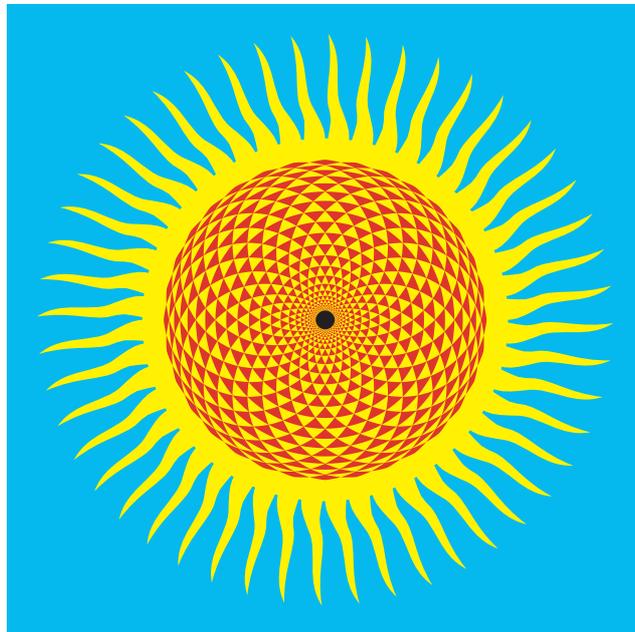




# **Recapitulating the Cosmogonic Cycle**

## ***Understanding Ourselves***



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## Abstract

This article is the first of a trilogy on Mystical Pragmatics, expanding an introductory essay titled ‘Mystical Pragmatics: Harmonizing Evolutionary Convergence’, available at [mysticalpragmatics.net](http://mysticalpragmatics.net). This website consists of three elements, addressing three great movements unfolding and enfolding in the world today as a coherent whole: Spiritual Renaissance, Scientific Revolution, and Sharing Economy. . A complementary strategy document on Project Heraclitus is also available.

The first step in this strategy is to invoke the Divine power of Love to help people recapitulate the Cosmogonic Cycle, a term that Joseph Campbell introduced in *The Hero with a Thousand Faces*. For the central issue facing humanity today is that there are no permanent structures in the Universe, as Shakyamuni Buddha pointed out some 2,500 years ago with his three marks of being. This fundamental law of existence applies not only to our bodies, but also to economic systems, civilizations, species, stars, galaxies, and the multiverse of physical universes.

Traditionally, there have been two ways to deal with physical mortality. For those out of touch with Reality, with our Immortal Ground of Being, people have formed religious immortality symbols to assuage the fear of death, such as the belief in an immortal personal soul, which either reincarnates indefinitely in cyclic time or has everlasting life in linear time. Today, money is the primary immortality symbol, which we look at in the third article in this trilogy, titled ‘The Sharing Economy: Transcending the Divisiveness of Money’.

However, mystics through the ages have shown us a second, authentic way to realize immortality as Cosmic, Divine Beings, for instance, by coming into union with the Divine through No-mind, as taught by Advaita sages, such as Ramana Maharshi. The Buddha, himself, taught that if we do not accept universal impermanence, we shall suffer unless we are free of the sense of a separate self in Emptiness.

But there is a third way, less known, but equally genuine. This is through what Aurobindo called Supermind, living in Fullness, that is, Wholeness. And rather than dying to the world, we can recapitulate the Cosmogonic Cycle by tuning into the convergent tendencies of evolution, enabling us to know and even understand ourselves.

However, such a path to liberation is countercultural, for understanding ourselves in this holistic, integral manner is regarded as taboo in the mainstream, somewhat less so in alternative subcultures. Nevertheless, this is really the only viable option that humanity has at the present time, as evolution passes through the most momentous turning point in its fourteen billion-year history since the most recent big bang, called its accumulation point or singularity in time in systems theory terms.

Furthermore, it is by invoking the power of Divine Love that we can accelerate the breakdown of cognitive structures that are inhibiting us from breaking through to the Age of Light, necessary if we are to complete today’s scientific revolution, as outlined in the second article on ‘Integral Relational Logic’.

# Recapitulating the Cosmogonic Cycle

## Understanding Ourselves

In *Protagoras*, Plato tells us that seven wise men, led by Thales, the first Greek philosopher, inscribed this maxim on the temple of Apollo at Delphi: γνῶθι σεαυτόν (*gnothi seauton*) “Know thyself.” In a similar fashion, when Neo visited the Oracle in the popular allegorical movie *The Matrix*, hanging on the kitchen wall was a sign saying *Temet Nosce*, Latin for ‘Know yourself’.

Yet, how many of us follow the maxim to know ourselves, never mind to understand ourselves today? Not many, for several reasons, not the least is that knowing ourselves is perhaps the greatest taboo in Western civilization. So we have very little understanding of what the Universe is or of our relationship to the Divine Cosmos. Yes, an increasing number of people today are realizing that Consciousness is the Cosmic Context for all our lives, that Love is the Cosmic Soul or Divine Essence we all share, and that Life, in its various guises, continuously bubbles up from our Divine Source, like a fountain.

But while this understanding is necessary to awaken us from our slumbers, it is not sufficient to understand the psychodynamics of society in its entirety, understanding that is necessary to understand our own ontogenies and the phylogeny of *Homo sapiens sapiens* from Alpha to Omega and back again. Because of our ignorance, our lives do not consciously recapitulate the Cosmogonic Cycle, an example of the fundamental law of the Universe: *Wholeness is the union of all opposites*, called the Principle of Unity. So as we live our lives out of harmony with Natural law, we are bound to suffer, unable to intelligently manage our business affairs with full consciousness of the evolutionary and involutory energies that cause us to behave as we do.

It is not surprising therefore that Eckhart Tolle wrote in *A New Earth*, a book made famous by Oprah Winfrey, “We are a species that has lost its way.” Essentially, this is because the maps that we use to guide our journeys through life are obsolete, based on a false view of Reality that has been blindly passed from generation to generation for thousands of years.

The worldview that governs science and business today was established in the Western mind some 5,000 years ago, when Babylonians in Mesopotamia began to map the skies. Helped along by Aristotle’s *Physics* and Newton’s *Principia*, this has led the West to believe that the Universe is the physical universe of mass, space, and time, and that all phenomena, including human behaviour, can be explained in terms of the mechanistic laws of physics.

The three Abrahamic religions of Judaism, Christianity, and Islam have evolved within the overall context of this external cosmology, leading to the widespread belief that God is other, that there is a great gulf between the Creator and created that can never be bridged. As the Divine is as much immanent as transcendent, it is not surprising that some mystics in these religions, known as Kabbalists, Gnostics, and Sufis, respectively, are beginning to speak out. For instance, at the *Synthesis Dialogues* in Rome in 2004 organized by the Association for Global New Thought and attended by the Dalai Lama, the Benedictine monk David Steindl-Rast said that one of his great concerns is that the Western God-view is warped and makes us sick. The idea of God as being separate from us is an extremely dangerous view. And as Anne Baring wisely writes in *Dream of the Cosmos*, we urgently need a new image of God, different from that which we have inherited from the patriarchal religions, which portray a transcendent God creating the world from a distance, distant and separate from the created world and ourselves.

