

Article

## Physics & Cosmic Order II: Introducing the System

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### ABSTRACT

The quest for a theory of everything requires that there must be such a thing as universal wholeness implicit in the cosmic order. As an expression of the cosmic order one universal System determines how experience is organized and integrated. This System must integrate phenomenal experience by reconciling the diverse universe of our common experience with unity. This requires degrees of universality hierarchically subsumed in discrete levels of elaboration within itself. The One System subsumes an open ended series of higher Systems nested within it. We may thus speak of Systems 1, 2, 3, 4,... n,... where each higher system elaborates on the lower systems that subsume and transcend it. Since the System must delineate the nature of space and time there is no accurate way to describe the System in language within a space-time context. It can only be structurally represented with respect to the inside and outside of phenomena as active interfaces that we commonly know as the surfaces of things. We can never know the inside to the exclusion of the outside or vice versa. All we can know in phenomenal experience is active interface processes between them. The One System can thus be structurally represented from two perspectives, one passive (from outside active interfaces looking in) and one active (from inside active interfaces looking out). System 1 represents universal wholeness. It requires that all phenomena consist of active interface processes that share both a universal inside and a universal outside. This rift in universal wholeness between inside and outside requires that System 2 must elaborate upon System 1 with two related active interfaces to account for multiplicity. One interface must be universal and unique while the other is particular and many. System 2 requires a fundamental interdependence of particular and universal aspects of experience in alternating objective and subjective orientations with an active transformation between them. This threeness requires a fundamental discontinuity in the projection of space-time phenomenon. It is for System 3 to elaborate further.

**Key Words:** Cosmic Order, physics, universal System, active interface, inside, outside.

### Theories of Everything:

We all face a common question: how is experience organized and integrated? We all know there are many provisional answers. Nevertheless we each have a theory of everything. We each have a worldview that we implicitly believe is universally true for all people for all time. We need a holistic worldview to integrate our experience, even if we believe that there is no transcending meaning or purpose to life and that we are all driven by primal desires. Even if we believe that we face total psychic extinction at death we implicitly believe this is true for every sentient

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creature that has ever lived anywhere in the universe. We do not believe that we alone are singled out for oblivion. And we generally fail to see the contradictions implicit in our theory of everything. We can not function without a perceived integrating context that we implicitly relate to. All cultures and sub-cultures need one too. Science also seeks a theory of everything.

But do we really want a theory of everything? Would answers in left brain language satisfy the emotional quest in our hearts or be satisfying to our right brain mute intuitive perceptions? Can science write a new bible for all people for all time? Would it be a guide that we could follow to live by? Or would we rather have a universal methodology that would render the structural dynamics of the creative process transparent, and thus allow us to better interpret our thoughts and behavior in more positive ways whatever the context?

Despite our differences we have learned to cope together in various ways, although history painfully reveals that our solutions are often sadly lacking. All the same we have gathered an abundance of knowledge in the process that suggests a few salient features about the nature of phenomenal experience in general—about the cosmic order. We can make certain general observations about how it is structured to work.

We know that there must be some kind of system to the organization of experience. We seek out natural laws because we need universal principles of some kind to develop our sciences and facilitate rational techniques of behavior. We do this with an intuitive faith that the system is unique, not many, for the one *System* embraces many in the cyclic patterns that we see recurring in diverse areas of experience. Phenomenal experience by its nature relates to itself. There is a structural self-similarity that pervades the whole of phenomenal experience.

Philosophers of science have recognized this too. For example Bertrand Russell, in developing his logical atomism, asserts that it depends on the isomorphism of the structure of an ideal language and of the structure of reality.<sup>1</sup> The position taken here is that there is an isomorphism that is implicit in the structural dynamics of all phenomena through which experience relates to itself, also lending language its meaning. This does not imply that the whole of experience is reducible to language, since language is essentially a social endeavor dependent in large measure on a basis of shared experience within a common framework of understanding that socially evolves. The word isomorphism is generally replaced with the term self-similarity here.

### **The System as an Expression of the Cosmic Order:**

The one System is an expression of the Cosmic Order. But one System must allow for all possible varieties of experience in the way that it integrates diverse elements as a whole. Since it must be all inclusive, it cannot be based on some ideas to the exclusion of others, while it must allow for mutually exclusive variants of phenomenal experience. It is structural as opposed to behavioral.

The System is not something that can be contrived in language. It is not something that we can logically construct with our powers of reason. It is not something we can create. We can only

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<sup>1</sup> Russell B. *The Philosophy of Logical Atomism* (1918), reprinted in *Logic and Knowledge*, Marsh RC, Ed., London, 1956.

discover it. It can reveal itself in phenomenal experience and we can have intuitive insights into the possibilities it offers. We can intuitively see that the one System must embrace the multiplicity that we see in a perpetual state of change around us. We may thus expect a ubiquitous interdependence between universal and particular aspects of experience. As noted before this is an ancient theme.

The reconciliation of One and Many requires that the System must be hierarchical. We can recognize that hierarchies pervade experience. We find levels of sentient awareness from the plants, to the invertebrates, to the vertebrates, to man, that clearly reflect a hierarchical capacity to respond to and cope with the environment. There are hierarchies everywhere we look. Our social and economic organizations have hierarchical structures. The heavens are hierarchically structured from galaxies to suns, planets and moons. There are hierarchical structures implicit in our own anatomy. The human nervous system directs the muscles that animate our skeletal architecture.

These few observations will form a starting point to delineate the System, not from the standpoint of a logical construction, but as an intuitive guide consistent with experience. Although the System must be self consistent, it cannot acknowledge a logic more fundamental than itself, if it is to be the one all embracing System. Neither can it be conceived within the constraints of space and time, since this would impose many *a priori* assumptions. Space and time are concepts derived a posteriori from the world around us and can not properly be raised to a priori status to explain creation.

