knowledge of the special systems

for the Greeks. It is also interesting that Alchemy started in Egypt combining metal working practices and Platonic and Aristotelian philosophy of nature together to produce a proto-science perhaps based on special systems theory images from its inception.

What is interesting is that Aristotle's natural philosophy ends up being a projection of an image of man based on special systems theory onto common nature. This is what was wrong, this theory is based wholly on interpretation of anomalies and does not apply to the whole of nature as viewed in common by the common man. So the problem with Aristotle's use of the nature of man as projected onto nature is over generalization. He expects nature to act like a human being, and this results in many strange consequences. However, human beings have many qualities that are well modeled by the special systems, like consciousness, life and the social. Aristotle deals with whole men and thus touches on many of these features of men. But unfortunately he projects that template onto nature itself as seen by the common man in common with others, and so his vision of nature fails, even though it continues the tradition started by Plato of describing things in terms of the characteristics best defined in terms of the special systems.

Special Systems Theory

Once mathematical anomalies with characteristics like Plato's cities were found and a proto-theory constructed of the special systems then it was possible to forget Plato and develop a full fledged theory guided by primarily by the mathematical anomalies. This is what I have called Special Systems Theory proper and it was developed in a series of working papers called Reflexive Autopoietic Systems Theory. Slowly this theory became more and more complex especially with the realization that the various mathematical anomalies that were used as analogies actually fit together to specify this systems theory very precisely. It also became more complex when it was realized that the various special systems

and the normal system fit together to give something called the Emergent Meta-system which is a meta-level structure above that of the Special Systems. Eventually it was realized that the distinction between system and meta-system was very important to understanding the nature of the special systems themselves and situating them. Thus we begin with a standard General Systems Theory, in this case the one of George Klir in Architecture of Systems Problem Solving. Then we extend that Systems Theory along the lines suggested by Bataille³ as interpreted by Plotnitsky⁴. Thus we can contrast a restricted economy of the system (gestalt) with the general economy of the meta-system (proto-gestalt). Between these two schemas the special systems are hidden. The next step was to associate each type of special system with a modern theory that was most like it. So we named the one that was most like the cities of Republic or Ancient Athens the Dissipative Ordering special system and associated it with the Negentropic Dissipative Structures of I. Prigogine. We named the one that was most like the city of Magnesia of the Laws the Autopoietic Symbiotic Special System and associated it with the theory of Autopoiesis of Maturana and Varella, especially the very early theory of the two together. We named the one that was most like the city of Atlantis the Reflexive Social Special Systems and associated it with the Reflexive Social Theory of John O'Malley and Barry Sandywell. By picking out particular modern theories with similar structures and characteristics it is then possible to begin a discourse with modern science using the terminologies of these theories which because they themselves are modern theories they are something that modern science can understand. But these modern theories need in some cases to be modified because they do not necessarily mimic the structure of the mathematical anomalies that Special Systems Theory is based upon. The concept is to follow out the implications of the Math no matter where it leads, even if it is counter intuitive and to change what ever theories are used as images

³ See Accursed Share

⁴ See Complementarity

of the mathematical relations to coincide with the structures brought out by the mathematical analogies. So for instance, Autopoietic theory has to change the most, and from the perspective of special systems theory standard autopoietic theory is in fact wrong. So this new theory introduces a new version of the theory of autopoiesis that builds upon but corrects and refines the theory of the founders of that particular theory. On the other hand the Theory of Prigogine and Reflexive Social theory need little or no such correction. But by having a hierarchy of theories we describe different emergent levels which different characteristics and their relations to each other. It is in this gauging of the gaps between the emergent levels that Special Systems theory proves most useful. In this sense it is not specifically a positive theory of phenomena as much as a theory about the emergent separation between levels of phenomena, along with some general structures regarding the organizing of the emergent levels. Special Systems are organized in unexpected and novel ways that we normally would not expect. The mathematics is the basis for understanding this new ordering principle called conjunction. Special Systems are put together by conjunction and function in conjunction with each other and with normal systems that are put together by relations. Conjunctions are more like juxtapositions rather than links between things. It is through this new type of ordering principle based on conjunctive connections between things that arises the model of nonduality that has been spoken of earlier. Special Systems are models of nonduality embodied. Once we have special systems theory we can go looking for phenomena that exemplify that same anomalous structure, and it turns out that they exist as anomalies in nature that have similar structures to the mathematical anomalies that made the models of the special systems exact. Once we have physical phenomena with the same structure as our theories of special systems based on anomalies in mathematical categories then we have a completely scientific theory that is just as rigorous as any scientific theory, but different in as much as it is based on anomalies, that is has deep roots in the