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At about the same time as the Babylonians were looking outwards at the dawn of history and birth of civilization, Rishis in the Indus Valley looked inwards and discovered a quite a different Universe, described in *The Upanishads* about 2,500 years ago. For instance, here are short passages from the *Mandukya Upanishad*, the shortest of the *Upanishads*, and from Lao Tzu's *Tao Teh Ching*:

<i>AUM stands for the supreme Reality.</i>	<i>Tao can be talked about, but not the Eternal Tao.</i>
<i>It is a symbol for what was, what is,</i>	<i>Names can be named, but not the Eternal Name.</i>
<i>And what shall be. AUM represents also</i>	<i>As the origin of heaven-and-earth, it is nameless:</i>
<i>What lies beyond past, present, and future.</i>	<i>As 'the Mother' of all things, it is nameable.</i>

In other words, "Brahman is all, and the Self [Atman] is Brahman," as the *Mandukya Upanishad* goes on to say. This is not conceptual knowledge, as it might be for a pandit-type figure. For we can understand this in the utmost depth of being with Absolute Certainty, exquisitely expressed in the Sanskrit word *Satchidananda* 'Bliss of Absolute Truth and Consciousness'.

However, to say *Tat tvam asi* 'You are That' is an even greater taboo in the West than knowing ourselves, regarded by religious authorities as heresy or blasphemy. For instance, Mansur Hallaj was sentenced to death in Baghdad in 922 for declaring, "I am the Truth" (*Ana'l-Haqq*). And in 1329, Pope John XXII declared Meister Eckhart guilty of heresy for saying, amongst other things, "The eye with which I see God is the same as that with which he sees me." Presumably Eckhart, the pre-eminent Christian mystic and an immensely popular Dominican preacher and scholar, would have been burnt at the stake, the official punishment for heresy since the Synod of Verona in 1184, if he had not died before such a sentence could have been carried out.

In 1600, the Italian Dominican friar, philosopher, mathematician, and astronomer Giordano Bruno did not escape so lightly, being burnt at the stake for heresy. For he ruthlessly criticized all geocentric, zoocentric, anthropocentric, and heliocentric views of reality, proposing that the Sun is essentially a star, and that the universe contains an infinite number of inhabited worlds populated by other intelligent beings. With such an infinite cosmology, Bruno naturally also denied the right of the inquisitors to declare what was heresy and what was not, a denial of their authority that sealed his fate.

Today, people are not executed for affirming, "I am Love." Nevertheless, both theists and atheists alike discourage spiritual seekers from understanding themselves. Why is this? What are the religious, scientific, and political authorities who attempt to govern our lives so afraid of? And why are so many on the spiritual quest so averse to understanding the phylogeny of our species, even when such understanding provides answers to questions that many are seeking, such as "Who are we?" "Where have we come from?" "How can we live in love, peace, and harmony with each other?" and "Where are we heading?"

Well, what we are dealing with here is acute existential fear, which human beings have been struggling to deal with since our forebears were given the great gift of self-reflective Intelligence some 25,000 years ago, the Divine quality that distinguishes humans from the other animals and machines, like computers. Since then, only the mystics have discovered how to be truly free of such fears. For instance, to be fully alive—free of the existential fear of death—we can do no better than to follow Shakyamuni Buddha's teachings, encapsulated in his three marks of being (*trilakshana*):

1. There is nothing whatsoever that is permanent in the Universe, including our bodies and any groups, from our family, through our cultures, to our species, that we feel we belong to (*anitya*).
2. If we do not recognize this fundamental principle of existence, we shall suffer (*dukkha*).
3. The way to end suffering is to pass through a psychological death, free of the sense of a separate self, of attachment to the egoic mind (*Anatman*), leading to *Moksha* 'liberation and release from worldly bonds', *Nirvana* 'extinction', and *Kaivalya* 'Solitude, Absolute Consciousness'.

However, the mystics cannot tell us what is causing the pace of scientific discovery and technological development to accelerate exponentially. For to understand this, we need a radically new art and science of thought and consciousness, as outlined in the second article in this trilogy titled 'Integral Relational Logic: The Universal System of Reason'. The third article on 'The Sharing Economy: Transcending the Divisiveness of Money' provides some insights into our practical affairs that might help us to recapitulate the Cosmogonic Cycle, as they have done for me.

This document contains an introduction to the transfinite cosmology revealed when we fully understand ourselves. It begins with an outline of the Cosmogonic Cycle, which provides the overall context within which to describe both my own ontogeny and human phylogeny, and continues with the principal ways that we can intelligently and consciously recapitulate this Cycle in our lives.

## The Cosmogonic Cycle

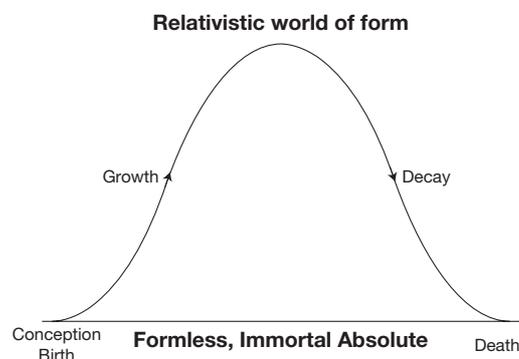
A Google search on 25th May 2013 returned 5,500 hits for the term *Cosmogonic Cycle*, quite a few, but not many considering the billions of pages on the World Wide Web. So this phenomenon is not entirely unknown, albeit often unnamed. Below are two poetic passages describing our journeys in life from Alpha to Omega and back again, the first from T. S. Eliot's poem 'Little Gidding' and the second from the *Taittiriya Upanishad*.

<i>We shall not cease from exploration</i>	<i>Bṛhīgu meditated and found that bliss is Brahman.</i>
<i>And the end of all our exploring</i>	<i>From bliss are born all creatures,</i>
<i>Will be to arrive where we started</i>	<i>By bliss they grow,</i>
<i>And know the place for the first time.</i>	<i>And to bliss they return when they depart.</i>

It was Joseph Campbell who coined the term *Cosmogonic Cycle* in his popular book *The Hero with a Thousand Faces*, no doubt much read because it succinctly encapsulates the journeys so many spiritual seekers experience.

However, *Cosmogonic Cycle* requires a little explanation, for *cosmogony* 'derives from Greek *kosmogonia* 'creation of the world', from *kosmos* 'order, world' and *gonia* 'begetting'. But this only gives us one side of the story, *cosmogony* meaning 'study of the origin and evolution of the universe'. To obtain a complete picture of the Universe we need to cycle back to the Origin, from Greek *kuklos* 'circle', an example of the Principle of Unity, the fundamental design principle of the Universe, described in Section 'Transcending the Categories' in the article 'Integral Relational Logic'.

As Campbell says, "Redemption consists in the return to superconsciousness and therewith the dissolution of the world. This is the great theme and formula of the cosmogonic cycle, the mythical image of the world's coming to manifestation and subsequent return into the nonmanifest condition." For as the schematic life-and-death curve in this diagram graphically illustrates, all beings in the Universe are born to die, or, in the case of mammals, birds, and reptiles, at least, are conceived to die.



In other words, if we are to live in harmony with the fundamental law of the Universe, we also need to experience involution, as mystics through the ages have taught, returning Home to Formlessness through a psychological death before physical death, encapsulated in the term *jīvanmukti*, from Sanskrit *jīva* 'to live' and *moksha* 'liberation from worldly bonds'. For instance, the incantation *neti neti* 'not this, not this' in *jñāna-yoga* 'path of wisdom and abstract knowledge' in Advaita can help us to answer the most

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fundamental question we can ask ourselves: “Who am I?” As Anne Baring delightfully puts it in *The Dream of the Cosmos: A Quest for the Soul*, the answer to this question would be “I am the Soul of the Cosmos discovering itself through its own creation.”