The approach here originates from a series of cosmic insights,<sup>2, 3</sup> which accounts on the one hand for the lack of direct references to the System, while on the other hand relating to a plethora of ideas expressed throughout history and far too numerous to attempt tabulation. Virtually every contributor to the world of ideas has glimpsed in some way some aspect of the System. The endeavor here is to illustrate a progressive structural development that is not itself dependent on language but from which the meaning in language derives. It appeals directly to intuitive insight. It is consistent with the structural dynamics of experience in such a way that it can offer pragmatic direction and application to the physical, biological and social sciences. It is a universal methodology that can complement traditional approaches to the sciences.

We can start by saying that the System includes distinct hierarchical levels of elaboration within itself. We can designate these discrete levels as *Systems 1, 2, 3, 4, ...n, ...* such that each successive system is both transcended and subsumed by all of the systems that precede it. In this way the System allows for any degree of elaboration within itself, while remaining one System, designated as System 1. Higher Systems must reconcile successive levels of multiplicity with unity.<sup>4</sup> In this way the one System is an expression of how the Cosmic Order works in a manner consistent with phenomenal experience.

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<sup>2</sup> Campbell R. *Fisherman's Guide: A Systems Approach to Creativity & Organization, Part 4*. Boston: Shambhala, 1985.

<sup>3</sup> Campbell R. [http://www.cosmic-mindreach.com/Cosmic\\_Insight.html](http://www.cosmic-mindreach.com/Cosmic_Insight.html), 2007.

<sup>4</sup> Campbell R. Introduction to the System:  
[http://www.cosmic-mindreach.com/System\\_Intro.html](http://www.cosmic-mindreach.com/System_Intro.html), 2005.

Attempts have been made to systematize the cosmic order throughout history, beginning with the creation myths of aboriginal cultures. Efforts became much more rigorous with the introduction of writing, number theory, and systems of measurement (c. 3000 BC) which gave rise to the sacred geometries that built the pyramids. The Pythagoreans were perhaps the last of an ancient tradition that perceived the cosmic order as an expression of number. The tetractys, employing the numbers from 1 to 4, expressed the ratios of the musical scale and was also related to the decimal system, the sum of the digits adding to 10.<sup>5</sup> The System as introduced here delineates the roots of meaning from which the significance of languages, mathematics and numbers derive, not the other way around. Remnants of ancient traditions have persisted to the present day, with various attempts by philosophers and scientists to reintroduce the significance of number in theories of the cosmic order, for instance Johannes Kepler's dogged although unsuccessful attempts to discover a harmony of the spheres based on Pythagorean ideals. Modern science is much indebted to the spirit of the ancients rekindled in men like Kepler, Newton and others.

J. G. Bennett, developed a Systematics based on the progression of the natural numbers and incorporating concepts of isomorphism.<sup>6</sup> Although the delineation of the System bears no correspondence to Bennett's Systematics, the latter nevertheless offers considerable heuristic value and encouraged the author to make this effort following profound cosmic insights that demonstrated how the cosmic order works.

### **System 1 and Universal Wholeness:**

System 1 transcends the whole of creation, the whole of history, the whole of space and time. It is an expression of *universal wholeness*. It can not manifest as a physical thing itself. That would define a boundary to it in space and time. System 1 must nevertheless specify boundary conditions or there could be no phenomena in experience.

System 1 specifies universal boundary conditions with an active universal inside relating to a passive universal outside across an active interface between them. This active interface cannot be a static boundary or it would isolate an inside from an outside. It would not be one System relating to the whole cosmic order. It would be two mutually isolated arenas, self contradictory and forever irreconcilable. There must be interaction between a common inside and outside across an active interface.

The active interface reveals itself in phenomenal experience as a boundary or active surface between a center inside and a periphery outside. This requires that all phenomena must share both a universal inside and a universal outside. All we can know is the active interface between them. We can not know the universal inside or the universal outside as separate things in themselves. We cannot know one without the other.

When we look out at the night sky, we see a common peripheral outside to which all things relate. We see separate stars, the moon, meteorites, clouds, and so on with boundaries and we think of

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<sup>5</sup> Guthrie W. Pythagoras and the Pythagoreans. History of Greek Philosophy, Vol. 1, Cambridge, 1962.

<sup>6</sup> Bennett JG. The Dramatic Universe. London; Hodder and Stoughton, 1956 (Vol. 1), 1961 (Vol. 2 ), 1966 (Vols. 3,

them as existing in empty space. But space itself is not a thing with a boundary. This universal outside is not something we can know as a thing in itself. In the absence of phenomena that we sense in some way with active surfaces space itself is as elusive as a ghost. Our sense perceptions themselves constitute active interface processes with the environment. For example light from the sun is refracted by particles in the air that make the sky blue and further reflected by trees and mountains or other objects made of atoms. The reflected light that betrays physical shapes is picked up by the retinal cells in our eyes and further integrated into images in our mind by more active interface processes in our nervous system.

We also intuitively sense there is a common center or inside to all phenomena. If there is no universal inside then separate things could have no common characteristics. Atoms and molecules of a kind are known to have universally identical characteristics. Every particular thing is one of a universal kind. The human genome is universally shared by all people. And we experience a common center in our mutual humanity. We can empathize with one another and feel one another's joy and pain. The same is true to varying degrees with our animal ancestry. We share a range of ideas and emotions with animals, especially the higher mammals, and even insects to some extent. A cockroach senses one's intention to kill it. The whole cavalcade of phenomena that we see passing may be seen as experience in perpetual change across active interface processes between a common inside and outside on many intermediate levels that are both subsumed and transcended by System 1. System 1 exhibits a universal inside and outside across an active interface and thus prescribes this characteristic to all phenomena in a subsumed nested hierarchy of discrete higher Systems.

