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The Truth of Gaia: Knowings and Proofs

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We can no longer, in all honesty, attest to our supremacy. We are not all powerful all knowing beings! In fact, our weaknesses are screaming out to us for amends. In the Wizard of Oz, Dorothy revealed the 'Great Oz' as a fake to both the world and finally himself. It is long past time that we admit our own tiny little place in the universe to ourselves, deal with the humiliation, pain, guilt, and fear involved with doing so, and get on with it! We are not wizards. As our currently grievous concerns now demonstrate to us, our Earth is a self-sustaining system. Clearly every cause does have an effect. As such, we can either live in harmony with what exists or attempt to consume that which we believe will make us happy and suffer the consequences. Our Earth will maintain itself with the chips falling as they may. Homo sapien sapiens are no more necessary to this planet than dinosaurs were. If only for the sake of self preservation, we must extend our view past self-interest (comfort, ease, and 'stuff') and a shallow ecological moral code. Our happiness, if not basic survival, will depend upon our ability to take a deep ecological approach to our whole life. We must universalize ourselves to the point whereby we can openly admit that we are, each and every one of us, connected and ultimately existing as a very minuscule part of a totally unified whole.

Let me take you back through the meanderings of a little girl's mind. One day, when I was about 10 years old, my father, my two brothers and I all arrived at Dad's favorite fishing hole. It soon became more than apparent that we were short one fishing rod; three rods and four fisher-people. In being the sweet selfmartyring child that I was, I cheerfully told the guys to go on ahead, secretly believing that I would fashion my own rod the Tom Sawyer way, and fish the heck out of the whole works of them. Well, needless to say, my initial reaction to a total lack of suitable supplies was overwhelming despair. With this, I climbed onto a big rock beside the creek and commenced doing what I did best, wandering around inside of my own head. The sun was shining ever so brightly and it suddenly occurred to me that. . . . this creek, which was running so swiftly beside me, was completely made up of tiny rain drops or drops of water. Millions and millions of these tinsy little drops of water that had fallen from the sky, come from springs within the earth, or were the result of melting snow, all would have had to have joined hands, and decided to go in exactly the same direction for this marvel of a creek to be possible. In doing this, these raindrops gave life and home to fish, plants, bugs and even me, since I too, was dependent upon the very essence of what raindrops were. I became one with the creek and everything in and around it. Complete joy filled my heart. I must have sat starring at that creek for hours because as I remember it, at the very time my revelation was complete, the fishermen of the day came back with a great deal more than their fair share of nature's bounty. In my heart that day, I 'knew' that we were all part of the same thing.

Next came my experience with a book called, . Boy's [?] First Look At The Universe. In it were pictures of galaxies. Hundreds of galaxies, it appeared, all held hands and decided to become one, in order for the marvel of the universe to be possible. Each solar system I looked at, was an exact replica of what I had been studying in school, as of late. 'Atoms' were the basic units from which all things were made. It appeared to me, that the suns were the nuclei and the planets were the protons and electrons. Our whole world, complete with everything in it, was nothing more than one measly proton or electron revolving around its nucleus, which for us, just happened to be our sun. Perhaps our whole world was nothing more than an atom, in the making of a cell, on a giant's toe. With this, I just 'knew' that everything was connected and simply a smaller version of something else. We are all a part of the same thing.

Once in high school, I was exposed to 'cell biology.' Each of our cells are made up of millions of atoms. Millions and millions of atoms all decide to hold hands and work together to allow the marvel of a cells' possibility. As such, each cell can then be conceived of as being, a living organism unto itself. Then, what happens is millions and millions of cells decide to all hold hands and work together to allow the marvel of the human body or the animal body or the plant body or whatever . . . to be possible. Ah huh, I thought to myself, my original thoughts had been confirmed. I 'knew' it, I 'knew' it all along; everything is intrinsically connected and the same. Atoms make-up molecules. Molecules make up matter, of which cells are a part. Cells make up bodies. Bodies, animate and inanimate, inhabit the Earth. The Earth is part of our solar system. And last but not least, our solar system is part of the universe. We are all a part of the same thing.

It is therefore, from within this paradigm, the paradigm born of my perceptions as a youth, that my view of our Earth took shape. For many, many years, I had conceived of our planet as an entity unto itself. I was introduced to James Lovelock's theory of Gaia, our Earth as a superorganism unto itself, via a documentary aired on PBS's 'Nova' series. I loved it! The whole idea just seemed 'right' to me.