So if we are to obey the fundamental law of the Universe, our lives—as both individuals and as a species, from conception and birth to death—must recapitulate the Cosmogonic Cycle, which all forms follow, no matter what their lifespans might be, from a few yoctoseconds to zillions of years. Otherwise, we are bound to suffer.

Conscious evolution thus implies conscious involution, graphically described in the myths and fairy tales of all cultures and times, which Campbell brilliantly synthesizes in Part I of his wonderful book. He calls the hero’s adventure the ‘monomyth’, a term borrowed from James Joyce’s *Finnegans Wake*, consisting of three major stages: separation or departure, initiation, and return. In the monomyth, “A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.”

Essentially, the hero leaves the society in which he is born in search of the Divine, which he finds at the end of stage two of Campbell’s three-stage model, for societies are not generally grounded in Reality. For many spiritual seekers, this is the end of the journey, but not for Campbell, who is one of the most advanced both-and thinkers I have ever read, clearly expressed in his androgynous view of the fully awake human being. The third stage is one in which the mundane and the Divine are fully integrated while living in society, a central theme of Anne Baring’s magnificent *The Dream of the Cosmos*.

The table below lists the three major stages of the hero’s journey and their divisions into seventeen steps, possible because Campbell was well aware of the immense power of abstract thought, able to see the underlying patterns and generalities in the myths and stories in all cultures of the world.

Departure	Initiation	Return
The Call to Adventure	The Road of Trials	Refusal of the Return
Refusal of the Call	The Meeting with the Goddess	The Magic Flight
Supernatural Aid	Woman as Temptress	Rescue from Without
The Crossing of the First Threshold	Atonement with the Father	The Crossing of the Return Threshold
Belly of The Whale	Apotheosis	Master of Two Worlds
	The Ultimate Boon	Freedom to Live

As we see, at the end of the second stage of the spiritual journey, the hero finds the Ultimate Boon, which, for some, is the end of the quest. However, while returning to the Source is the end of the individual’s journey, it is not really the end of humanity’s spiritual quest as a species. As Campbell points out, there is third stage in the monomyth: the return to society. As he says, “The return and reintegration with society ... is indispensable to the continuous circulation of spiritual energy into the world.” However, “the hero himself may find [this] the most difficult requirement of all.” Campbell gives three reasons for the hero’s predicament:

1. The bliss of this experience may annihilate all recollection of, interest in, or hope for, the sorrows of the world; or else the problem of making known the way of illumination to people wrapped in economic problems may seem too great to solve.
2. The powers that he has unbalanced [on his journey to Freedom] may react so sharply that he will be blasted from within and without—crucified.
3. The hero may meet with such a blank misunderstanding and disregard from those he has come to help that his career will collapse.

On this third point, “Even the Buddha ... doubted whether the message of realization could be

communicated.” And on the first point, “Saints are reported to have passed away in the supernal ecstasy.” For these three reasons, Campbell says that the responsibility of returning to the world with the adventurer’s life-transmuting trophy when the hero-quest has been accomplished has been frequently refused.

### **Becoming free of our ancestry**

However, not always. People on the spiritual quest often follow the epithet “Be in the world, but not of it,” depicted in this graphic from the *What is Enlightenment?* magazine, founded by Andrew Cohen. As the suit and tie symbolize, we are all obliged to follow the economic laws of the prevailing culture, even if these are causing severe psychological and ecological damage, for reasons outlined in the third article in this trilogy: ‘The Sharing Economy’. So in some aspects, at least, ontogeny recapitulates cultural phylogeny, even though such a way of life is unsustainable and is no longer viable.



So if human phylogeny is to recapitulate the Cosmogonic Cycle, it is necessary for cultural phylogeny to recapitulate the ontogeny of those pioneers taking evolution in a quite new direction, as happens when new species break away and emerge from their immediate specific ancestors. We see a similar situation in the death and birth of new civilizations, for as Arnold Toynbee explains in *A Study of History*, civilizations die in this way:

The nature of the breakdowns of civilizations can be summed up in three points: a failure of creative power in the minority [the leaders who brought the civilization into being], an answering withdrawal of mimesis on the part of the majority, and a consequent loss of social unity in the society as a whole.

That is what is happening in the world today, for some visionaries see a new civilization or even a new species emerging. For instance, Eckhart Tolle ended his book *A New Earth* with these sentences: “A new species is arising on the planet. It is arising now, and you are it!” To give this superintelligent, superconscious species a name, Osho called it simply *Homo novus* or Zorba the Buddha, representing a new synthesis of East and West, the meeting of all polarities. As he said, “The new man is not an improvement upon the old; he is not a continuous phenomenon, not a refinement. The new man is the declaration of the death of the old, and the birth of an absolutely fresh man—unconditioned, without any nation, without any religion, without any discriminations of men and women, of black and white, of East and West, or North and South.”

And Barbara Marx Hubbard, founder of the Foundation for Conscious Evolution, the Evolutionary Edge, Birth 2012, and the Agents for Conscious Evolution (ACE) training, has suggested these names for our emerging species: *Homo universalis*, *Homo noeticus*, *Homo spiritus*, and *Homo sapiens sapiens sapiens*, indicating that this is not a biological species but a psychospiritual one.

However, at present most live in the noosphere, so we need noetic terms to denote the predominant and the emerging species. It makes no sense for biologists to name the species that exist today. The terms I prefer here are *Homo scientia* and *Homo divinus* to denote that the prevailing species is detached from Reality, while the developing species is one consciously living in union with the Divine. We need to emphasize *consciously* for in Reality no one is separate from our Immortal Ground of Being for an instant. But sadly, many do not know this, ignorance encapsulated in the Sanskrit word *avidyā*.

A study of etymology, which David Bohm aptly called the archaeology of language, helps us understand how this split arose, going back to the Proto-Indo-European (PIE) origins of most European languages some 7,000 years ago. Most particularly, the root of *human* and *Homo* is Latin *humus* ‘ground,

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earth', from the PIE base *\*dhghem-* 'earth'. This etymology shows that our forebears some 7,000 years ago conceived of human beings as earthlings in contrast to the divine residents of the heavens, as Calvert Watkins explains in *The American Dictionary of Indo-European Roots*. So the split between the human and the Divine lies deep in the collective psyche. To be humble, which derives from the same root, is therefore to deny our Divinity. Conversely, it is arrogant to realize and acknowledge our True Nature as Divine Beings, *arrogance* being the opposite of *humility*.

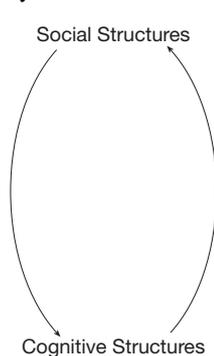
More recently, *physics* derives from Aristotle's treatise *Physics*, a translation of Greek *ta phusika*, literally 'natural things', the neuter plural of *phusikos* 'of nature', from *phusis* 'birth, origin; nature, inborn quality' and *phuein* 'produce, bring forth; grow, be born', from PIE-base *\*bheua-* 'to be, exist, grow', also root of *be*. In turn *nature* derives from Latin *nātūra* 'birth', from *nātus*, past participle of *nāscī* 'to be born', from PIE base *\*genə-* 'to give birth, beget', also root of Greek *genesis* 'origin, birth', from which *genetics* and many similar words are derived. But most physicists and geneticists today do not begin their studies at the Divine Origin of the Universe, for they deny its very existence. So what is called supernatural is entirely natural and the natural sciences study the effects of Nature, not Nature itself.