### **Structural Representation of System 1:**

The universal inside or common center is active and it relates to the universal outside or passive periphery across an active interface between them. This may be represented graphically from two perspectives, one passive and one active. Between them one can intuitively grasp the structural nature of System 1.

The passive perspective (from the outside looking in), and the active perspective (from the inside looking out), are shown below in Figure II-1. The active universal inside is represented by light, **L**. The passive universal outside is represented by darkness, **D**. Light is thus illustrated relating to darkness across an active interface between them. In a more general sense the active interface involves energy processes or communication of all kinds between a universal inside and a universal outside. The yang and yin of Taoism illustrates the relationship between an active and a passive aspect of experience, so beautifully expressed in the poems of the Tao Te Ching.<sup>7</sup>

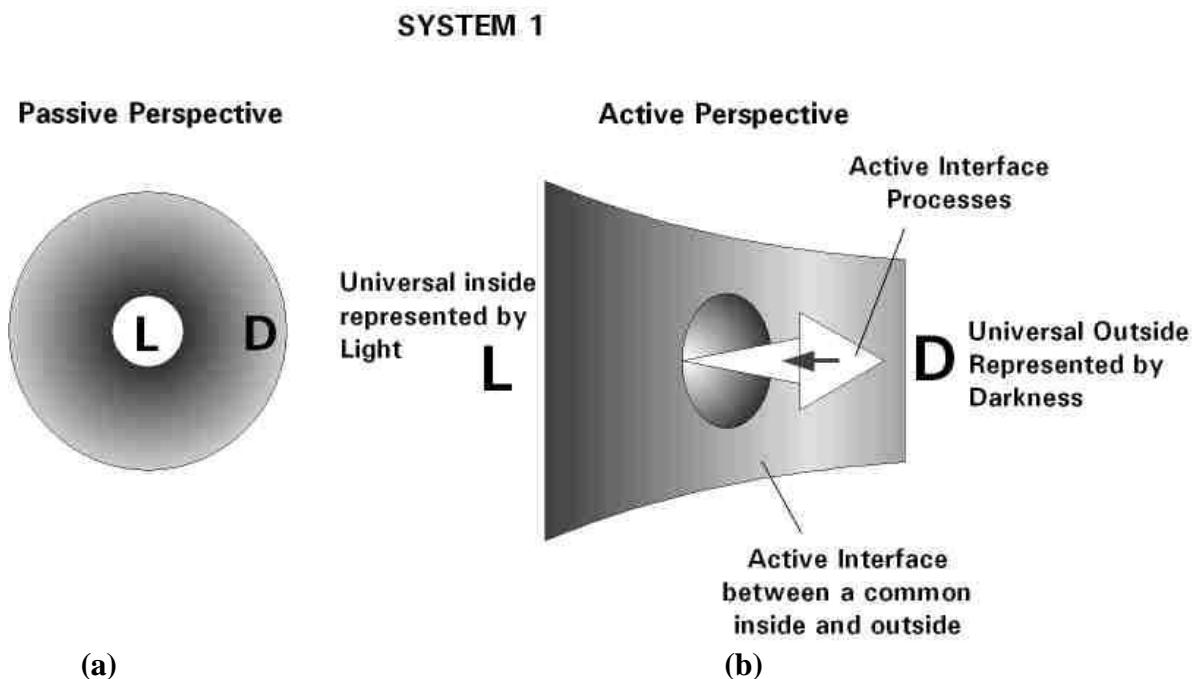
We see this confirmed in experience. Life giving energy comes to us from atomic processes within the sun. Energy is captured by plants within the molecular bonds of sugar to support the biosphere. It is the energy we digest inside our bellies that allows us to think and mobilize our bodies in response to our environment.

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<sup>7</sup> Blakney RB, trans. Tao Te Ching: The Way of Life, NY., Mentor Books, 1955.

The active perspective represented in Figure II-1(b) is most important. The Passive Perspective (Figure II-1(a)) simply helps us to better visualize the active representation in higher Systems.

We are concerned with intuitive insight into the structural dynamics of phenomenal experience. The creative energy disseminates from the active center, as shown by the white arrow in Figure II-1(b), and there is reflux back toward the center, as shown by the black arrow. The process of reflux is less obvious in the physical universe as a whole, for it often occurs through the hierarchies involved, on a scale that we are only beginning to understand. We see this in the transformation of the atmosphere and the geological evolution of the continents over the past few billion years. Plants and invertebrates have influenced this process by the deposition of carbon, which in turn has influenced the internal dynamics of the planet and its electromagnetic character.<sup>8</sup> In other words, organic life cycles arising from the planet in response to the sun relate back to transform the planet. There is likewise evidence for stellar reflux through the galactic center.<sup>9</sup> This is consistent with cyclical dissemination (efflux) and return (reflux) on many levels between one universal center and one universal periphery.



**Figure II-1**

### **A Rift in Universal Wholeness:**

The concept of universal wholeness, as represented by System 1, requires an interdependent twoness as a level of subsumption within it. We cannot conceive of undifferentiated oneness

<sup>8</sup> Campbell R. *Fisherman's Guide: A Systems Approach to Creativity and Organization*, New Science Library (Shambhala), Boston, 1985.

<sup>9</sup> Bok BJ. *The Milky Way Galaxy*, Scientific American, 244, March 1981.

without distinction or attribute of any kind. Meaning slips away from us. In order for there to be a subjective and objective aspect to things we must be able to distinguish separate active interfaces as boundary conditions of phenomena. We identify things as separate surfaces. This requires two active interfaces, one universal and unique and the other particular, representing many. Manyness can only find reconciliation with oneness in this way.