Physics has substantiated, in so far as is possible, that matter differs not from empty space. When broken down to the limits of our scientific expertise, it appears that we, and the objects around us, are nothing more than categorical configurations of rapidly moving subatomic particles, being held in space. These particles have mass, electric charge, velocity, spin, position, and that is it. It is energy which keeps all of these fundamental subatomic particles in continuous motion but, what is energy? Well, according to the first law of thermodynamics, it is never destroyed but, exactly what energy is, or why it is we just don't 'know.' At any rate our 'Theory of Chaos'1 tells us that, the slightest change to a 'quark', or energy system in one place, has ramifications for everything in its path. It is somewhat akin to the ripples in a pond, which grow exponentially

in every direction. Further, we have recently (well in 1925 actually), thanks to Werner Heisenberg 2, come to realize that, when we attempt to measure the position of one of these tiny little subatomic particles, the velocity changes; and when we attempt to measure the velocity of one of these tiny little subatomic particles, the position changes. As the saying goes, 'the flapping of a butterfly's wings here, will have its (unpredictable) effect on weather conditions many, many miles away. In so far as this may be true, perhaps we should extrapolate to the big picture. We are not wizards, we are at the mercy of the same laws as everything else.

In opposition to geochemistry's allegation that life was just a natural, if not accidental, by-product of the conditions inherent to our planet, Lovelock suggests that our world as a whole, animate and inanimate together, evolved as a closed-loop cybernetic (automatic, steer-steering) unit. Our planet, with its highly unstable atmosphere and myriad of homeostatic systems (water, nutrients, gases, etc.), is being actively held in conjunction with the needs of the various life forms found within it. We are as much a part of our environment as our environment is a part of us. With this, Lovelock 'knew,' he just 'knew,' that everything was connected and very much interdependent. Is this heresy? It is thought to be by some, but I think not! It makes a tremendous amount of sense to me. It certainly makes far more sense than the supposition that we, as the superior species, can do whatever the hell we like without repercussion! We must now accept that arrogant assumption for the idiocy that it is.

Our theory of matter has given us much with its understandings of the crucial building block of our world. But, my question is, how on Earth, with these empirically suggested thoughts in mind, could we have, all of a sudden, thrown caution to the wind, and started to view ourselves as apart or different from the rest of the matter in the world? We, as the human players, somehow came to view ourselves as the only active agents. We turned the world into an 'us' and 'them' sort of scheme whereby, all but the human form, was perceived as inert. As such, we have assumed that all is passive and just sitting here waiting to be mastered by the art of the human hand and mind. How does this follow if all is inherently the same? How can the energy inherent in our human condition be one thing and the energy around us be another? If we apply pressure, things change. When other life forms apply pressure things change. When so called inert matter applies pressure, things change. Whenever anything within our universe applies pressure, things within our universe change. We must start taking into account how the energy that we direct toward change will ultimately affect the world around us. This in sum, is the crux of what James Lovelock is saying. The Earth and the life on it are at work synergistically, the whole being far greater than the sum of the parts. We systematically bring into being what is and then, in our short-sighted notion of dominion, we attempt to find remedies which will further allow our indulgences. In endeavouring to perform catastrophic global change (such as massive deforestation), without regard for the long-term outcome, unpredictable exponential (or catastrophic global) change will be inevitable. If, through our seemingly never ending quest for external gratification, we enact enough of a change, so as to affect our world adversely then conditions here will change sufficiently so as to no longer sustain either us or our mindless endeavors. We will become extinct. Such is implied by the science we already whole-heartedly embrace! Our world must be a self-governing, self-creating system. To think otherwise is completely without reason!

We would all do well to remember that science does not deal in certainties. Scientific discovery is not a static process. We know nothing as 'absolute.' It is true that, in seeking knowledge, we must first break things down into manageable pieces. There is no way to do science without reduction at some stage. The material relationships alone, found within living things and earthly systems, are so phenomenally complex that they must be broken down in order to even take peek at them, but science wrongly assumes that what has already been accepted cannot be integrated, and then fine tuned. Lovelock merely put the life sciences back together, to gain a glimpse of the whole picture. The truth will only be found in the big picture and even then unified conceptual clarity must undergo continual revision based upon new levels of understanding in every field.

Recently I read a bit by a merchant of old named d'Holbach (1723-1789). In his pieceentitled, *Systeme de la nature*, d'Holbach suggests that man is unhappy because he is ignorant of nature.

There is a fundamental continuity between man and the rest of nature, between animal and human behaviour; all natural phenomena, including mental ones, are explicable in terms of the organization and activity of matter. Religion and extranatural beliefs inculcate habits inhibiting enquiry and the acquisition of the knowledge that is necessary to achieve the fundamental aims of man; happiness and self-preservation. Nature makes men neither good nor evil but malleable by education and experience. 3

I think he is right! I think that we should go back to the beginning and rethink our position.

