**Our Holistically Elegant Universe:**
**Noticing the Pattern that Unifies the Cosmos & the Human Condition**

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## 1.0 Introduction

The goal of this paper is to present a new model of our universe, which accounts for both the natural processes and the intelligibility of the world. As it does so, it draws our attention to a set of four cosmos-spanning "cardinal principles". These principles, we will discover relate to the first four numbers of mathematics. Evidence will be presented that suggests the universe is exceedingly elegant in the way it uses this single set of numerically-ordered principles as it expands outward to generate the cosmos' multitude of levels - including those natural processes that occur on our planet.

Each of these levels will be shown to have its own set of elemental parts, which express these four foundational and primitive-most principles. In other words, spanning from the subatomic to the galactic, from the biochemical to the psychological, there is a foursome holistic pattern of elemental components building that level. As we witness these four numerically-framed principles working in this ever-repeating *holistic* manner, we will note that this foursome pattern unifies the cosmos in a very remarkable way.

This unifying pattern is made more noticeable when we use this foursome of base principles to generate a set of four categories. All the members of each category will in this way relate specifically to one of those four cardinal principles. The scientific quest to better understand the building block constituents of those many cosmic levels will be helped by recognizing these four categories.

For example, important constituents of the universe such as dark matter and dark energy will be better understood when they are noticed to be members of a certain category – each an expression of one of those four base principles. We can in this way use what we know about other members of the same category as our studied object to better understand important unknown attributes of it. A table proposing the placement of these and other members of this proposed foursome of cosmic categories can be found at the end of this paper.

## 1.1 Fire-Air-Water-Earth as principles

The terms that have been chosen for the naming of each of these four principles (and their affiliated category of constituents) pay homage to the ancients who sensed a universe-wide set of principles that came to be called the *four elements of nature*. The Fire-Air-Water-Earth (FAWE) Element Hypothesis suggests that these four primitive, nature-based terms can do much even now to help us understand those cosmos-spanning first principles.

It makes the case that nature's four elements are themselves expressions of this foursome of base cosmic principles. Further it suggests that because the sun, the air, the water and terra firma of nature is more "in our face", we could use what we know about them to tease out and better define the essential nature of any universal pattern that might indeed unify the cosmos. In deference to the way those four natural terms will be used to connote an elementary set of first principles, they will be capitalized in this article as Fire, Air, Water and Earth.

As we define these cardinal cosmic principles we begin by noting that there is a top-to-bottom order to them and their associated categories. Fire (nature's sun) is at the top, Earth (terra firma) is at the bottom, and Air is lighter than Water. This order is spelled out in the FAWE sequence of the abbreviated version of this Fire-Air-Water-Earth Element Hypothesis – The FAWE Element

Hypothesis. More than being platonic ideals, these four principles will be shown to have a register within reality that is not so much transcendent as being fundamentally embedded into every level of the cosmos. As part of the introduction to these terms, let us take a moment to appreciate their historical richness.

### 1.2 Historical context

While it is rarely appreciated, it is useful to know that scholars tell us western science and philosophy had its origins with the four elements. Early Greek philosophers and scientists like Thales, Anaxamander and Heraclitus theorized about their natures, often making the case as to which element was most primal. Empedocles in the later 5th century BCE is said to be the first to classify them as a distinct and equal foursome, from whose mixing all parts of the world are built. It should be noted that a little earlier in that century, Hippocrates, the father of medicine, practiced clearly as a four-element physician. According to him, we have greatest health when these four are properly proportioned to each other; pain and disease come when one is too low or too high, or otherwise not well "compounded" with the others.

Further, each of the four was said to give us one of four temperaments, and its related humour – yellow bile, black bile, blood, and phlegm. Fire, for example, was thought to bring the choleric temperament of active enthusiasm with yellow bile as its humour. Air brought the sanguine temperament – an optimism that comes as constant self-correcting movements – with blood as its bodily humour. Water brought the phlegm humour, and a temperament of feeling emotions. Earth's humour was black bile with its melancholic temperament bringing forth tenaciousness, practicality, and the capacity for hard work.

Arriving later, it was Aristotle, who especially influenced the course of the four elements through science and philosophy. He related them to a set of primary opposites – hot and cold, wet and dry – that did much to define the four until the end of their use two thousand years later. Fire, he defined as hot and dry; Air was said to be hot and wet; Water was cold and wet; Earth was thought of as cold and dry. The FAWE Element Hypothesis of this paper takes the Ancients' perception of four natural cosmic principles in a whole different direction. In doing so, it seeks to rescue the four elements from the dustbin of history, showing them as nature's expression of something significant – the universe's first four principles.

And indeed, there very well may be a reason that these four humours and their related temperaments and energies were the focus of scientists and physicians for well over 2000 years. From Greece to all of Western Europe, from Persia to India, these four elements built much of the science of the day. Arguably, these four stayed a part of medicine until just about 150 years ago because in a practical way each element (or natural principle) was thought to have a healing power that the physician was able to access. Most of us are completely unaware of the emphasis our forbearers placed on this foursome, rarely noticing that they are even in the creation story of Genesis – the Air element, for example, is the firmament (the sky) created on the second day.

The Fire-Air-Water-Earth model of early scientific thinking began its decline in the later 18th Century as scientists like Lavoisier were able to fracture "Air" into component gaseous parts like oxygen, and the mined ore of Earth was seen to be composed of a variety of more base mineral components. Mendeleev's Periodic Table enabled scientists to see a larger set of "elements". The breaking apart of matter into its elemental base parts continued as Rutherford created his model of an atom built upon protons, electrons and neutrons.

This process continues even today as those subatomic particles have been shown to be reducible to quarks and leptons. And it doesn't necessarily stop there; they are possibly divisible as well. The

hypothesis being developed in this paper posits that each of the elemental parts of these cosmic levels and indeed any yet to be uncovered will fit into one of the four categories being proposed by this paper.

## 2.0 The ultimate reality of numbers

In order to grasp the relevance of applying the names of nature's four elements to this proposed set of fundamental principles we will look initially to numbers. There are after all *four* base principles (and elements of nature) proposed by this hypothesis. In the same way that the sun, air, water and solid ground of nature are generally recognized to be the building blocks of nature on this planet, it is useful to appreciate the value of numbers as we seek out essential cosmic truths. And indeed more so than anything else, numbers are the expression of the most abstract reality we can all generally agree upon. In other words, anywhere in the universe, it will always be true that 3+5 = 8.

And so it would be that more than perhaps anything else in the universe, numbers are impressively basic and affirming to our sense that there is an order present in the cosmos. It is in this way that they are able to express the laws of physics so grandly and to yield us the equations that work so well whether for flights to the moon or for deep statistical analysis. We will come to realize that as any set of cosmic principles would necessarily be, numbers are abstract, embedded in the universe's functioning, and are empirically undeniable.