This means that there is a fundamental *rift in universal wholeness* between the *universal* and the *particular* aspects of phenomena. It is this rift in wholeness that gives rise to the nested higher Systems that constitute the creative process. The creative process endlessly seeks to mend the rift in wholeness. As humans we likewise seek a unified worldview that we can creatively relate to in order to integrate and make sense of our experience.

### **Grand Unified Theories and the Big Bang:**

Scientific attempts to resurrect universal wholeness from an atomized universe through the invention of Grand Unified Theories of various kinds fail to acknowledge that phenomena share a universal inside. They implicitly assume that physical phenomena share a universal outside only. Atoms, star systems and galaxies are believed to be embedded in a spacetime continuum consistent with General Relativity. Given the red shift of distant galaxies this extrapolates back to a Big Bang, when the universe, including the spacetime continuum and the laws of physics, spontaneously came into existence from nothing.

The Big Bang was the universal unifying event. Everything since has been determined by seeds inherent in that initial condition of infinite density. Ever since then the thermodynamic clock has been running down. With the formation of our solar system the evolution of biological life on Earth has likewise been a causal molecular accident devoid of transcending meaning or purpose. We have no subjective mind inside that transcends the externalized biochemical processes that constitute our physical bodies. All life is reduced to physical processes. This bleak scenario essentially leaves us spiritually and morally bankrupt, mere robots of accident driven by primal animal appetites. Currently there is simply no alternate paradigm that can bridge the gulf between the practice of objective science and our subjective spiritual and ethical concerns.

### **Quantum Mechanics and the Schism in Physics:**

The development of quantum mechanics introduced a dichotomous division between the practice and the philosophical interpretation of physics. Meta languages developed in the practice of physics based on how the sophisticated language of physics has come to be used, and not based upon insight into the nature of reality. Consequently the practice of physics makes certain predictions in a limited range of contrived experiments that allow a growing number of diverse metaphysical interpretations.

Moreover the metaphysical interpretations can never be directly confirmed in phenomenal experience of any kind. No one has ever seen probability waves, or infinitesimal strings, or dark matter, or parallel universes, or the Big Bang. No one ever will. The meta-languages that science has evolved are not required to relate to truth. They are not required to find universal confirmation

in direct phenomenal experience. They are languages that allow the practice of experimental science.

This applies to experiments of the kind made in particle accelerators. For these experiments the Copenhagen Interpretation is the default interpretation and it invites alternate interpretations that tend to become belief systems. Science needs an integrating framework of understanding to relate to, as with all cultures throughout human history. A growing variety of metaphysical interpretations of the same experimental results are often hotly debated in the culture of physics.

Early in the development of modern physics the legendary Bohr-Einstein debates highlighted fundamental conflicts between General Relativity and Quantum Mechanics. The latter was itself born in conflict between Heisenberg and Schrödinger<sup>10</sup> and conflicts over interpretations continue.

Einstein's criticism of the direction that physics took is exemplified in the following quote: "I see on the one hand the totality of sense-experiences, and, on the other, the totality of the concepts and propositions which are laid down in books. The relations between concepts and propositions among themselves and each other are of a logical nature, and the business of logical thinking is strictly limited to the achievement of the connection between concepts and propositions among each other according to firmly laid down rules, which are the concern of logic. The concepts and propositions get "meaning," viz., "content," only through their connection with sense-experiences. The connection of the latter with the former is purely intuitive, not itself of a logical nature. The degree of certainty with which this relation, viz., intuitive connection, can be undertaken, and nothing else, differentiates empty fantasy from scientific "truth."<sup>11</sup>

It is noteworthy that the year before he died Einstein wrote to his friend Michele Besso, quote: "I consider it quite possible that physics cannot be based on the field concept, that is, on continuous structures. Then nothing remains of my entire castle in the sky, including the theory of gravitation, but also nothing of the rest of modern physics."<sup>12</sup>

The Big Bang is nevertheless preached to the public as gospel, despite serious philosophical obstacles. An exclusively objective view divorces us from our own understanding placing us outside creation. It leaves us bereft of transcending values to guide our behavior apart from primal appetites, conditioned belief systems, and irrational fears that tend to confirm them.

## **The Universal Center and System 2:**

The *only* alternative to believing that events take place in a universal common outside or spacetime continuum is to also acknowledge a universal center to all phenomena. This is a universal requirement for both a subjective and objective aspect to all phenomena consistent with System 1 and to a rift in universal wholeness. All we can know is active interface processes between an inside and outside. This brings us to System 2.

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<sup>10</sup> Cassidy DC. *Uncertainty: the Life and Science of Werner Heisenberg*. New York: Freeman HW, 1991.

<sup>11</sup> Albert Einstein (written at age 67). Schilpp PA, trans. *Autobiographical Notes*. Chicago: Open Court, 2007.

<sup>12</sup> Pais A. *Subtle is the Lord: The Science and the Life of Albert Einstein*. Oxford: Oxford U Press, 1982:467.