tradition going back to Plato, and that it models nonduality by direct embodiments. A fully scientific theory of nonduality of phenomena is something that Western Science needs to come to terms with. If it does address it as an anomalous theoretical structure then our guess is that Western Science itself will be transformed because this is the first confrontation with a firmly grounded theory which also has deep roots in the Western and even the Indo-European tradition.

This theory may not be the final form that a nondual scientific theory takes, but it is an example of what one must be like in order to succeed. We expect as with all science that there will be refinements. But this theory is the equivalent to the work of Galileo for nondual science in as much as it comprehends a fundamental force of nonduality itself and brings about a Copernican revolution in which nonduality becomes the center of science. It is like the work of Newton which showed that what works in the heavens also works on earth and that gravity is the same in both places. In this case what we see is that this invisible thing nonduality that is nonconceptual and nonexperiential does have a role to play in Science itself, even hard sciences of physical and biological phenomena. It is like the work of Einstein in as much as it is a paradigm change that takes what was separate and makes them one thing. Einstein taught us to think of spacetime rather than absolute space and time. This science is also a paradigm shift because it brings together the dual and monisms into relation with the nondual such that we see the nondual interface as part of the relation between monism and dualism or the relation between the two duals. It appears in the cracks between the elements in each case as the unexplained existence of the discontinuities that appear. Having a theory that embodies nondual principles within the realm of Western Science changes the nature of the playing field. Granted this theory is a Trojan horse in as much as it is also at the same time a non-theory, but even so Troy fell because of the entry of such a Trojan horse. It is a non theory in as much as it is pointing to the

nonconceptual and nonexperiential that is not one and not two simultaneously without contradiction, i.e. in terms of suprarationality. But here the Koan is embodied, it is an actual theory that looks like other theories, just as Koans look like words, phrases, and sentences of ordinary language even though they are really indicators of the nondual nature of things. This theory is a gateway into an alternative universe in which Science is nondual and is about the nondual nature of existence itself. The theory is a bridge in many senses. It bridges traditional sciences based on nondual traditions in other cultures with modern science. It bridges Plato's theory of cities with modern theories of diverse phenomena at different emergent levels. It bridges Nonduality and Science as developed within a dualistic culture and environment in the West. It bridges many spiritual paths and a restricted set of the results of modern science. It bridges the study of consciousness, society and biological viability of organisms and their existentiality. It bridges Modern Science and Alchemy, the proto-science of nonduality within the Western tradition. It bridges Western Science to the environment of the Western Worldview that develops it and shows that the nonduality at the heart of the Western Worldview expresses itself concretely as a nondual Theory. It bridges Anomalous Science with the Science of the common man looking at things in seen in common. Because it is suprarational it pulls off all these bridging juxtapositions simultaneously without producing contradiction. Because it is nondual it is benign, it is not a religious dogma or practice that is heralded as the only way to enlightenment, but rather it brings together different nondual ways under one umbrella yet allows them to maintain their unique differences without any compromise between them. It is as good for Buddhists, as Taoists, as for Islamic Sufis, and other nondualists from other traditions. But what is remarkable is that it is good for Scientists as well because it gives meaning to what they are doing. All the findings of Science and Mathematics are seen within a new framework that gives them meaning where before they were merely

isolated facts and theories without any overall import. The anomalies are the singularities that organize the field of theory, phenomena, and mathesis. But the anomalies fit together into a grand design which is not of our making that define the theory, describe the phenomena, and make the theory approach testability. This of course for Popper is the threshold for the fully scientific nature of any theory. We cannot claim this final stage of the development of Special Systems Theory yet. What exists is only the general version that needs to be applied in various disciplines to see whether it can yield results. It has sort of the status of String or M-brane theory in as much as it is something elegant and beautiful that is as yet untestable. But like String or M-brane theory it is something that, if true, explains a lot of things that would otherwise go unexplained and for that reason even in the crude form that it not exists it is still valuable.