## 2.1 An ordering to numbers

One of the first defining aspects of numbers to note – after the discreet, uncompromising, unambiguous identity that each has – is that like our four elements, numbers have a top-down order. One comes before two, and four comes after three. The laws of physics and the numerical equations applied by our scientific technologies are all given their potential by the rigid constraints of this ordering put into numbers. That ordering permits us to delineate just about everything in this world: sizes, distances, atomic mass, density, charges, spins, time.

This hypothesis suggests that there is something unique and significant about the first four numbers that is resonant with a set of first principles. If there was indeed something metaphysically important about these initial numbers that we could relate to base cosmic principles, we should be able to comprehend those principles once we have cracked this numerical code. Furthermore, it is fair to suggest that if we could sense how these numerically defined first principles fit together into a cosmos-spanning pattern as proposed, the world would become ever more intelligible to us.

Our ability to understand familiar components of the cosmos such as the photon, electron, proton and neutron of the atom might increase when they are seen in this numerically-framed, principle-understood way. Familiar subjects like the four dimensions of space-time might be seen in a new way; this hypothesis postulates that there is a numerical ordering to these dimensions – some being more primitive, or older, than the others; a topic which will be discussed later.

## 2.2 The geometry of numbers

With respect to the point of this hypothesis, the stepwise progression to each of these four numbers will be shown to be needed for the generation of the cosmos. The case will be made that the universe begins as a pre-Big Bang *Oneness*, and continues as Two, Three and then Four "happen" in succession.

To help in our teasing out of the way these numbers generated the cosmos we will look to how these four manifest in a set of geometric structures. As we will shortly see, the reality and usefulness of those geometric structures are undeniable within both the physical and mathematical worlds. In a sense,

geometry gives something that approaches "physicality" to a number – a structure that we can analyze, investigate and theorize upon as we see that geometry in action within the physical world.

There is a reason, this model suggests, that mathematics and physics cannot escape from the use of circles (and their arcs), lines (and their vectors), triangles (and their trigonometric functions) and right angles (and their orthogonal relationships). These four shapes are continuously manipulated to render many of our scientific and technological advances. As we do so, we may very well be relating to the principle for which that shaped number speaks.

In this context it would seem fair to suggest that the *first* number, *one*, would express something more primitive, and less filled with complexity than two or three – and have a shape that is likewise. And so let us look at a circle, or if inflated, a sphere – or for that matter, if ever so reduced, a point – as an expression of the number one. Is there a similarity to the number one and these shapes? Might they exist in the same category?

While humankind has intuitively related a circle to a spiritual concept of oneness or unity over the ages, what might mathematics and physics say about the relationship of a circle and the number one – besides it being composed of only *one* continuous side?

To answer that question, let us look at symmetries. It is widely thought that the cosmos as we know it began through the breaking of symmetry. Indeed, there is general agreement that before the Big Bang there was complete symmetry. The four forces of physics are often theorized to have been unified (joined into *one*) in a way consistent with this symmetry. Of all the two dimensional geometric shapes, a circle is the most symmetrical; a sphere is similarly so in three dimensions. As far as the most rarefied version of that geometric shape: any part of a point would by definition have the same identity as any other part of it.

The case to be made is that there is something distinctively similar between those geometric shapes and the number one. Before symmetry would be broken, there were no things, no multiplicity of parts; a single identity existed – the presence of simply a "Oneness". There was then only category present. Translating that oneness reality into the geometry of our world, this category contains our mathematical point, the all-inclusive circle and sphere of total symmetry. For the number two to follow one, this state of total symmetry would have to be broken.

### 2.3 The breaking of complete symmetry by Two

This hypothesis suggests that the number following one, *two*, has a geometry that expresses the breaking of total symmetry, which begins the process of generating the cosmos. Let's see what two necessarily does toward the unfolding of the cosmos. Arguably, the geometric shape that speaks most of two's nature is a line. By definition, a line has *two* rays going in opposite directions. While the rays themselves are symmetrical to each other, they are not symmetrical to the edges that they create. This geometric rendering of two generates what is spelled out in the parlance of human language as the *yin-yang* opposites observed throughout the cosmos. In a real way, as well as in this linearly graphic manner, *two* relates to the fact that until they are "tamed" by something else, opposite principles will move in opposite directions with vector-like precision; one ray toward the "biggest big", for example, with the other ray moving toward the "smallest small".

All of the opposing forces, and the opposites within every system throughout the entirety of the cosmos, perhaps beginning with matter and antimatter (and later as quarks and leptons) are members of the category we will call Twoness. The cosmic law that "for every exerted force there is an equal and opposite force created" is also the playing out of this Twoness law. Further still, this Twoness is why

"birds of a feather flock together", why electrical currents in parallel wires attract each other, why electrons congregate with their fellows, why protons do so with members of their pole.

### 2.4 Numbers help unify reductionism and holism

Let us step back and review quickly this numerically holistic way of viewing the cosmos: each of these first two principles (oneness and twoness) state what is fairly obvious: the whole of each system has a unity (a oneness), and that the opposites working within it initiate the context for all that follows. Creating the context, setting the stage for all that follows, is what gives rise to the scientific notion of *first principles*. As mentioned, science's reductionism is still struggling to find a unifying set of first principles propping up the cosmos.

It may very well be that by using numbers, which clearly are part of the reductionist's divisions of a whole, we might unite reductionism with holism and create a model that explains much. The bringing together of reductionism and holism through numbers (and the particular shapes they take) may very well be the only way to accomplish this unifying of reductionism and holism – permitting us to "see both the forest *and* the trees". This may only be able to occur if we can accept the geometry of a number (at least the first four) to be an integral aspect of that number – allowing us to better notice the hidden nature of that number, holistically embedded as it is into the cosmos.

With that said, it may be necessary to aside notions that there needs to be something even more primitive than numbers to be used for understanding any such first principles. To counter that notion, it is reasonable to assert that even if there is something more primitive or more elementary than numbers, numbers would remain elementary enough to at least relate to, or express, those first principles, from which the cosmos evolved. Furthermore, an added virtue of numbers is that like nature's four elements, they are so well known to us. After being put into the proper context, they allow us to identify an objective set of first principles and to define a primary set of cosmic categories.

### 2.5 A holistic universe's single pattern

As we continue in this way, it is useful to sense the potential reality of a holistic universe – one in which there is indeed a continuously repeating pattern of principles. It concerns the properties of a holographic film plate. After a laser beam is split into two parts, having only one of its parts directed at an object, both portions of the laser beam reach the film plate. What is interesting here is that if you were to smash that film plate into 100 pieces and shined a laser onto one of those holographic fragments, the whole image would be seen – with just a loss of some of that image's fidelity.

If you looked at the film plate you would see squiggly lines, which make up what are called, "an interference pattern". Acting in a similar way as fractals do, the interference pattern representing the whole of the original image is embedded in a repetitive way within each smaller and smaller portion of the holographic film plate. The relevant point here is that the FAWE Element Hypothesis proposes the universe is similarly composed of a single pattern. This pattern is built by a single set of principles, which repeats (in that holographic-holistic way) on all levels of the cosmos. These principles manifest in the particularities of each level.