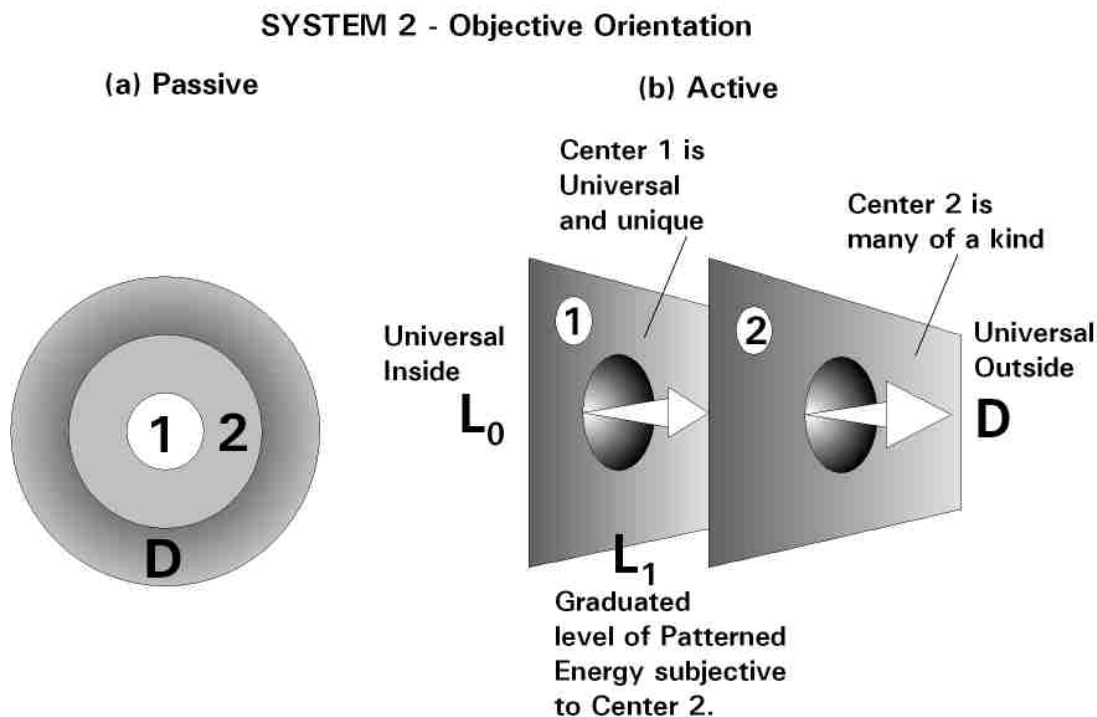


System 2 is represented by two active interfaces. Each shares a common universal inside with respect to a common universal outside, as required by System 1. The universal interface is unique. It is a manifestation of System 1 acknowledging Other than Self. It transcends the particular interface which represents many of a universal kind. The universal interface is an archetypal pattern of Universal Being that each particular interface can structurally relate to in *only* two possible alternate ways.

Since active interfaces exhibit active centers, it will be convenient to call them centers. System 2 thus consists of two centers: center 1 (C1) and center 2 (C2). The two possible ways in which two centers may relate to one another with respect to a common inside and outside represent two alternate orientations. One is *objective* and one is *subjective*.

### The Objective Orientation of System 2:

In the objective orientation illustrated in Figure II-2 the universal interface is inside the particular interface. The universal interface is designated as *Center 1* since it represents a common center to all particular interfaces represented by *Center 2*. Together they relate objectively outwards to other particular Centers 2. Other particular Centers 2 are perceived in a common outside designated as darkness D.



**Figure II-2**

The objective orientation illustrates that center 1 is within center 2. Both share a common center in light,  $L_0$ , and both relate objectively out toward darkness,  $D$ . In Figure II-2(b) it can be seen that light disseminates from within center 1 (C1) through center 2 (C2) to the universal outside

designated as darkness D. A graduation of patterned active energy between them is designated  $L_1$ . As active interfaces centers have active partitioning characteristics between a subjective inside and an objective outside. C1 is universal and unique, while C2 is particular and manifold. C2 represents any number of particular centers in the objective world. Everything shares a common active center inside and a common universal outside in darkness. This is consistent with System 1.

We know, however, that not all particular things are the same. There are degrees of universality among them. All living creatures in the biosphere share the same DNA language, but we are not all trees, nor are all trees the same species, nor do all trees of the same species grow the same size and shape. Although we are beginning to see that particular centers subsume hierarchical levels within them that are distinctions of kind, the only distinction of kind that is explicit in System 2 is that between the universal and particular aspects of experience in general. This makes it a very fundamental characteristic of experience. System 2, like System 1, transcends and subsumes the whole of space-time. As particular human beings this requires that we seek universal wholeness as a condition of living. We need a universal worldview to relate to.

### **The Subjective Orientation of System 2:**

In the alternate mode of System 2, called the subjective orientation, C2 turns around to face C1. It will be said that C2 does a perceptual transposition. It turns inside out, so to speak, now standing apart from itself. It now faces C1 that was formerly within it and through which it still derives its energies since they share the same universal inside. C2 now objectively faces the universal center of the universe distinct from itself. It is nevertheless a transcending subjective orientation in which C2 explicitly shares in the archetypal nature of C1 as universal Being. C2 sees C1 as System 1 from the subsumed perspective of System 2. This is completely distinct from the objective orientation where many C2s are open to a common outside that they share.

One may call the universal center God, or Allah, or Brahman, or universal intelligence, or universal values, or the Tao, or the Dharma, or the Great Manitou, or whatever. A name does not determine its nature. It is what it is. It is the universal active interface manifest within all creation, although it does not exist in space and time. C1 is an open and unbounded center in this respect and thus not constrained by the limitations of space and time. C2 is open and unbounded also albeit within the transcending context of C1. C2 can perceive objective phenomena in both orientations, but in the subjective orientation phenomena can only be orchestrated at the discretion of C1.

C1 is the universal center of all phenomenal experience. It can not exist as a physical thing because that would mean that universal wholeness would have a fixed physical boundary which would negate the very nature of universal wholeness. The universal C1 transcends and subsumes physical creation. In the subjective orientation this means that one particular human being can see the universal center of the universe face to face. This must be a private one-to one experience if universal wholeness is to be preserved. Neither interface can admit of more than one other active interface in this orientation if universal wholeness is to be preserved. The subjective orientation is One, whereas the objective orientation is Many. The subjective orientation is a profound realization that bridges the rift in universal wholeness from which all creation proceeds. This is a private realization, not a theory of everything.