The word *science* itself derives from Latin *scientia* 'knowledge', past participle of *scīre* 'to know', from PIE base *\*skei-* 'to cut, split', also root of *schizoid*, *scīre* meaning here 'to separate one thing from another, to discern'. The emphasis is thus more on analysis than synthesis, a divisive approach to reason that goes back to Aristotle's *Prior Analytics*, in which he defined the syllogism, the beginnings of deductive logic. However, when discernment—from Latin *discernere* 'to separate'—becomes the primary way of acquiring knowledge, we create unreal divisions between us, as Edgar Mitchell discovered when looking at the Earth after returning from the Moon in 1971. It is then up to our artistic abilities to put back together that which has been separated, for *art* derives from Latin *ars* 'skill, way, method', from PIE base *\*ar-* 'to fit together', also root of *coordinate*, *reason*, *harmony*, and *order*.

It is important to note here that scientists are not the only people detached from Reality. Theologians in the Abrahamic religions who believe that God is other, also suffer from split minds, as mentioned on page 1. So we can identify two subspecies of *Homo scientia*: *Homo scientia theistica* and *Homo scientia atheistica*, denoting those who believe and do not believe in the existence of God, respectively. A third subspecies *Homo scientia agnostica* would then denote those who do not know what to believe. Having identified the existence of *Homo scientia*, we can obtain a much better perspective on the long-running war between science and religion. It is actually taking place between members of *Homo scientia*.

For members of *Homo divinus*, as *Homo scientia gnostica*, do not need to engage in such Holy wars—wars about the Whole—for they know the Divine with Absolute certainty, inner knowing that we can best call Gnosis, from Greek *gnosis* 'knowledge', cognate with Sanskrit *jñāna* 'knowledge' and, of course, *know* itself. In contrast, the knowledge that scientists and technologists mostly work with is superficial symbolic knowledge, rarely based on Gnosis.

But how can *Homo divinus* evolve from *Homo scientia*? Well, the adjacent diagram illustrates the central issue here. As children, we learn what our parents and teachers want us to learn, in church and at school and university, carrying this learning into the workplace. Each generation thus passes on to the next generation what they have learned from the previous generation, a cyclic process that has been going on for some 25,000 years. Questioning these deeply held cultural beliefs often leads to ostracization.



Then during the 5,000 years of the patriarchal epoch, which began at the dawn of written history and the first city-based civilizations, our cultural worldviews have

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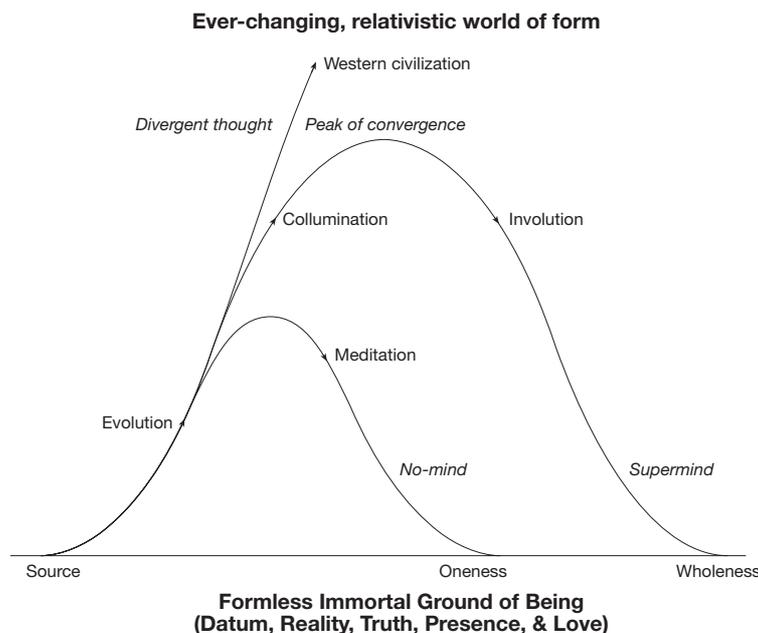
become increasingly set in concrete. Our individual ontogenies recapitulate this mental phylogeny, our behaviour patterns being well established by the age of five or even earlier. So the institutions that govern our lives are the products of these rigid cognitive structures, which, in turn, inform us what and how we learn. For our minds create our reality and govern our behaviour. This means that the phylogeny of the species, or of any culture, is actually the synthesis of all individual ontogenies.

To break free of this pernicious cycle, in *The Ghost in the Machine* Arthur Koestler gave an explanation of how new species can emerge with the words *gerontomorphosis* ‘the shaping or forming of the old’ and *pædomorphosis* ‘the shaping or forming of the young’. During gerontomorphosis, evolution progresses from immediately preceding forms and structures, as in phylogeny. However, as Koestler puts it, “gerontomorphosis cannot lead to radical changes and new departures; it can only carry an already specialized evolutionary line one more step further in the same direction—as a rule into a dead end of the maze.”

During pædomorphosis, on the other hand, evolution retraces its steps to an earlier point and makes a fresh start in a quite new direction. Pædomorphosis is thus a rejuvenating, renascent process; it leads to new vitality, new energies, and new possibilities.

These principles of pædomorphosis and gerontomorphosis apply equally in the noosphere, the prime example being the Copernican revolution in the sixteenth and seventeenth centuries. For Copernicus effectively went back to Aristarchus’s heliocentric view of the solar system, Aristarchus being called the Greek Copernicus, abandoning Aristotle and Ptolemy’s geocentric view, which was generally accepted at the time. And generally, this process does not begin on the scale of the species; it begins at the individual level, breaking the social-cognitive cycle that drives so much human learning today.

This is absolutely essential at the present time, for Western civilization is blindly accelerating away from Reality with every day that passes, as the path so marked in the diagram below indicates. However, as this diagram of different ontogenies also shows, there are two ways of recapitulating the Cosmogonic Cycle, returning to our Nonmanifest Divine Source.



The first ontogenetic path is depicted in the small bell curve, the traditional path of the mystics, taking a short cut to God, towards Oneness and union with the Divine, with No-mind. However, killing the mind does not enable us to rebuild our education and economic systems while at the same time recapitulating the Cosmogonic Cycle.

### Recapitulating the Cosmogonic Cycle

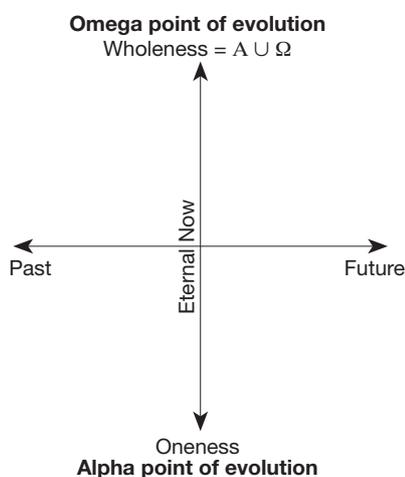
To do this, we need to heal the fragmented, specialist mind in Wholeness, depicted in the large bell curve. *Collumination* derives from Latin *cum* ‘together with’ and *lumen* ‘light’, on the model of *illumination*, denoting the skill of combining thinking or cogitation with a meditation practice such as mindfulness or vipassana or insight meditation. The distinction here is that when practising vipassana the focus of attention is on an object, such as the breath, aimed at stilling the mind, while when colluminating, practitioners watch the creation of their own thoughts arising from their Divine Source, aimed at healing the fragmented mind in Wholeness, for as Aurobindo Ghose writes in *The Life Divine*, “The Supermind is the Vast; it starts from unity, not division, it is primarily comprehensive, differentiation is only its secondary act.” Collumination is also the coherent light of Consciousness needed to create and see a holographic map of the Universe, described in more detail in the article ‘Integral Relational Logic: The Universal System of Thought’.