The FAWE Element Hypothesis proposes that the first four of these universe-embedded principles are particularly important to understand. They "warp and woof" the cosmos together. The power of numbers – their ability to help us manipulate the world through our technologies – comes because numbers express in their own holistically embedded way, this set of cosmic principles. Through them we tap into an overarching set of principles in very practical ways, even as we do not fully understand the holistic pattern that these numbers together build.

### 2.6 The power of three: big, small and *medium*

While we as observers of this universe generally sense and say that "opposites attract", in the realm of *Two* they do not. For example, the ray at the end of each line expands endlessly in a direction opposite to the other ray. For there to be a productive cosmos – which is what we seem to have – the cosmos apparently "found" a way to get beyond the yin-yang principles that arose with Two. Hence, we gain a context for the number that follows two, namely *three*. This is shown to us by looking at the geometry of three, *a triangle*. With three, there is the ability to move beyond a (bipolar) line with its yin-yang opposites.

In a broad metaphoric way, opposites like big and small are able to come together to create what we can term "medium". Polar opposites within the universe can now be drawn productively together. Three brings forward the principle that may be called "Inter-connective Balance". Without this third cosmic principle, opposites would go endlessly in opposing directions; the universe would get nowhere. Perhaps another universe never made it to three and is stuck in that condition; but in this universe, the number three does exist, triangles exist, balances indeed exist as opposites are drawn together.

There are a variety of important triads of the universe beyond that common threesome we see as big-small-medium, which are born as polar opposites are drawn together by the power of Three. While the FAWE Element Hypothesis can be used in ways in which there is no spiritual context, interesting things are seen when we do utilize the spiritual sensibilities that many people possess. This hypothesis suggests that what we call *nature* is the productive joining together of the spiritual and the material poles. In this holistic context, then, nature may very well have both a spiritual and material dimension, giving reason for people to say that they sense a spiritual quality, or "glow" to nature.

Interestingly, a more accepted-by-science primal polarity – Energy and Mass – does not fit as neatly into this kind of schematics. It is not only because they are convertible into the other ($E=MC^2$), but more so that they are not really poles, since there are other values that enter into their relationship (C, the speed of light).

Returning to something that again, science tends to dismiss, but philosophy cannot, we should look at another important triad that many people tend to recognize: body-mind-spirit. This triad is considered an important one in holistic health. Here, we would have body and spirit as the two poles of our human condition. The uniqueness of each person is seen from this three-element perspective as the way we each connect these primal two (body and spirit) poles of our being together in our own particular way.

And yet more than that, from a three element perspective we are each a *mind,* which balances *all* the various yin-yang opposites of our life, and our human condition. The free will agency we have as a human being is a function of our mind choosing those balances. Our sense of beauty and aesthetics relates to those balances that we find good or pleasingly attractive to us. Our recognition of beauty in nature emerges because we can sense nature's ability to create *balances* that are powerfully positive, elegantly productive and even purposeful to us.

## 3.0 Nature's four elements

Before we move to four's geometry, let us look at the elementary parts of nature as a natural scientist might *still* see them – the sun, the air, water and the terra firma of earth. But even here the reader may ask, "is this really necessary – why should I waste my time looking at a set of ancient terms that have been disproved to be of scientific value?" One brief answer is that from a macroscopic natural science perspective, the sun, air, water and earth are immensely relevant. They set the scene for all that follows on our planet – for nature as we see it operating in our life.

Secondly, might the ancients have had an intuitive grasp on what these four elements were truly about – a code, so to speak, that explained so much of the cosmos? It would be somewhat arrogant to categorically say that there is no value or potential of a four element insight that held sway over so many peoples through so long a period.

Thirdly, and most importantly, it is useful to appreciate that until cosmology and high-energy physics took center stage in the creation of models to describe how the universe works, the ideal of the natural scientist held much greater sway. This ideal was that the mysteries of the cosmos are to be found in nature. It's that ancient hermetic axiom that the macrocosm is reflected in the microcosm; "as above, so below" – the mysteries of the greater cosmos can be found in the smaller parts of it, like this planet.

And indeed, nature – as it exists on this planet – was the original "nature" of humankind and its legions of scientists; a bubble of sorts within the greater cosmos. Physicists and others have expanded "nature" to include the greater cosmos. With all this said, perhaps if we were to return to the natural science notion that by observing the workings of this planet's nature – its chemistry, its physics, its biological processes – we are given the ability to tease out the true nature of the entire cosmos.

### 3.1 Nature: principles in elegant balances

The natural scientist ideal stresses, then, that any universe-spanning principles that may be present within the cosmos are more apt to be understood when they are seen in terms that are more apparent to our eyes, our research tools, and our thinking-about-this-world-in-front-of-us brains. That is what the four elements of nature do. Importantly as well, the FAWE Element Hypothesis suggests that more than most places in the cosmos, nature on this planet has found ways to bring each of those primal four cosmic principles into immensely elegant balances with the others.

Along these lines, this hypothesis posits that each one of nature's four elements is as productive as it is only because it, too, holistically has all four cardinal principles working in a balanced way within itself. For example, the air of our planet has water within it, is able to hold the sun's heat, has within itself earthy dust particles to help it rain; the earthy soils have moisture and airy space; they hold onto and release photons of heat.

The consistent drawing together of these four principles in a variety of elegant ways is what permits our planet to be more organized than most of the cosmos. The endless coming together of those four principles through the work of our planet's four elements is what permits the productive nature and immense order energy (information-holding capacity) of our planet. A cosmic law might be: the more productive something is, the more complexly these principles are bundled up, balanced and dynamically moving within it. It is the dense concentration of this complexity on our planet that makes for a wide variety of fields for our sciences to explore and tease out.

Lastly, before we move on, some readers might entertain the skeptical thought that it would seem doubtful that only *four* principles, elements, categories of parts, could generate all of the cosmos and the complexity of our world here on Earth. It is worthwhile to keep in mind that all of life has been built upon only four genetic bases; that photons, electrons, protons and neutrons create much of the chemistry of our world; solid, liquid, gas and plasma are the four states of matter; four forces appear to be responsible for the structure and functioning of the greater cosmos. As we will see soon, there is something about four that facilitates all this – locking physicality into being.

### 3.2 Nature's elements physically embody these principles

As we move now into using nature's four elements to tease out the hidden working of the cosmos – and connecting them to numbers – we need to acknowledge that like numbers they present themselves in an order. As alluded to earlier, the easiest way to sense this order is by looking at the density of each of them. Earth is the densest, then comes water, then air, then comes fire. The top-down order as far as states of matter would again be the FAWE order, beginning with the plasma state (Fire) and ending with the solid state of matter (Earth). With that said, from the category-based model we are developing, the number one and Fire would be in the same category; two and Air would be in another category together; three would be with Water; and finally four and Earth would be in the fourth category.