### SYSTEM 2 - Subjective Orientation.

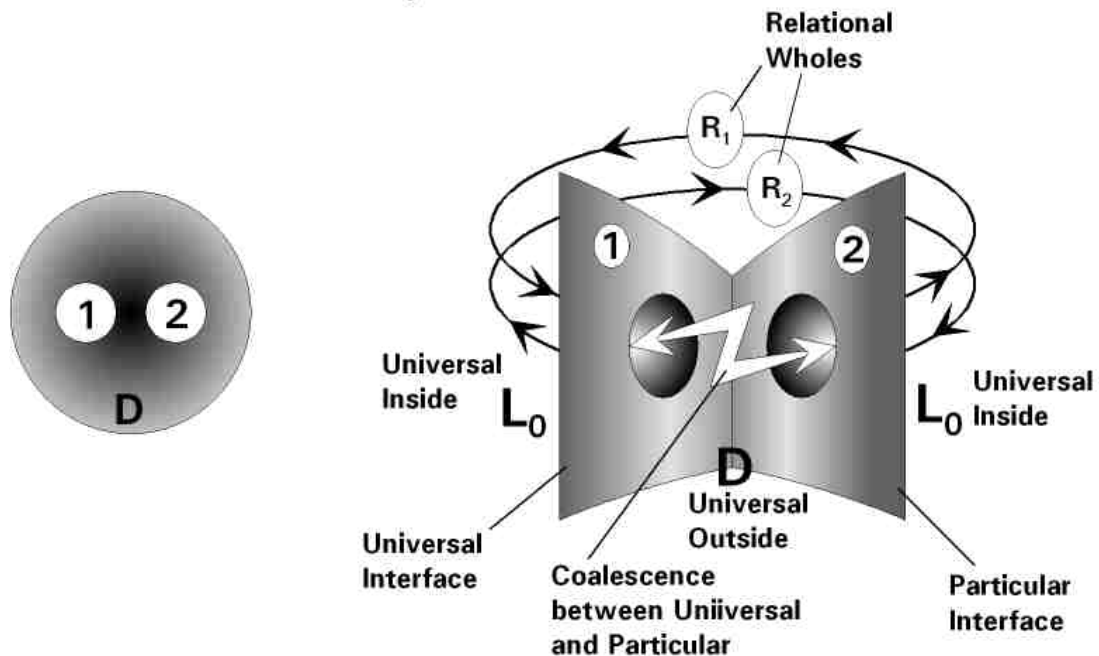


Figure II-3

The universal center can make itself directly knowable to a particular human being. This distinguishes it from blind religious belief founded on dogma. This work comes directly from an unusual series of cosmic insights of this general kind transcending and subsuming the whole of creation.<sup>13</sup> This is not an intellectual contrivance nor is it an empty claim for intelligent design as will be shown in what follows. The *objective* relationship between C1 and C2 facing one another in a *subjective* context is illustrated in Figure II-3. The subjective and objective aspects of phenomenal experience begin to compound within themselves.

In the subjective orientation of System 2 one particular interface C2 can only share phenomenal experience with the universal interface C1 at the latter's discretion. All active communication is one way, from the universal C1 to one particular center C2. This must be so as a condition of universal wholeness. The two are coalesced as One but are two.

Normal organic feedback to the particular human being's consciousness is totally suspended. The particular human being can entertain no independent thoughts, ideas, or actions apart from C1. This bridges the Rift in Universal Wholeness. Since this is the ultimate experience of universal truth it implicitly requires that the universal interface is the manifestation of universal values. The particular center C2 realizes that the universal center C1 is the living manifestation of truth, unity, harmony, love, compassion, justice, mercy, and cosmic order. Universal values are the ultimate reality manifest in Universal Being.

<sup>13</sup> Campbell R. *A Cosmic Insight*, 1985.  
<http://scigod.com/index.php/sj/article/view/225/260>

If this is not so there can be no such thing as values that transcend our short sojourn here on Earth. There can be no transcending meaning or purpose to life. Everything would be the result of blind objective happenstance as in the exclusive outside option assumed by science. In that case we may as well seek to gratify our appetites however gross they may be, so long as we can get away with it. There would be no real basis to truth or justice or order or compassion or mercy or love. Values would become reduced to arbitrary personal preferences according to how we have become conditioned to use language and behave. A scientific pursuit of truth would be meaningless and futile.

In the passive mode it is clear that C1 and C2 are mutually distinct as separate centers, yet they must relate to one another as one. They are an elaboration of System 1. In the active mode the two centers are shown mutually perceived as one by the double headed **Z** arrow. They both share the same inside, **L<sub>0</sub>**, and the same peripheral darkness, **D**, outside. It will be said that they are *coalesced* as one, although they are two. They must relate both as two and as one.

Through this subjective mode of System 2 universal wholeness is known. At the discretion of C1 there is a countercurrent communicative exchange between the two centers to complete their mutual identity, since they share the same outside and inside. C2 shares in the Universal Being of C1 at the discretion of C1. This is illustrated by the relational wholes **R<sub>1</sub>** and **R<sub>2</sub>**. The rift in universal wholeness that gives rise to the creative process is bridged. Life returns to the subjective orientation in order that universal wholeness C1 can realize itself through the long climb back up the levels of sentient awareness implicit in the evolutionary process.

### **Subsumed Hierarchies Implicit Within the Particular Center:**

System 1 indicates that all things are in a perpetual flux of dissemination and return. The objective mode of System 2 elaborates on the dissemination, while the subjective mode of System 2 elaborates on the return. Efflux and reflux find a mutual balance.

In the objective orientation, C2 is manifold. It represents the quality of all particular things relating outward toward peripheral darkness. This particular quality is inherent in three dimensional separate things as we normally perceive them “out there.” But C2 like C1 is an open center as opposed to a closed center with three dimensional boundaries. Closed centers are defined by System 3 which elaborates on System 2 and makes the realization of universal wholeness possible, as will be shown. System 2 transcends and subsumes space and time as prescribed by System 3.