We can thus distinguish two subspecies to denote the two ways of returning Home to the Non-manifest, to Oneness and Wholeness, respectively: *Homo divinus unitas* and *Homo divinus holoensis*, from Greek *ólē* ‘whole’ and *-ensis* ‘belonging to’. So members of *Homo divinus holoensis* do not belong to any group, whether this be national, religious, cultural, racial, sexual, specialist, or whatever, for they belong to the Ineffable, Nondual Whole.

To evolve into Wholeness in this manner, we need to follow a holotropic path. Stanislav Grof coined *holotropic* to mean ‘turning towards the whole’, modelled on *heliotropic* ‘turning towards the sun’, from Greek *tropos* ‘turn’, from *trepo* ‘to turn’. However, *trepo* has two meanings, as in English: ‘to change direction’ (as in ‘turn into a side-road’), and ‘to change form’ (as in ‘turn into a frog’). So *holotropic* can be said to have two meanings, the second being ‘transforming the Whole’, using *-tropic* in the same sense as *entropic* ‘in transformation’, coined by Rudolf Clausius in 1865 as *entropy*. In order to return Home to Wholeness, to our Divine Source, we need both to transform the Whole—a partial transformation is not sufficient—and to turn towards Wholeness, the union of all opposites, our Authentic Self.

### The two dimensions of time

Now these curves depicting the Cosmogonic Cycle can be rather misleading, for they appear that the life-and-death cycle takes place in the horizontal dimension of time. Perhaps this is not surprising, for time plays such a dominant role in our daily lives, especially as we collectively drive the pace of scientific discovery and technological invention at unprecedented exponential rates of acceleration. However, we



still have very little understanding of Eternity (infinite time), the Timeless, and exponential time, which inhibits us from making sense of all our experiences, from the mystical to the mundane.

To put all these aspects of time into perspective, we need to call on the Principle of Unity to recognize the existence of the vertical dimension of time, as well as the horizontal dimension. We can think of this horizontal dimension extending to infinity or eternity in both the past and future. However, in the late 1800s, Georg Cantor showed that there is not just one infinite cardinal in mathematics, but an infinite number of them. So the ‘largest’ infinity could be denoted by  $\aleph_\infty$ , where  $\infty$  is  $\aleph_\infty$ , defined recursively, where  $\aleph_0$  is the smallest infinity.

Now physicists have difficulty in assimilating the mathematical fact that there are an infinity of eternities in their materialistic worldview, believing that the physical universe of mass, space, and time is

### *Understanding Ourselves*

the Universe, the Totality of Existence. Similarly, for people who believe that the personal soul reincarnates indefinitely or has everlasting life after the death of the body, which eternity are they referring to? While there is much evidence from people's experiences that the personal soul survives death, this does not mean that it is immortal, for only the Cosmic Soul is Immortal.

The key point here is that while playing with Cantor's infinities is great fun, these mathematical concepts are just thoughts, mental constructs, not based in Reality. To develop a worldview that is squarely based on experience, we need to note that the horizontal line in the diagram corresponds to the bell-shape curve in the Cosmogonic Cycle, representing the relativistic world of form, and the vertical line corresponds to the base line in the Cycle diagram, representing our Immortal Ground of Being. The extremes of the horizontal dimension then join in the Timeless, Eternal Now, a notion made famous in Eckhart Tolle's best-selling *The Power of Now*. As he says,

To be identified with your mind is to be trapped in time: the compulsion to live almost exclusively through memory and anticipation. This creates an endless preoccupation with past and future and an unwillingness to honour and acknowledge the present moment and allow it to be. The compulsion arises because the past gives you an identity and the future holds the promise of salvation, of fulfilment in whatever form. Both are illusions.

In other words, if we are to live our lives squarely based in Reality, we can only do so in the Timeless. Otherwise, like *Homo scientia*, we suffer from schizophrenia 'split mind', detached from Reality, from Greek *skhizo-* 'split', from *skhizein* 'to split', from PIE base *\*skei-* 'to cut, split', and *phren* 'soul, mind, heart', from PIE base *\*g<sup>w</sup>hren-* 'to think', also root of *frantic* and *phrase*.

Healed of schizophrenia, we can see that time and all other forms in the relativistic world of form are appearances in or abstractions from the vast Ocean of Consciousness. In the East, such appearances are called *māyā* 'deception, illusion' and *līlā* 'play of the Divine in the manifest world'.

What this means is that in Reality everything that happens in the Universe takes place in the Eternal Now. There is no other possibility consistent with experience. For the past is just a memory and the future is the imagination of what might come, often based on past experience. And what is true in the noosphere, from Greek *noos* 'mind', is also true in the biosphere, from Greek *bios* 'life', and the hylosphere, from Greek *ūlē* 'matter'. In other words, the most recent big bang and the entire evolution of the species both take place in the Eternal Now.

The downward arrow in the vertical dimension of time then corresponds to the movement from form to the Formless, depicted in the right-hand side of the bell-shape curve. This is the direction that seekers of the Divine classically take on the spiritual quest, seeking psychological death before the death of the body. This spiritual path corresponds to what physicists call the second law of thermodynamics: in a closed system entropy, as a measure of disorder, can only increase, leading eventually to the heat death of the universe.

On the other hand, the left-hand side of the bell-shape curve is the classic S-shape of the growth or learning curve, corresponding to the upward movement in the vertical dimension of time, from the Formless to form. This growth process begins at the Divine Source, the Origin of the Universe, as the irrepressible power of Life creates all the beautiful forms we see both within and around us.

But where does this evolutionary process end? Well, normally, creative processes, both within and without us, terminate in forms, from paintings through horses to stars, to give examples from the noosphere, biosphere, and hylosphere, respectively. However, we actually live in the numinosphere, from Latin *nūmen* 'divinity'. And when all the divergent streams of evolution converge, as described in 'Integral Relational Logic', we realize that the glorious culmination of evolution is Formless Wholeness, corresponding to what Pierre Teilhard de Chardin called the 'Omega Point'.

### Recapitulating the Cosmogonic Cycle

Of course, scientists, believing in the absolute truth of the second law of thermodynamics and denying the existence of Life, cannot explain such creative, evolutionary growth processes. The best that they can do is to call evolving structures self-organizing or self-creating living machines, as Humberto Maturana and Francisco Varela did in 1972, without mentioning the role that the Logos plays in creating organized systems. In technical terms, they call this process *autopoiesis*, from the Greek *poien* ‘to make, do, produce, create’, which is also the root of *poetry*.