In this context let us look at the first three of the four categories. In Category 1 we have the circle, the number one and Fire. The FAWE Element hypothesis suggests that we can appreciate more of this first category – and the over-riding oneness principle defining it – by looking at nature's expression of it, our sun and all the stars. It's important to notice how the sun becomes the radiator of energy for nature on our planet. It does this through the process of fusing *four* hydrogen atoms together to create *one* helium atom. This nuclear fusion releases great amounts of energy, or light. While it is not ever thought about in this holistic way, light is "a oneness energy", released as four things unify to become one.

Within the biology and physics of nature, this oneness energy becomes "order energy". The oneness of any system is initiated, built and maintained as this order energy is translated and stepped down into the particulars of its physical or biological level.

The dynamic movement of Fire's order energy through a unified system might be seen in this model as Fire acting in a dynamic or *yang way;* whereas *yin Fire* would be the more inherent de-facto oneness within a system. This yin-yang expression of Fire reflects what was discussed earlier. Here, the Oneness Principle of Fire will have in a holistic way, other principles like the yin and yang of Two being drawn into itself as it moves into a system of complexity.

### 3.3 Yin-yang spatial oppositions, an electron's elbowroom and "Air"

Now let us look at the second category, where we have the number two and Air. While we may think of air as simply the gas that we breathe in, on a more primitive, more basic level, Air should be thought of as "space". Here is a quick exercise to understand the connection between Two and Space: bring your two arms straight out to their sides at shoulder level. Imagine you are creating that Two-generated line, with each of your two arms as an arrow, or a ray, directed in a direction opposite the other. What lies between those two rays of each line going in their opposite yin-yang directions? Space, endless space.

Space fills the *endless distance* that exists between the opposite poles that the arrows of each line are directed. While some may say that there are more essential primitives that create space, perhaps not; maybe Two's expression of it as this polarity-widening *two*-framed line is as close as we can get to an understanding of how space is created. This model proposes that the nature of dark energy – which is, on a macroscopic level, causing the universe to expand – can be better understood if we see it as a member of this Air category.

Space, then, is created/generated by Two as a consequence of those yin-yang opposites doing exactly what they do: directing themselves in opposite directions. Space – more so than the air we breathe – is the second principle of the cosmos. Nature on this planet fills this space with important chemistries to make it more productive for life – giving us our "air". A case could be made that the diatomic

molecules – $O_2$, $N_2$, $H_2$ – filling up our air are befittingly an expression of the power of this "Twoness principle".

It is important to realize that this Air element, or space, is required for everything to exist. We can witness this in the atom with its electron orbits; indeed most of an atom is space. Ultimately what this space allows for is a separateness of an entity, or even to each of an entity's inner constituent parts from another. And with that said, in your mind's eye envision this: the power of the Air Principle has been cut five-fold, and everything was that much closer to you, impinging upon "your space". It should not be too hard to image that you would feel closed in, that your level of *self-empowerment* would be diminished. The Air element is "the elbowroom" that we, and even atoms, depend upon. Category 2 components of the world have something of this empowerment-separateness-twoness as part of their makeup.

### 3.4 Water, Inter-connectedness, and Category 3

While the Air Principle separates all things, the Water Principle connects the parts of the whole, and all of the cosmos, together. While the Fire Principle is behind light's electromagnetic force, the Water Principle is what underlies the cosmos' force of gravity. Gravity *connects* all the parts of the cosmos together by way of each entity's mass. Consequently, this hypothesis posits that the mass of the universe arises out of this Threeness-Water-triangularly dimensioned force. More importantly, now we should take note of how the inter-connective power of this principle presents itself in water's general nature.

Consider that not only does water, $H_2O$, express the connective power of three in its molecular triad structure, but also in a holistic, deeply embedded manner, water (and its Threeness) connects that which came before it – the numbers One and Two – and seen too, as Fire's hydrogen and Air's oxygen. With Three, the cosmos can move forward – beyond those oppositely directed, "getting nowhere" rays of Two's line. It is under the Water Principle's influence that endless opportunities open up – it triangulates all the cosmos' yin-yang opposites into endless inter-connective balances.

It is worthy to note that water as an element in nature actually does much to manifest this inter-connective power of Three. It does this through what is called its *hydrogen bond*. Through this special hydrogen bond each water molecule bonds, or connects, with up to four other water molecules. This inter-molecular hydrogen bond of water is said to ultimately make all of the ocean's waters a single giant *interconnected* molecule of water. In this scientifically understood way water does so much to embody Category 3's principle of interconnectedness.

The significance of this special inter-connective bonding of water should not be lost. The hydrogen bond gives water most of its life-nourishing properties – from its high boiling point, which allows it to stay liquid over a wide range of temperatures, to its freezing from the top downward that permits aquatic life to survive in an ice-covered winter pond. This special bond gives increased surface tension and viscosity for plant transpiration of nutrients upward as well as water's high heat of vaporization (and melting) for moderating regional and global weather and our body temperature through sweating. And if it was not for water's hydrogen bond, water would be liquid only under very cold conditions; making the biological processes needed for organic life happen considerably slower. Possibly no other molecule is as important for life as is water – and it's all due to this Three-born principle of connectedness that is anchored into water through that special hydrogen bond between individual water molecules.

## 4.0 The Power of Water in Our Body

There are important places that Water manifests in our body. Firstly, we are mostly composed of water – though as we saw earlier, water is intriguingly made up of that earlier pair, showing up as the Fire element's hydrogen and the Air element's oxygen. Hence life is composed to a large extent in this way by the way these first three elements-principles-forces holistically come together. But on a more apparent level – besides it giving flesh to each cell and creating a soft, inter-connective, interstitial medium – the Water element builds our blood. Blood is that watery element of our body that *connects* each cell to the nutritive resources that come from outside it. With that said, this hypothesis tells us that the nutritive Water element of the body is more than blood.

In your mind's eye imagine this: ancient amoebas are immersed in a watery pool, gaining their nutritive needs as water allows for these nutrients to diffuse into their cells. Life grew larger and canals developed to distribute these nutritive-rich waters. Life became bigger yet and digestive organs were needed to take captured prey and pull out those nutrients needed for this larger life form; an immune system was needed to keep its inner waters parasite/pathogen-free; a urinary tract to keep its waters vibrant and osmotically balanced; a heart to pump vessels filled with what had become blood. When life came onto land it needed lungs to pull oxygen, which was dissolved in the seas, out of the air. The point is this: *all our visceral organs are an embellishment of the Water element in life* – focused as it is on being what connects life to its nutritive needs.

The sensory organs express another important way that the Water Principle works its way into the body. Our sensory organs *connect* us to the world in often soft and intimate ways. With that said, it is useful to appreciate that while we generally say we have five (or more) senses, all of them resonate with one of our four. In other words, in this *holistic* model where the pattern of the four elements repeats endlessly, any biological or functional agency of importance would include four inter-locking parts. This includes Water's sensory apparatus.