For example, in the objective orientation C2 can represent the universal quality of humanity that is within the physical form of each human being. It can represent the genotype of humanity as an archetypal organized energy pattern. It can also represent the personal integrating archetype of a specific human being, subsumed by the human genotype. There is thus a hierarchical organization implicit within C2. This is generally consistent with Jung’s theory of archetypes.<sup>14</sup>

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<sup>14</sup> Jung CG. The Archetypes and The Collective Unconscious. In: The Collected Works of C. G. Jung Vol. 9 Part 1. London: Routledge, 1980.

This is also consistent with System 1, for each entity as represented by C2 contains C1 and we intuitively sense that somehow there is an implicit wholeness to experience, even though it is presented to us as a multiplicity of separate things. We cannot avoid the need for a holistic worldview to integrate experience.

In the subjective orientation a further qualification arises. C2 now relates directly to the universal C1. This is not something that can be collectively perceived by a multitude of separate particular centers. It would not be consistent with universal wholeness. On the one hand C1 is unique, while on the other C2 may represent species, or individual members of species that subsume animating archetypal behaviors within them. As pointed out previously C2 is Many in the objective orientation and One in the subjective orientation. There can hardly be a direct mutual identity between C1 and a multitude of individual members of a species represented by C2. The identity of things must be mediated. C2 can thus encounter another face in the subjective mode that is *not* Many. This face is on the inside of transcending levels within C2 in the same way that a universal human archetype or human genotype is within every human individual.

This human archetype is a Universal Human Being associated with the evolution of humanity on the planet. This can be known directly in a subsumed subjective mode of System 2 when the C2 of one human individual faces C1 as the universal human archetype. It is an experience distinct from facing the transcendent Universal Being of the universe. The human individual retains a capacity for independent discretion and thought in the face of the universal human archetype. A description of such an experience is given by the author in a website article<sup>15</sup> and also in a journal article.<sup>16</sup> The human archetype is the suffering face of humanity.

This indicates why there must be degrees of universality hierarchically organized. Universal wholeness implicitly requires subsuming levels of organization within it. This requires that the subjective face of a particular center 2 must be holistic, not manifold, if the *idea* of universal wholeness is to be known. The relationship of the universal to the particular is essential to the identity of anything.<sup>17</sup> It is noteworthy that this self-similar characteristic of all phenomena is a fundamental tenet of Gestalt theory.<sup>18</sup> The subjective mode is private, largely mute, and intuitively perceived. Each of us values the independent privacy of our mind. It is through private reflection that we intuitively seek a holistic worldview.

### **The Universal and Particular as Fundamental to Being:**

This basic pattern of two orientations, one subjective toward the universal center inside, one objective toward the universal periphery outside, has been a prominent theme since the beginning of rigorous thought. For example Parmenides (born c. 515 BC.) was one of the most influential of the Pre Socratic philosophers. In the fragments of his poem, *On Nature*, that have come to us Parmenides describes a journey to the Goddess of Justice, where he learns of the Way of Truth, and

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<sup>15</sup> Campbell R. *A Cosmic Insight*, 1985.

[http://www.cosmic-mindreach.com/Cosmic\\_Insight.html](http://www.cosmic-mindreach.com/Cosmic_Insight.html)

<sup>16</sup> Campbell R. <http://scigod.com/index.php/sgj/article/view/225/260>

<sup>17</sup> Kohler W. *Gestalt Psychology: An introduction to new concepts in modern psychology*. NY: Liveright, 1947.

<sup>18</sup> Rock I, Palmer S. *The Legacy of Gestalt Psychology*. *Scientific American*. 263 No. 6, Dec. 1990.

of the Way of Seeming. These two ways are similar to the two modes of System 2. The universal center manifests the wholeness of everything that is, having no generated origin and having no termination. The Way of Truth is to see this, as in the subjective mode where one particular C2 perceptually transposes to face C1. In the way of seeming, C2 is oriented outward to the objective world where all is perceived consisting of Fire and Night (light and darkness), offering an account of the origin of stars, planets, and all things on earth. The phenomenal world is thus granted a degree of transient reality, wherein the opportunity is provided to know the Way of Truth as Unity.<sup>19, 20</sup> These two ways became interpreted in the *Timaeus* by Plato as “what always is and never becomes,” and “what is continually becoming but never truly is.”

In his Theory of Forms Plato also recognized that universal archetypes determine the identity of particular examples of them. We recognize an oak tree by its relation to a transcendental archetype of the oak species. Although his pupil Aristotle rejected the mystical transcendental character of Plato’s archetypes, insisting that the quality of a thing was concretely implicit within the thing itself, nevertheless the universal archetype also remains implicit within the thing itself. Jung’s Theory of Archetypes and the Collective Unconscious is closely related.

The hierarchies implicit in experience require the self-similar proliferation of the pattern if we are to determine the identity of anything. The same pattern recurs in different areas of experience. The heavens are organized as an immense community of galaxies, and however different they may be from one another, they are all galaxies. They share a self-similar pattern of structurally organizing a community of stars. Everything has characteristics of one and many, same and different, universal and particular.

### **Organic Evolution as Reflex Back to Universal Wholeness:**

The evolution of organic life on the planet marks a return in ascending levels toward the sentient awareness of universal wholeness. The plants explored the vital energies of cellular chemistry, from single-celled algae to complex plant species, building on the lessons of experience in progressive levels of refinement, all relating to the capture and use of solar energy. The invertebrates explored the sensitive energies of motor response to their physical environment, depending on the vital energies of plants to sustain them while they explored characteristic behaviors universal to their species. The advance to the vertebrates marked the introduction of cerebral hemispheres and an autonomic nervous system within a fixed quadruped format. This provides a capacity for cerebral reflection on emotional patterns of behavior within an anatomical framework that is universal among the reptiles, birds and mammals in the biosphere.