In terms of human experience, it is vitally important to note that the upward and downward movement of evolutionary and involutory processes are not mutually exclusive. They are both constantly taking place within all of us as we live in the horizontal dimension of time, which we need to look at in a little more detail in order to understand our personal ontogenies and human phylogeny.

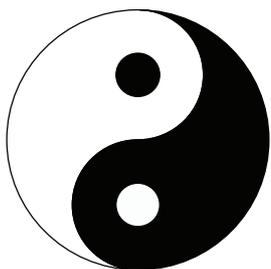
Traditionally, there have been two basic ways of looking at time during the past few millennia: cyclic and linear. The cyclic view of time predominated in all cultures during the Great Mother Goddess epoch between about 25,000 and 5,000 years ago because our forebears tended to look at time through direct human experience, most notably in the cycles of day and night, the phases of the moon, women’s menstrual cycles, and the four seasons in the year, depicted in this sinusoidal diagram.



In the East, such a cyclic view prevails. For instance, in Hindu attempts to capture the vastness of time before the discoveries of modern mathematics, Brahma is deemed to live 100 Brahma-years, each Brahma-year consisting of 360 Brahma-days and nights or 720 *kalpas*, denoting the creation and death of the universe, and hence recapitulating the Cosmogonic Cycle. *Kalpa* is a Sanskrit word meaning ‘world cycle’ or ‘world age’, consisting of 1,000 mahayugas, totalling 4,320,000,000 years, about the age of the Sun and hence the Earth. For a mayayuga is 12,000 divine years, each of which is 360 earth years, consisting of four yugas diminishing in length in the ratio 4:3:2:1.

These yugas are Krita- or Satya-Yuga, Treta-Yuga, Dvarpara-Yuga, and Kali-Yuga, characterised as ‘Golden age’, ‘Sacrifices begin’, ‘Spiritual decline’, and ‘War, fear, and despair’. We are currently in a Kali-Yuga period, which began around 3102 BCE, when the mental-egoic, patriarchal epoch began, and will end in some 400 thousand years time, when a new golden age will begin. So the Hindu calendar consists of cycles of degeneration and rebirth, lasting the lifespan of Brahma—denoting the life-and-death cycle of the universe—which is about 311 trillion years, or 14 orders of magnitude.

However, Buddhists have a less limited view of time. In Buddhism, *kalpa* is a “term for an endlessly long period of time, which is the basis of Buddhist time reckoning. The length of a *kalpa* is illustrated by the following metaphor: suppose every hundred years a piece of silk is rubbed once on a solid rock one cubic mile in size; when the rock is worn away by this, one *kalpa* will still not have passed away.”



Taoists also have a cyclic view of time, encapsulated in the classic *Tai-chi-t'u* symbol, or ‘Diagram of the Supreme Ultimate’. The dots in each section indicate the potential of Yin or Yang to become primary when Yang or Yin is predominant. In Taoist philosophy, this cyclic process can continue indefinitely, in infinite time. However, as the mathematical sinusoidal curve above illustrates, this cyclic view of time is actually linear, with no limit in either direction.

In Western religion and science, time is seen as a linear arrow of time, with a finite beginning and end. In the seventeenth century, James Ussher, Anglican Archbishop of Armagh in Ireland, and John

Lightfoot, vice-chancellor of the University of Cambridge, made independent calculations of the date of the Creation based on a study of the Old Testament, Ussher deducing “that the first day of Creation began at nightfall preceding Sunday October 23, 4004 BC in the proleptic Julian calendar, near the autumnal equinox”.

Then in the 1920s, Edwin Hubble—using the Hooker telescope on the summit of Mount Wilson, near Pasadena, California—discovered that our Milky Way galaxy is but one of many in the hylosphere. Specifically, he discovered twenty-two galaxies, seventeen of which are moving away from each other, while the Andromeda galaxy is rushing towards the Milky Way, and is due to collide with us in three to five billion years, as Brian Cox tells us in *The Wonders of the Universe*. Focusing attention on the galaxies that are moving away from each other, astrophysicists then wound the clock back, surmising that a big bang originated the expanding universe about 13.7 billion years ago, according to the latest calculations. Of course, such a cosmology goes against commonsense, as Fred Hoyle pointed out in a BBC radio broadcast on 29th March 1948, when he coined the term *big bang*, as an alternative to the far more elegant steady-state cosmology that he favoured, along with Thomas Gold and Hermann Bondi.

However, neither the cyclic nor the linear view of time help us understand ourselves, most specifically what is causing us to behave as we do. We can shed light onto this problem by looking at change from the vertical dimension of time, rather than the horizontal, leading us to look at causality in a radically new way. In Book VIII, section 4 of *Physics*, Aristotle said that everything that changes is changed by something and in section 5 that there is a first agent of change that is not changed by anything. Thus the notion of an unmoved mover entered Western philosophy, expressed in *Metaphysics* in this way: “Now since that which is moved must be moved by something, that the prime mover must be essentially immovable, and eternal motion must be excited by something eternal.” How right he was. But Aristotle had no understanding of the vertical dimension of time: the Eternal Now. Neither, it seems, did Thomas Aquinas, who took Aristotle’s long cause-and-effect chain as the basis for his five proofs for the existence of God in *Summa Theologiae*.

Even David Bohm seems to have believed in this mechanistic process at one point in his career, for he wrote in the opening paragraph of *Causality and Chance in Modern Physics*, “In nature nothing remains constant. Everything is in a perpetual state of transformation, motion, and change. However, we discover that nothing simply surges up out of nothing without having antecedents that existed before. ... Everything comes from other things and gives rise to other things.” This book went on to examine the indeterministic phenomena of quantum effects in the light of the traditional deterministic nature of Newtonian mechanics.

So, as astrophysicists believe that the physical universe began in the past in finite time, when do they think it will end? Well, in the ‘Destiny’ episode of the BBC documentary series *The Wonders of the Universe* in 2011, Brian Cox said that the physical universe has a lifespan of “10,000 trillion trillion trillion trillion trillion years”, apparently drawing on Fred Adams and Gregory Laughlin’s *The Five Ages of the Universe*. This is  $10^{100}$ , just one googol, a name coined for a very large number by the nephew of Edward Kasner, as he tells us in *Mathematics and the Imagination*, a term adapted by Google for its search engine.

Now, as large as the lifespan of our physical universe is, it is important to note that this lifespan is minute compared to the infinity of eternities in mathematics. We can make sense of this apparent anomaly by noting that quantum physicists and astrophysicists have constructed the concept of multiverse to make sense of what they observe. William James coined the term *multiverse* in an address that he gave

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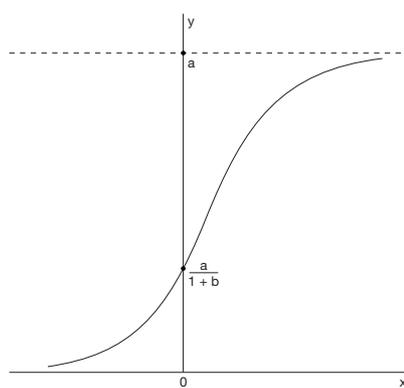
to the Harvard Young Men's Christian Association in 1895, titled 'Is Life Worth Living?' He sought to show that life is only worth living if we recognize that nature, as presented to us by materialistic science, "cannot possibly be its *ultimate word* to man".