From within my perceptions as a child then, here are a few of my historical attempts at rational thought. There are three conditions which have to be met in order that we may satisfy the claim that we 'know' something. These conditions are;

- 1. That we believe it to be true
- 2. That it is true
- 3. That adequate evidence can be found to support its truth

In contemplating the reality of what we now claim to 'know,' I have oft times, like sceptics throughout the ages, wondered if our perceptually conceived external world exists at all, that is, anywhere other than in our own minds.

The concrete tangibility of our sense data varies greatly depending upon the context under which an object is perceived. So goes it with our experiential reality. As light, angle and distance affects 'the nature' we attribute to things, so too does observation, experience, and expectation affect our conception of reality. Our immediate reality is the direct result of what we perceive when we perceive it. Our truth is completely relative to the time and space we live in. Time is perceived as being linear and so is the collections of truths upon which we base our current body of knowledge. Our dreams seem real to us, while we are dreaming. If our whole world were just a dream how would we even know the difference? Real is by definition, what exists for us. Real is relative to the moment. Many, many times I have personally interpreted a situation, or set of perceptions while completely awake (as far as I can 'know'), only to later find, in retrospect, that I had seen what I wanted or needed to see. From there then, upon greater inspection, I came to an even greater understanding of the situation as a whole, thereby allowing myself to alter how subsequent perceptions were experienced. Somehow the energy of my thoughts effected my perceptions such that, I was given the opportunity to gain new insights. I had new truths upon which to conduct my life. It is in the self-evidence of this progression that my beliefs have taken their current shape.

Science professes to be continually seeking hard and fast 'objective' rules about 'how things are' and 'what will happen.' History however, has clearly revealed infinite shades of totally unexpected grey in both cases. There have been many times, throughout history, when we have had to stand back and reformulate what may previously have been considered intrinsically evident. The obvious example here being our previous assumption that the world was flat. With this notion looming in the distance as quite conceivable, science was forced to adjust its expectations to fit a new reality. Their truths changed. Now we are faced with other, more personal, blockages to clear. In refusing to take our own (self-admitted by the science of physics) minuscule place in the universe, our search will be in vain. In assuming that we are smarter than everything else in existence, we have somehow decided to assume that we are more important as well. Not!

Our current world of hard and fast, reductionistic, scientific laws are subject to the same degree of epistemological and logical constraints now, as they have always been. In my view, we are not yet at an understanding, whereby we can logically internalize the total consistency and/or uniformity of our 'us' and 'them' scenario of the world. The weather, never mind our future, as it unfolds, cannot yet be known (anticipated or expected) by anyone. It is simply impossible to know what we do not yet know and refuse to even entertain.

After having spent much time, contemplating all this, my beliefs have finally

solidified to where I now believe that our world exists as some sort of collective unified energy pattern. Just for fun, let us call it 'Gaia.' I am in complete sympathy with Carl Jung's conclusion of synchronicity of mind. There are no accidents. All is a matter of cause and effect. We as individuals, each embedded within our own definition of reality, are just specks within a much larger system, or even plan, if you will. I believe that we are all, person, plant, animal and mineral, just tiny aspects of a unified whole which is struggling through an existence, purposely formulated to achieve subsequent evolutionary ends, or is perhaps, just following the basic universal laws which govern it. Since energy is thought never to be destroyed, the universal energy which makes all what it is, must be a closed system of cause and effect. Therefore, as individuals, we create our own lives or perceptions thereof, and as a whole, we create what we find ourselves living within. We see and experience what we need to see and experience so that we may understand what we are doing. By opening our eyes and truly using more efficiently, the infamous reasoning skills, for which we give ourselves so much credit, perhaps we would not have to see and experience what we are now seeing and experiencing. Perhaps we could open our minds to the things that we are doing wrong. There is reason within this, even though it may not be tangible. Besides, to think otherwise, is to my mind, completely without reason.

We 'know' painfully little, if anything, as 'absolute truth'. In this therefore, my truths are as valid as anyone elses'. None of us has any logically conclusive, eternal proof of anything. We all spend our whole lives without any proof of anything at all ever! At given times, however, we do 'know'. . . . we just 'know.'

Notes

- 1. Hawking, S., Black Holes and Baby Universes, (New York: Bantam Books, 1993) 143.
- 2. Hawking, S., Black Holes and Baby Universes, (New York: Bantam Books, 1993) 77.
- 3. Dictionary of Philosophy. (London: Pan Books Ltd., 1979) 106.

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