Autogenesis and Gaia

We have mentioned how the Special Systems and the Normal System combine to give the Emergent Meta-system which is the means by which schemas bootstrap themselves out of the void or emptiness as the case may be. But then there is the question as to how the Emergent Meta-system bootstraps itself out of the void or emptiness. That is the question of autogenesis, and we are given some insight into that in the way that the different analogies of the special systems fit together to produce a synergetic theory. Not only do things pop out of the void or emptiness as creations ex nihilo (anathema in the Western Tradition) but also the process by which things pop out of the void or emptiness itself pops out of the void or emptiness. Autogenesis is a very significant aspect of the genesis of the special systems so that the theory is not just a chemistry of the conjunctions between different kinds of special systems and normal systems that give rise to meta-systems, but also it is a dynamic theory of how swarms of monads arise out of nothing and are sustained and then return to nothing. But this karmic cycle of eternal return expressing a will to powerlessness because it is

constantly reentering and emerging from the sea of nonduality itself is something that participates in a meta-EMS cycle by which the cycle of things itself arises. Images of this self bootstrapping may appear endless in our imaginations but due to the anomalous structure of nature and math the bootstrapping process is really just a maintenance of a least energy state within an attractor.

Another point that is interesting about Special Systems Theory is that it is an image of Gaia. There are nested meta-systems that go as far down as necessary to express the whole of the Gaian system of the interlocking synergy of nature on earth. As a formal theory of Gaia the theory should be of interest to environmentalists, and ecologists, even to deep ecology, because it is a theory of how a Gaian planet wide network of interdependent species could be formed and co-evolve within a framework that can be explained in a comprehensive manner. Thus we might expect the first experimental results of the theory from the discipline of ecology which is still using system models for the most part and has not discovered meta-system models, nor special system models that show us the way that the niches in the ecosystem might work. The special systems appear as the cushion between the system that fits into the meta-system niche and the meta-system itself. If we can show that these special systems exist within the niche structures of the actual environment that would be a big step forward in understanding the Gaian phenomena in a scientifically explainable way. Rather than Gaia being merely a postulate, Special Systems and Emergent Meta-systems theory gives rigorous form to that postulate to make possible the formation of hypotheses that we might put to test in the field.

Prospects for Nondual Science

Special Systems Theory along with Emergent Meta-systems Theory and Autogenesis are a new kind of Scientific Theory based on nondual roots. As such they give an example of what a nondual scientific theory might be

like. They show how it must come from within the tradition, and point to the nonduality inherent in the Western worldview itself. Yet it is capable of describing and explaining the results of other nondual approaches to phenomena including traditional sciences that were developed in these foreign traditions. It gives the practitioner something to relate to in science that can help him understand his or her own nondual intuitions that somehow overflow what is thinkable and what is experienceable. But it also gives the scientist something to confront that suggests a new approach to science itself which considers nonduality first and everything else second. You can never reach nonduality from either monism or dualism or both. But from nonduality you can unfold both duality and monism and their various relations. Science itself is merely made up of a hodgepodge of dualities and monisms in various configurations. Nonduality is seen in the discontinuities between these but points to something else prior to yet between these differentiations. What seems to be noticed last, the possibility of the nondual, is actually what genetically comes first in the unfolding of things, and nondual science merely recognizes that. But with a specific theory of nondual embodiments then we have the possibility of putting these nondual approaches to the test of science, and thereby develop the science of nonduality itself as well as science in general by the recognition of the centrality of nonduality as the empty epicenter of a vigorous modern science. With a specific theory now advanced as nondual practitioners and philosophers we are in a good shape to challenge ourselves to improve the provisional theory, and to challenge Western Science to unseat and critique the theory. In the volley of mutual challenges a dialogue will be opened up which must transform Western science even if the theory is ultimately wrong and another one of completely different nature needs to be developed. Appreciating science as giving us metaphors for understanding nonduality is one thing, engaging in science as nondual scientists as well as practitioners is quite another. Practitioners can support the scientists by using the model to understand their own form

of nondual practice. Scientists can support the Practitioners by fulfilling the dream of a Nondual Science which in fact develops a fully scientific science of the nondual itself. Either way the goal is an increase in wisdom rather than merely increasing knowledge which is destined to be used wrongly in the wrong hands against the earth on which we all stand.