Today, physicists are talking not about a single physical universe, but about a multiverse of hyloverses, which can exist both concurrently and consecutively, sometimes called parallel universes. For instance, Kim Weaver of NASA has said, "In some ways, the physics [of black holes] is very similar to what started the universe." And just as general relativity indicates that there could be many black holes, not observable directly, Martin Rees has said, "There could have been many big bangs, even an infinity of them. ... Whenever a black hole forms, processes deep inside it could perhaps trigger the creation of another universe." So, a new physical cosmology is emerging that is entirely consistent with experience, when we learn to understand ourselves, recapitulating the Cosmogonic Cycle.

### The Singularity in time

Having a slightly better handle on Eternity and Timelessness, we now need to look a little more closely at evolutionary growth processes, at the sigmoidal learning curve, the left-hand side of the Cosmogonic Cycle. The key point here is that evolution is an accumulative process of divergence and convergence, proceeding in an accelerating, exponential fashion by synergistically creating wholes that are greater than the sum of the immediately preceding wholes through the new relationships that are formed, apparently out of nothing. Or as Jan Christiaan Smuts put it in *Holism and Evolution* in 1926, "Evolution is nothing but the gradual development and stratification of progressive series of wholes, stretching from the inorganic beginnings to the highest levels of spiritual creation."

Some ten years earlier, D'Arcy Wentworth Thompson extensively studied the growth curve in Chapter III, 'Rate of Growth' of his monumental *Growth and Form*, surprisingly not summarized in John Tyler Bonner's abridgement of this influential book on morphogenesis. Others who have used the growth curve as a tool for thought are C. H. Waddington, Stephen Jay Gould, and Peter Russell. However, it is



possible to define this curve in precise mathematical terms, called the logistic function, as Pierre François Verhulst did in 1845, when studying Malthusian limits of population growth:

$$y = \frac{a}{1 + be^{-cx}}$$

This growth curve has applications in many different situations, not the least in human learning, when many are familiar with the flat part at the beginning, as we struggle to coordinate all the skills and ideas that we need for learning to accelerate exponentially. We can therefore call the turning point at the bottom of the curve the coordination point, which corresponds to the saturation point at the top, when learning reaches a plateau. It is important to understand the full shape of this curve. For when beginning a new project, it is easy to give up, saying, "I'll never manage this." And when growth is happening very fast, we think that it can continue indefinitely, such as the deluded belief about technological development and economic growth in today's capitalist society.

Now the growth curve applies to biogenesis, just as it does to noogenesis, as Niles Eldredge and Stephen Jay Gould pointed out in a paper they presented at the annual meeting of the Paleontological Society and the Geological Society of America, in Washington, D. C., on 2nd November 1971, titled 'Punctuated Equilibria: An Alternative to Phyletic Gradualism'. At the time, the general consensus among palaeontologists and biologists was that evolution progresses gradually. But this does not explain

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why there are large gaps in the fossil record. There are long periods of virtual standstill (equilibrium), punctuated by episodes of very fast development of new forms. In actuality, evolution progresses in fits and starts, for as Eldredge put it in his book *Time Frames*, “once a species evolves, it will not undergo great change as it continues its existence.”

We see a similar situation in the noosphere, as the German philosopher Karl Jaspers pointed out. He called 500 BCE the ‘axis of history’ and the 300 years either side of this pivotal point the Axial Age, when we saw the most amazing spurt of creative energy, although some consider the first axial period to be from about 600 to 300 BCE, the second being from the sixteenth century to the present day. It is amazing to see that nearly everything that influences the rational mind today was learned during two periods totalling less than a 1,000 years, although we should not deny the great contribution the Arabs and Indians made to human learning during what Francesco Petrarca ‘Petrarch’ pejoratively called the ‘Dark Ages’.

Foremost among the spiritual innovators during the Axial Age were Siddhartha Gautama (563–483 BCE), Lao Tzu, a mythical figure who supposedly lived in the sixth century BCE, Heraclitus (535–475 BCE), the mystical philosopher of change, and Parmenides (c. 520–c. 450 BCE), a major influence on Plato’s philosophy. Some also faced the challenge of how to create a harmonious society, foremost among them being Confucius (551–479 BCE), Socrates (c. 469–399 BCE), and Plato (428/427–348/347 BCE). In philosophy, including metaphysics, and in science, Pythagoras (born between 580 and 572 BCE, died between 500 and 490 BCE) and Aristotle (384–322 BCE) were two other giants of the times. Mahavira (599–527 BCE) and Zarathustra (Zoroaster in Latinized Greek) (c. 628–c. 551 BCE) also had a significant influence during these times as the founders of Jainism and Zoroastrianism, respectively. And we should not forget about Euclid (323–283 BCE), who systematized the mathematical ideas known at his time, building on Aristotle’s either-or, linear logic and laying down the principles of axiomatic mathematical proof, which would be shattered by Kurt Gödel in 1931 in his incompleteness theorems.

However, if we are to fully understand our creative learning processes, we need to put them into a cosmic context. This is made crystal clear in Pierre Teilhard de Chardin’s four-stage model of evolution, following what he called the law of complexity-consciousness, the greater the complexity, the greater the consciousness. We can see what this means for evolution as a whole from his four stages of evolution, illustrated in this table:

Evolutionary stages, years ago						Transition stages, years ago		
Teilhard	Type	Realm	Start	End	Duration	Start	End	Duration
Prelife	Physical	Hylosphere	14,000,000,000	4,500,000,000	9,500,000,000	4,500,000,000	3,500,000,000	1,000,000,000
Life	Biological	Biosphere	3,500,000,000	25,000	3,500,000,000			
Thought	Mental	Noosphere	5,000	50	5,000	25,000	5,000	20,000
Superlife	Spiritual	Numinosphere	-50	-300	250	50	-50	100

Each realm in this table is nested into the succeeding one. So we can only truly understand evolutionary processes by studying the way we learn in the noosphere, rather than studying the wondrous diversity of species as biologists since Darwin have been doing. And we can only understand what the Universe is from the perspective of the unbounded numinosphere, rather than standing in the tiny hylosphere, as physicists are wont to do.

As this table indicates, we are currently in the middle of a 100-year transition period between what we can call the mental-egoic age (the self-centred me-epoch, focused on conflict and competition) and the age of universal spirituality (the socially centred us-epoch, focused on peace and cooperation). We can say

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that this radical transformation of consciousness began with the counter-cultural movements of the 1960s, symbolized by 'flower power', sometimes induced by consciousness-expanding psychotropic drugs, the basis of Aldous Huxley's utopian novel *The Island* from 1962, as a riposte to his dystopian novel *Brave New World* from 1932.

However, useful as it is, Teilhard's model doesn't directly illustrate the exponential rate of human learning, especially the unprecedented pace of technological innovation during the second axial period. For as John Templeton wrote in 2000, "More than half the scientists who ever lived are alive today. More than half of the discoveries in the natural sciences have been made from 1900 to 1999. ... More new books are published each month than were written in the entire historical period before the birth of Columbus." He was then naturally led to the question, "Is the slow progress of prehistoric ages now speeding up?"

Fairly obviously, this is clearly the case. But quite extraordinarily, answering the question "What is causing scientists and technologists to drive the pace of evolutionary development at exponential rates of acceleration?" is not on the agenda of any university, research institute, technological research and development division, or governmental agency anywhere in the world. So, for the most part, we are living in ignorance of what is causing us to behave as we do, unable to answer the Big Questions of human purpose and ultimate reality that it is the mission of the John Templeton Foundation to answer.