The patterns of sensitive response worked out by the invertebrates are integrated anew without re-exploring multiple limb structures, compound eyes and so on. Vertebrate evolution became fixed to a quadruped limb structure and has had a different focus altogether, in which patterns of behavior become progressively varied and consciously modulated in higher species. A dog has a greater repertoire of emotional and behavioral responses than a crocodile. This capacity to tailor experience

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<sup>19</sup> Kirk GS, Raven JE. *The Presocratic Philosophers*. Cambridge U Press, 1957

<sup>20</sup> Taran, L., *Parmenides*, Princeton U Press, 1965

to suit circumstance implicitly requires the progressive subsumption of all quadruped behavior in the biosphere. Complex behavior consciously integrates primary elements of behavior previously established in evolutionary history.

The climb up the hierarchy has continued through the reptiles and mammals in such a way that in the human brain the brains of the lower species have a close anatomical association with the emotional reflux of experience into cerebral awareness.<sup>21, 22</sup> We know intuitively that our emotional experience is rooted in the history of the biosphere, that it is in fact an integration of that history in subsumed levels of experience. Our animal roots go back hundreds of millions of years.

With the introduction of language we must also deal with experience in abstraction, but this of course brings us to the need to understand how the whole of experience is organized. This has resulted in the bilateral polarization of neocortical function into linguistically explicit and intuitively mute hemispheres.<sup>23, 24</sup> The author's website article *Inside our Three Brains* at <http://www.cosmic-mindreach.com/Three-Brains.html> summarizes this pioneering research.

While we draw on the lessons of a few billion years in the biosphere our minds will be satisfied with nothing less than comprehension of how the cosmic order is structured to function. There is a need implicit in the evolutionary process to know universal wholeness and thus transcend and subsume our origins in the biosphere. This could not be presented to us in more graphic terms. It is wired into our nervous system. The apparatus we must use to relate to experience must itself reflect the structure of experience. It must reflect the cosmic order.

### **Summary:**

System 2 transcends and subsumes the whole of history by prescribing the universal pattern of creative dissemination and return. This is more than speculative metaphysics, for the pattern has correlates everywhere we look in the world around us. The hierarchies of centers as active interfaces recycling energy through creative activity are real phenomena. How this works is structurally elaborated on in the higher Systems that exhibit universal and particular relationships. Integrating archetypal ideas are known through particular forms much as Plato stated it in his Theory of Forms.

This is true even of things that we make. We identify a particular motor car by its correspondence to the archetypal plan inherent each model and in turn in all motor cars. The archetypal plan is a real idea. It specifies how cars work and how they are built for a definite purpose. The plan is clearly implicit in the design of each particular motor car.

The two modes of System 2 result from the perceptual transposition of center 2, such that it alternately relates outward to the manifold creation then inward to the universal center, center 1.

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<sup>21</sup> Papez JW. A Proposed Mechanism of Emotion, *Arch. Neurol. & Psychiat.* 38:725, 1937.

<sup>22</sup> MacLean PD. Contrasting Functions of Limbic and Neocortical Systems of the Brain and Their Relevance to Psychophysiological Aspects of Medicine, *Amer. J. Med.* 25:611-626, 1958.

<sup>23</sup> Sperry RW. Hemisphere Deconnection and Unity in Conscious Awareness, *Amer. Psychol.*, 1969.

<sup>24</sup> Sperry RW, Gazzaniga MS, Bogen JE, Interhemispheric Relationships: The Neocortical Commissures; Syndromes of Hemispheric Disconnection. *Handbook of Clinical Neurology.* 4:273, 1969.

The integrating archetypal idea of a motor car is conceived through reflection in the subjective orientation and committed to paper as an initial objective orientation. Techniques of manufacture are devised through subjective reflection and the transformation to specific particular motor cars in the objective orientation is realized in their manufacture.

At the atomic level this recurrent action is associated with the quantum of action,  $h$ , such that the physical universe is projected as a very rapid series of still frames in a holographic cosmic movie. This recurrent action functions in different ways on different levels through the hierarchy to maintain a subjective to objective balance in the integration of history. Although the pattern is implicit in System 2, it requires System 3 to elaborate upon it. System 3 delineates how space and time are projected in the cosmic movie.

We may expect to see light play a universal role in the integrating *idea* of universal wholeness through cyclic *routines* of action in the parade of ever-shifting *forms*. We shall see that the *idea* itself becomes translated into organizing *routines* that in turn are translated into the *forms* that we see. In other words, *idea*, *routine*, and *form*, constitute a universal hierarchy that is everywhere apparent in experience. These three active interfaces constitute the universal hierarchy of System 3. It is apparent even in speech, where mute *ideas* are given explicit *forms* through the *routines* of language. But it should be no surprise if we find that language has evolved according to the System, that it depends upon the cosmic order to convey its meaning.

This leaves us with a fundamental choice between two, and only two, alternative structural approaches to a theory of everything. The current scientific approach is exclusively objective. It acknowledges only a common outside between physical things. It implicitly denies or ignores that there is a universal inside shared by all phenomena. This leads to the blind belief in a Big Bang as the singular origin of all creation from nothing, without plan or purpose. There is no transcending reality beyond our brief sojourn on Earth. Life is a chemical accident ending in oblivion.

The alternate approach recognizes both a universal inside and a universal outside. It is not a theory of everything that freezes creation into rigid belief systems with a variety of metaphysical interpretations that can never find direct confirmation in phenomenal experience. The System of delineating the Cosmic Order is a universal methodology that can complement traditional approaches to the sciences and expand our horizons. It is not a blind belief system. It requires a relentless quest into the nature of universal truth. Universal values are the ultimate reality. The quest lends transcending meaning and values to living that mends the rift in universal wholeness.