Obviously, vision – the ability to see light – is the participation of the Fire Principle in this Water Principle-framed sensory, agency of the body. The capacity to hear vibrations in air – sound – develops because our ears can tap into the Air element of nature. Interestingly, taste and smell both involve water as the medium to convey stimulation to their respective sets of sensory receptors. It should not be lost to us that these two senses are the most biologically generated ones – through them we sense the watery biochemistries of life. The sweet and the sour, the salty and the wide variety of bitter and other plant flavors are all based upon, and transmitted to us through, water's interconnective molecular nature.

Our sense of *physical* touch, our joint's proprioceptive positional senses, and even those otoliths deep in the bones of our inner ear that help us maintain physical balance, are all Earth element faculties of our body. This leads us to one point of this paper, that the intelligibility of the world comes only because we have four element-based sense organs, which connect us to it.

## 4.1 Primary principles: secondary principles

It is useful to appreciate that with Water we reach the bottom half of the four. There are in a sense, two higher categories and two lower ones. The top half is more involved in higher energy related activities, the bottom two are more involved in the here and now mundane nature of the universe.

More importantly, as we cross this half way threshold to the four elements, we move from Air directly to its opposite, Water. This prompts us to note an essential part of the FAWE Hypothesis – that there are primary and secondary principles. Fire and Earth – often recognized as energy and matter – are the primary polar principles of the cosmos, whereas Air and Water are secondary ones.

In this primary: secondary category relationship it is best to see the principle we are calling Air as composed of greater amounts of the primary principle we are calling Fire mixed with lesser amounts of that other primary principle, Earth; Water is composed of lesser amounts of Fire mixed with greater amounts of Earth. By way of this process there is a generation of four distinct principles with their associated categories. For example, on the atomic level, the Fire category includes photons, the Air category contains electrons, the Water category contains protons, the Earth category contains neutrons.

This particular categorization can be accounted for by more reasons than one defined by density – but that is for another paper. For now it is not hard to see how Fire's photons and Air's electrons might be said to represent the top half of atomic dynamics that play out in electromagnetism's energetic activities, while protons and neutrons represent an atom's bottom half that is more centered on mass, physical size and shape. The polar opposition between the middle two – Air and Water – show up as a proton's positive charge in opposition to an electron's negative charge.

### 4.2 Might it be fair to be anthropomorphic – the power of question words

As we reach into this lower half of the four principles, let us begin to apply this model to ourselves. In other words, if the universe is holographic – and we as humans expressed the mysteries and truths of the cosmos in sophisticated and beautiful ways – we should be able to test this hypothesis on how our human condition works. The four categories of this model, and the principles behind them, should be evident in us.

Let us tap into the set of question words we as humans use to see how these principles might work in us. According to this model's game plan we should look for an order, even a hierarchy, to these question words. I suggest that the top one is *what*, then comes *how* and then *why*, and then *where*.

> As it turns out, *when* is related to a fifth category – in the Eastern tradition it's called *Wood*; *which* is related to a sixth category – given the name *Metal* in Chinese science and philosophy. This is mentioned now to let the reader know that the cosmos does not stop with these four principles – just as other numbers follow (as the oneness is fractured into ever more parts).
>
> Still, these four are the fundamental building blocks. The Wood Principle is forged as the Fire Principle combines with the Water Principle; Metal comes as the Air Principle melds with that of Earth. Both can be seen as tertiary principles ultimately arising as a primary principle joins with a secondary principle.

To begin our question word categorization, let us analyze the two relating to Air and Water – the middle two principles – which, accordingly, amount to the "how" and "why" of our lives.

This Water and Air dichotomy shows up together as the "arts and sciences" of academia. Clearly science is about the how-ness of the cosmos. Art, like the Category 3 that exists within the lower half of the four, is more fleshed out by our human needs and emotional temperaments – as opposed to the cold logic of Category 2's intellect and the science springing out from it.

Drawing upon the line geometry of Two, it is not difficult to sense how intellect and its science functions by fracturing the whole – *di*viding, even *di*ssecting it into smaller and smaller twosomes to learn *how* those parts work. Art, on the other hand, works to *connect* things together in a new and creative balance. Why those parts are put into a particular artistic balance relates to the emotional, internal whyness of the artist.

### 4.3 Science and religion

While there is a comfortable balance afforded culturally between art and science, there is a more culturally troubling dichotomy between another important pair of the Air:Water dimensions of our human condition. That would be science vs. religion. If science is ultimately about the how-ness of it all, religion seeks to know the why-ness of our own lives. Within the FAWE Element perspective, these two portions of our human condition each have their own place, their own realm to explore.

While science says that it cannot tell us about the why-ness of the cosmos, perhaps other members within this third category, like Water, can give science (and ourselves) clues. In other words, if indeed there is a what, how, why and where playing out within the four categories of the cosmos, we should be able to use this four-part code to understand why-ness. There should be something about Three and Water – and other members of their third category, which can show us the mathematical, physics and natural underpinnings of this third question word, *why*.

The model suggests that the special life-giving hydrogen bond of Water speaks to this cosmic why-ness as it is an important component of this third category. In at least water's poetic (as opposed to a scientifically-based Air) way, it might be that water's life-nourishing bond came as the cosmos somehow reached "enough why-ness" to move from the getting nowhere polar opposites of Two to allow for all those productive balances, which Three does so much to allow biologically and otherwise.

With all that said about this Air : Water dichotomy showing up as the science : religion polarity in us, it is more accurate to say that this Water dimension of our life speaks more to our human condition's mystical nature. If the top two categories could be said to relate to the abstract and objective parts of our human reality, the bottom two pertain to the more subjective and here-and-now reality of our lives. This watery mystical dimension of humankind predates religion. Its inwardly generated, subjective sense of reality allows each person to feel that things are set in meaningful (strong why-ness) ways in one's lives. What often is happening at those especially strong mystically moments is that you feel your personalized connection to a cosmic reality.

We create our own mystical moments as we feel something in a deeper than normal way, which resonates with our own personal why-ness, set as it may be upon our life experiences and the emotional needs we have that are born out from them. It is in this way that the Air : Water dichotomy plays out in the distinction between intellectual prowess and emotional needs; between thoughts and feelings; between cold logic and the warm glow of meaningfulness and sentiment.

In a sense there is a strategic logic to numbers – they keep expanding onward. And it all begins as One fractures into two. Perhaps this stepwise progression could only get the cosmos so far. Perhaps there needed to be a reason to go further, a need that the cosmos experienced or "felt" – a hypothesized cosmic passion or drive – to bring Two's opposing principles in the early cosmos *together*. The fact that Three (with that metaphoric triangle, and the hydrogen bond of Water) does follow Two, shows – *at least* within a mystical frame of reference – that the cosmos had enough passion to drive the numerical process forward.

While the science arising from Category 2 may depict this numerical process in cold logical terms, if we were to come out of a Category 3 perspective to understand numbers, we find ourselves approaching the origin of *meaning*. The why-ness of the cosmos – the ultimate meaning of the cosmos – might be in forging especially productive balances between the various opposites born of Two. For us, this meaning may be in finding productive (and even beautiful, elegant) ways to connect the myriad of opposites that abound in the world and within ourselves. In fact, all creatures of life might be said to have a drive, an intention, an innate need to continuously forge productive balances.

To round out this Water part of our human condition, this model places enjoyment and pleasure in Water's Category 3 column. Consider the way laughter, joyfulness and pleasure frequently come as some of life's opposites are drawn productively *and* often unexpectedly *together*. Might there be something akin to joy, fun, pleasure, and meaning that the cosmos gains with its own unexpected creations of beautiful, elegant, productive balances? If so, we would find it as a Category 3 member, one of many that are born as Three's Balance Principle is given its due.

### 5.0 And then came Earth – Category 4

As we leave Water we move to the Earth element and all those many Category 4 portions of the cosmos imbued with the ideal of the Earth Principle. Here, we reach the final component of this model. To get a grasp of what Earth is all about, let us return to numbers with this mental exercise: draw a vertical circle (metaphorically, conjuring up oneness) in front of you. Imagine you are dividing that circle into four parts as you place your two forearms within that circle, creating four radii. The angle up at the top, between the backs of your two forearms is about 120°.

Now quickly bring the backs of your two forearms toward each other, perhaps creating the sound affect of a hard "tk" – so as to better appreciate the locking-into-place power of the 90° angle. What you just created are *four* 90° angles. The point is this: the geometry of four can best be seen as what happens when "the circle of Oneness" is fractured into four symmetrical parts. The FAWE Element Hypothesis says the 90° angle generated in this manner expresses the power of this fourth cosmic principle, which it aptly calls the *Buttressing Principle*. And so it would be that the cosmos' physicality is generated in a way that resonates with the buttressing power of a foursome of 90° angles; together these four right angles lock-in creation, permitting a physical cosmos.

Within this context, let us quickly return to Three. Consider how in our FAWE context, the realm of Three exists as a metaphysical or theoretical abstraction; there is nothing physical that you can put your hand around and say, this is mind, or nature, or medium. Three is the realm of abstract mathematical structure (as in shapes), not yet *physically* real.

This difference between the realms of Three and Four – between Water and Earth – can be seen in physic's quandary related to the wave vs. particle nature of reality. The wave function is a Water realm reality; a particle – with its innately "solid" nature – comes as something locks into a place *where* it can *physically* exist. The fact that science tells us an observer will facilitate this collapsing from a Watery wave state into an Earth element physicality state suggests that somehow the crosshairs of an observer's sensory apparatus add enough orthogonal resistance to buttress a physical where-ness – a quick freezing as it were – from a fluid watery wave state into an earthy, "solid", particle-like one.

When trying to understand the fourth principle, Earth, those four buttressed-together right angles should be envisioned in one's mind's eye. In this context, *nature*, which was metaphysical in the realm of Three (as it triangulated the Spirit and Matter poles through itself) is made physically real as this Buttressing Principle "locks-in" a *physical* creation. A previously abstract metaphysical nature becomes physically real. It is through the power of Earth, this fourth principle, that even the Fire Principle (the Oneness Principle) now becomes fully physical as stars – including nature's sun.

And similarly, through the power of this fourth principle the yin-yang separating Principle of Twoness becomes physicalized as the intergalactic space and the actual "elbowroom" between atoms, protons, quarks, and the air molecules composing our planet's space-giving atmosphere. Three's metaphysical

Interconnective-Balance Principle, working also with the power of Four, now becomes physicalized as water molecules including those life-nourishing ones covering much of our planet (and earlier perhaps as quarks that connect on deeper levels). And lastly with Four's Buttressing Principle we get the solid rock of our planet as well as the atomic physicality inherent in all matter.

From another angle, the FAWE Element Hypothesis points out that carbon and silicon – the atomic elements most responsible for creating the *physicality* of life and that of our planet's rocks, respectively – are built upon the power of four. Each is given their own structural backbone nature by having an electron valence of *four*. This hypothesis suggests that whether it's the right angles of the ancient masons and our carpenters today, or the valence of four that carbon and silicon have, there is something about four that helps the world to be *physically* made, built, and sustained.

### 5.1. Four categories of body tissues

One value of this hypothesis is that we can use it to understand our own human body – and all our planet's life forms in a new way. Our body reveals an evolutionary masterpiece of these principles being put into ever greater balances. With FAWE as a code, we are able to see biological expressions of each of these four cosmic categories in life. Beginning at the top, it would be fair to suggest that nerves – and especially the brain up at the body's top – is the Fire of a body, and hence a Category 1 member. Like fire, nerves are the least physically dense of the body's tissues. In their own version of lightning speed, fiery impulses travel through those nerves. Relevant, too, is that nerves are most responsible for generating order in the whole of a body – which as we saw earlier, our sun's fire is responsible for generating throughout nature.

As we move down to the next category that is constructed with Twoness, which we are calling Air, consider the biology and function of *muscles*. Aptly, there is a relationship between muscles and *space,* which we saw is created between those two separating arrows defining Two. Muscles are that agency within us that gives self-empowerment – playing out as our ability to create our "elbowroom", or to walk through that space between here to there. It's worth mentioning that this Twoness Principle is what gives muscles their yin-yang pair of proteins, actin and myosin. And too, muscles are exceedingly dependent upon another expression of this Twoness Principle: the *di*atomic $O_2$ residing in the *air* of our planetary, nature-honed space.

We saw earlier how Water relates to the nutritive system of the body – our blood and the visceral organs that allow the blood to vitalize a body. Because Water is so inherently connected to and powerful for the purposes of life, it would make sense that there are other places where its force operates in life. And so let us consider the connective tissue fibers composing much of our body. They rely on the power of Water to act in the biological bonds that build our ligaments, discs, facia, tendons, and organ structure. Being that in the metaphysical scheme of things Water is more primitive than Air, it is worth noting that connective tissue fibers like collagen and elastin are, befittingly, more primitive than the actin and myosin fibers that define all our muscles.

The fourth, and densest tissue type brings us to Earth's gift to our body. And that would be our bones; and indeed the whole of our skeletal system is our Earth system. It is not hard to appreciate how bones and Earth relate so well. Bones are hard, stable, sturdy like the earthy terra firma under our feet, like the solid particle-ness of rock, and the granular grit of gravel. In another paper I use this four element model to generate a "sacred architecture" to our human body as we notice how these same four principles holistically operate in the purposeful three dimensional shaping of our skeletal bones.

### 5.2 Physical diversity is generated but Oneness is preserved

Even as this all happens – as the world moves into physical diversity – it is important to see how there is still an underlying Oneness native to this physical cosmos. We call it a *uni*-verse for that purpose. As we become aware of the four elements, we can see this preservation of oneness in the fact that there is that *single* FAWE pattern propping up the entirety of the cosmos. The power of this oneness is projected forward as the light radiating out from stars like our sun, which create this light as *one* helium is generated from four hydrogens fusing together.

All of the cosmos, and all life, is powered by this same oneness force. The ancients' discernment of the four elements of nature as the expression of a cosmic pattern expressed their intuitive grasp of this deep cosmic oneness reality. They sensed that nature's four elements are ultimately about a singular cosmic pattern of four physicality-forging principles, with Fire's Oneness, or Unity Principle, leading the band.

And so it would be that both physicality is made possible *and* Oneness is maintained in this universe by there being *one* singular, unifying FAWE pattern that is holistically embedded into each and every part of the cosmos.

### 5.3 Light, space and orthogonals

With all this said, it is even useful to appreciate that the 90° angle so connected to four plays a vital role in the radiation of light – the propagation of this Oneness force. Light is an electromagnetic wave whose electric and magnetic fields are not only at right angles to each other but also at right angles to the direction of the wave's motion. This is mentioned to show that all of physics is built upon the power of four to create (and empower) these perpendicular angles – and all those consequential orthogonal relationships that do so much to frame the cosmos. From a different angle, even while light embodies Fire's Oneness force, for light to physically function the orthogonal relationships (those right angles) generated by the Earth Principle are needed.

Going further, the FAWE Element Hypothesis proposes that these spatial dimensions showing up in Fire's electromagnetic waves – and in the three spatial dimensions of the cosmos in general, relate to these same cardinal principles. It should be pointed out here that while we said earlier that space is the province of the Air Principle, we should in a holistic universe expect that each of the four universe-embedded principles would find their way to be present in something as important as is space. And so it is hypothesized that while the more solid (no open space) particle ideal is Earth's dimension, the Water, Air and Fire Principles give something of themselves to generate the universe's three spatial dimensions. Briefly, it proposes that the most primitive of these three, Water gives something of itself to the most primitive of life's axes – the lower energy side-to-side horizontal x-axis, which nature's water sloshes so well within. Air, and gas in general, rises *upward* away from a more earthen density below itself, hence the y-axis.

And appropriately, the forward direction, which light radiation travels, tells us that the z-axis would be incorporated as a member of Fire's Category 1 parts of our world. Within that context, there is reason to suggest that the axis relating to light's electric field's spatial axis is the cosmos' Air, or y-axis; the one related to the magnetic field is the cosmos' Water, or x-axis. The propagating wave travels in the z-axis, which speaks to what Fire is all about – going forward.

### 5.4 What and where, the ideal and the practical

In the same way that there is a polar opposition between Air and Water which was previously teased out, we now need to examine a more primal polarity – the one between Fire and Earth. Here we come

to those questions words of our human condition, *what* and *where*. For introductory purposes, think of it playing out in our human condition as the difference between "*what* is possible" and "*where* something is practical". The FAWE Element Hypothesis says that the Fire category of our human condition relates to *ideas*, which are ultimately about a what-ness – as in "what do you want to do?" – *what* idea do you have about what to do?

*Thoughts*, this model says, are about *how* to manifest that idea, the strategic planning that comes subsequent to the idea. And then comes the needed *why*; if you don't have enough of that, you don't get your foot out the door and accomplish the idea. If your idea is to go to the movies but *where* you ended up was at a restaurant, that movie idea did not reach manifestation, did it? Ultimately. then, as with everything in this universe, we need all four principles to enter into the equation in order to *physically* accomplish something.

There are other important ways that Fire and Earth relate beyond the question words of our human condition. We saw earlier that one is between "the ideal" and "the practical". Fire relates to the concept of principles and ideals. Still, with that said, even the lowest element – Earth – has in holism's way, a Fire component – an ideal. We've seen that part of Earth's ideal is to be practical, to deal with the mundane, here and now world we live in; and in our human way and our own style – to live a materially-rich life. Fire's ideal, on the other hand, is to be "idealistic" – to maintain that up-high "we are all One/Unity" ideal – which in this holistically inclined universe, requires Earth to physically manifest itself.

### 5.5 Fire and Earth, philosophy and technology

In a related way this hypothesis helps us to notice that philosophy is an expression of Fire operating in our human nature. Philosophy is arguably, the highest of human pursuits, concordant with Fire being the highest of these four principles. With that said, it is useful to appreciate the confluence of philosophy and spirituality. Both can be seen as members of the Fire category. From a four element perspective, spirituality may have more of a resonance with the oneness that Fire is ultimately about. Philosophy can include that, but often it relates more to understanding the what-ness of a particular subject, say optics or even parenting. In doing so it integrates itself with science as it teases out the underlying principles of a particular subject. The highest of philosophies would strive more to see the whole picture – to discern the what-ness of the whole universe – which is where it ties into what spirituality is more clearly about.

To get to Earth's goal of *physical accomplishment*, we move down the chain of question words, from Fire with its what-ness of the cosmos (and of what to do now), to h*ow* the universe came to be, which is science's job to figure out – as well as the everyday logic and strategies of our lives; and past the *why* of Water's religious, mystical, romantic – but often a more mundane stomach-growling, hormone-driven, emotionally bent input of energies – to the where-ness of it all.

Earth accedes to the actual conditions on the ground, and must deal with the physical here and now ramifications of all those high-falutin whats, hows, and whys that got us *where* we are right now. *Where* we are now is a fundamentally Earth-centric frame of reference. In this and other ways, Earth pushes us to be practical and physically engaged with the world. Like Earth, it drives us to work hard, to be sturdy and patient.

Still, *Earth* – with its focus upon physical accomplishment – depends upon Fire's goals, Air's strategizing, and Water's energizing passion all being locked together. The harder something is to do – the more resistance there is to the "locking-in" of a Fire-energized goal, idea, ideal, or creative aspiration into the physical world around you – the *harder* you have to work. Technology relates to our

ability to overcome that hardness. It comes as humankind finds ways to manipulate this Earth realm, which pushes our world toward being ever more materialistically bountiful.

It is worth mentioning that the Metal Principle of the Chinese speaks of the force behind technology. Seen in the dynamic of the metal sword, Metal can be thought of that tertiary principle coming as Earth's materiality is melded with Air's intellectual-scientific prowess. Technology continuously finds ways to thin out Earth – first as swords, later as transistors, now as nanotechnology-built consumer products.

### 6.0 A holistic view of walking – strengthening the Earth within

As discussed earlier, this hypothesis tells us our body's Earth element is our bones. The strength of our bones and the alignment of our skeletal system speak to the Earth Principle's goal of having a body capable of physical sturdiness and accomplishing physical and practical deeds. Along these lines, it is valuable to see how this comes together through a physical activity that is so basic for being a human, *walking*. Let us end this paper, then, as we ground its philosophical hypothesis into a simple activity we all generally do each day – walking.

Walking is, arguably, the most mundane, Earth-centric activity we as humans are meant to do daily. Toward this goal, remember again something important about our FAWE element paradigm – holistic patterns repeat on level upon level. In your mind's eye, then, can you envision that while *all* the bones of your body are the expression of Earth within you, this Earth is more concentrated in your *feet*? Not only are they at your bottom, where the Earth pole would act as a counter to the Fire pole of your brain up top, but also more than any other body region, a cross-section of your feet has indeed more bone concentration than any comparable cross-section.

### 6.1 The holistic hardness of our life

Now envision those feet: can you sense that within them, it is their *heels* that express the Earth element most intensely? If there is a place that we engage the ground most intensely, it is at our heels. And so, these patterns keep repeating; here we see it as all bones - the feet - the heels. Our heels are an exceedingly important part of our skeletal system – the Earth of our Earth. (Similarly, it would make sense that the prefrontal cerebral cortex is the most Fire part of our Fire-born brain). The suggestion I am making here is that our heels are an important place where the "Earth within us" – our skeletal system – is meant to properly engage the greater Earth below us as we walk.

With this said, let us ask a pertinent four element question: is Earth hard or soft? Unlike Water that we saw as soft, let us always remember that Earth is *hard* and sturdy as a natural element. This hypothesis suggests that we need to appreciate this hardness fact if we want to be (like Earth) sturdy as individuals. Therein lies the rub: as infrequently as many people walk in our modern era, they typically wear sneakers or other shoes with soft materials. For thousands of years – for all of our human history until about 60 years ago – humans were barefoot or wore hard leather heeled sandals and shoes that permitted this most Earth portion of us to engage the hardness of the ground below in a different way than we do today.

### 6.2 Piezo-electricity – Earth element energy

Interestingly, and quite appropriately, there is what can be called an "Earth element electricity" that is meant to be generated at heel strike, which relates to this hardness. How it works is that as the hard crystalline bone structure of your heels is deformed at the time of impact into the hard ground below, a piezoelectric current is generated. The reason that perimenopausal women are told to walk daily relates to this. It is well known that this micro-amperage direct current stimulates osteoblasts within bone to

produce more bone. Here as in other places, the four element way of thinking often presents a poetic way to understand what science might tell us, a "poetical science"; when the Earth within you (as in the heels of your feet) engage the greater Earth below you, an Earth energy is "translated" into you, strengthening your own Earth element – your bones – in the process.

A case could be made that people today are less sturdy compared to those only three or so generations ago – when shoes were only fabricated with the hardness of leather. The FAWE Element Hypothesis suggests that future research may find that that the piezoelectric currents stimulated by good hard heel strikes creates other positive benefits. It may convey something that increases our personal quotient of what Earth generates, sturdiness. And too, this heel strike may help our body's physiology beyond just bone density. It may be found that microtubules – each cell's structural skeleton (or cytoskeleton), *its Earth* – may be affected by this lack of "Earth energy", possibly contributing to cancer and Alzheimer's disease. This is mentioned because the telltale sign of Alzheimer's is the tau protein, which is a remnant of these earth-element microtubules, as they fall apart and degenerate within the neurons of our brain.

### 7.0 Closing: The four elements as a Rosetta Stone

In closing, the world is intelligible and knowable to us not only because there is a logic to it (that is built upon numbers), or because we and the world are connected in some watery, metaphoric, poetic way, or even because watery wave functions can collapse into particle-like observable data. It is more that even with the mind-boggling force of quantum physics thrown in, we are given the capacity to understand this world due to the fact that the same principles building the cosmos are embedded within us as well.

As this paper suggests, the reason this world is intelligible and open to our investigations and manipulations may very well be because our goals and ideals, our logic, passions, organs, muscles, senses, and the activities that prop up our lives resonate with a set of universe-spanning principles.

These principles relate to nature's four elements, which are in a sense a gift to us – a Rosetta Stone – for helping us to understand our body, the world we live in, and the greater cosmos in more intelligent, beautiful and productive ways. Nature's four elements are, in a sense, the intermediary between ourselves and the greater cosmos. While it was with them that science and philosophy began, we may find that even today with ever more complex systems of understanding devised, the four elements' value to us may not be over.

In our attempt to make the world more intelligible and more meaningful we would be wise to look at them and the pattern they together generate again – in our modern-most of times. In that process we may notice an elegance to the universe, seen in the almost infinite ways this foursome of principles have been brought so productively together – here on our planet and in our human condition.

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See table that follows for a summary of some of the proposed constituents of each of these four categories

| | Category 1 | Category 2 | Category 3 | Category 4 |
|---|---|---|---|---|
| **Mathematical Number** | One | Two | Three | Four |
| **Geometry** | Circle, sphere, point; arcs | Line; vectors | Triangle | Right angles; Orthogonals |
| **Principle; Source of –** | Wholeness to a system; Order energy | Yin-Yang oppositions; Space | Balance; Dynamic interconnections | Physicality; Particle-ness Granularity |
| **Natural Element** | Fire (the sun); Light energy | Air (atmosphere); Oxygen | Water | Earth (solid ground under our feet) |
| **Density-State of Matter** | Plasma | Gas | Liquid | Solid |
| **Fundamental Force** | Electromagnetism | Strong Force | Gravity | Weak Force |
| **Physics' Model** | Special Relativity | Quantum Mechanics | General Relativity | Newtonian/Classical Mechanics |
| **Energy:Matter (provisional)** | Initial Big Bang Energy | Dark Energy | Dark Matter Quarks | Ordinary Energy and Matter |
| **Physics' Kinematics** | Acceleration | Speed | Mass/Momentum | Friction Resistance |
| **Technology: Newton's 3rd Law** | Thrust | Lift (Airfoil Action) | Turbine Action | Fulcrum Action |
| **Base Level Foursomes** | Four Cosmic Principles | Four Forces of Nature | Four Mathematical Structures (shapes) | Four Atomic Level Components |
| **Spatial Dimensions** | Z-axis | Y-axis | X-axis | "Particle-ness" Inside:Outside |
| **Atomic Scale Components** | Photons | Electrons | Protons | Neutrons |
| **Biological Tissues** | Nerves | Muscles | Ligaments (and other connective tissues), Blood, Organs | Bones |
| **Physical Chemistry; Organic Chemistry** | H<br><br>C-H | $O_2$, $N_2$<br><br>C=O | $H_2O$<br><br>C-OH | Carbon & Silicon<br><br>C=C |

| **Human Question Words** | What | How | Why | Where |
|---|---|---|---|---|
| **Human Realms** | Philosophy/Spirituality | Mathematics, Science | Arts, Poetry, Religion, Mysticality | Technology |
| **Human Mind** | Ideals/Ideas | Thinking, Intellect, Logic | Emotions, Sentiments Pleasure, Fun, Meaning, Passion | Physical Action, Pragmatism, Accomplishment |
| **Senses** | Vision | Hearing | Smell, Taste | Touch, Proprioception, Physical Balance |