Now, while Teilhard showed that evolution produces ever-increasing complexity and hence consciousness, we need to turn to chaos theory, the complement of complexity theory, to understand what is happening to humanity at the present time. Leaps in complexity in self-organizing systems are known as bifurcations, divisions into two forks or branches, first studied by Robert May at Princeton when studying the strange properties of the logistic difference equation, a discrete-time demographic model analogous to the logistic equation on page 12:

$$x_{n+1} = rx_n(1 - x_n)$$

May used this equation to show the Malthusian principle that populations cannot grow indefinitely. Sooner or later populations must reach a point of equilibrium. Here, the parameter  $r$  represents the rate of growth, the term  $1 - x_n$  keeping the growth within bounds, since as  $x_n$  rises,  $1 - x_n$  falls. However, when May studied various values for  $r$  and  $x_0$ , as models for imaginary populations of fish, he discovered that sometimes the value of  $x$  would oscillate at bifurcation points, which would then split at more and more bifurcation points until this periodicity gave way to chaos at a certain point, called the 'point of accumulation'. Although the mathematics behind this accumulation point is quite different from that of the logistics equation, we could say that it corresponds to the saturation point in the growth curve.

We can look at evolution since the most recent big bang as a series of evolving systems, as the Russian dissident Valentin F. Turchin did in *The Phenomenon of Science* in 1977, as Béla H. Bánáthy did in *Guided Evolution of Society* in 2000, and as Ervin László, the originator of the Akashic paradigm, has done in his many books. However, to understand how and when evolution's accumulation point arrives in human evolution, we can use much simpler mathematics than that used in complexity and chaos theories.

As evolution is an accelerating, exponential process, the time periods between major turning points get shorter and shorter, simply represented in a diminishing geometric series, where each successive term gets shorter by a constant factor. But rather surprisingly, the sum of an infinite series of such terms is not infinite; it is finite, called a mathematical singularity, illustrated in this expression:

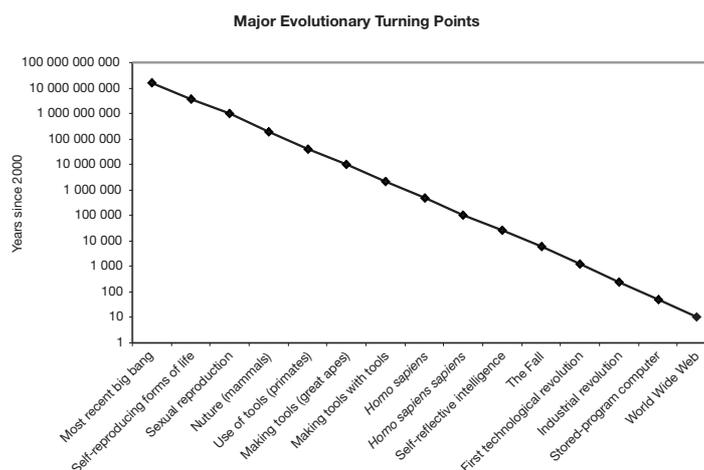
$$s = \sum_{i=0}^{\infty} \frac{a}{r^i} = \frac{ar}{r-1}$$

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For instance, when  $a = 1$  and  $r = 2$ , we have:

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots = 2$$

In ‘The Sharing Economy’, assuming that banks are held to a required reserve ratio of 9:1, we use this formula to show how banks can lend up to ninety times more money than they have on deposit, creating money out of thin air in today’s inherently unstable global economy. However, in Teilhard’s evolutionary model, the first term in this series corresponds to the period between the most recent big bang and the emergence of the first self-reproducing forms of life on Earth. Viewing evolution as a series of bifurcating systems, we can then use the Feigenbaum constant (about 4.472) to plot some major evolutionary turning points, showing that evolution has passed through its accumulation point.



Nick Hoggard, who developed this evolutionary model around 2000 as a scientific extension of Carl Johan Calleman’s evolutionary model based on the Mayan calendar, compared this bifurcating model to a dripping tap. When a tap is first turned on, drips are equally spaced and paced. But as the tap is opened up, drips become faster and faster and more and more erratic until the tap is turned fully on, no longer dripping. Similarly, evolution is now flowing continuously; there are no more discrete evolutionary turning points to be discerned. A simple calculation shows that this momentous event occurred around 2004, slightly different from the end of the sixteen billion-year Mayan calendar, whose last day is considered to have been 20th December 2012, using the Goodman-Martinez-Thompson (GMT) correlation coefficient to astronomers’ proleptic Julian calendar of 584,283.

Both these dates are different from 2023, when Victor Vinge believes a technological singularity will occur, described in a NASA paper he wrote in 1993 called ‘The Technological Singularity’: “Within thirty years, we will have the technological means to create superhuman intelligence [in machines]. Shortly after, the human era will be ended.” Similarly, Ray Kurzweil has suggested that humanity is rapidly heading towards an age of spiritual machines, when “a \$1,000 computer will match the processing power of the human brain.”

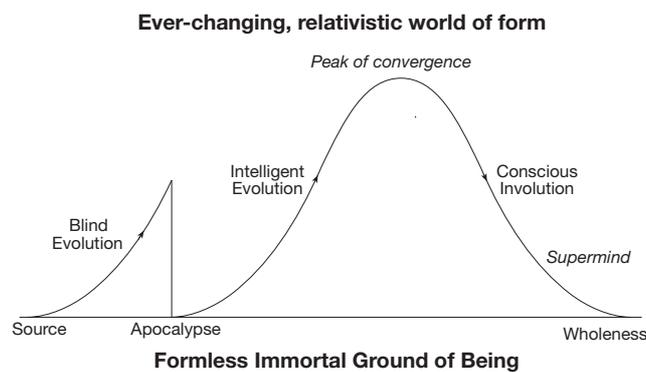
Hans Moravec goes even further, believing that computers are members of a new species, which he calls our ‘mind children’. As he says, “Intelligent machines, which will grow from us, learn our skills, and initially share our goals and values, will be the children of our minds. ... It is a world in which the human race has been swept away by the tide of cultural change, usurped by its own artificial progeny.” He thus foresees an Age of Robots, saying, “The fourth robot generation, and its successors, will have human perceptual and motor abilities and superior reasoning powers. They could replace us in every essential task and, in principle, operate our society increasingly well without us.”

## An ontogenetic perspective

Of course, the idea that computers are the leading edge of evolution rather than human beings is utter nonsense, as many intuitively know today. It is not true that we humans are machines and nothing but machines. But how can we become totally free of our mechanistic conditioning in the manner that J. Krishnamurti and Vimala Thakar suggested in *Education and the Significance of Life* and *Spirituality and Social Action*, respectively?

Is it possible for each of us, as individuals, to take responsibility for the evolution of the entire human race, as Andrew Cohen asked in *Freedom Has No History* in 1997? As he wrote, “To succeed, we must be prepared to do battle with the powerful conditioning, conscious and unconscious, of the whole race. That means we have to come out from the shadows and be seen. Like Atlas, we have to be willing to hold up the whole world on our shoulders. It’s an awesome task.”

Well, in my case, my ontogeny has not actually followed the large bell curve in the simplistic diagram of three ontogenetic paths on page 7. Rather, the diagram below provides a better representation of what has happened to me in my lifetime, remembering that in Reality all this movement has actually been taking place in the Eternal Now, in the vertical dimension of time as my energies have moved up and down, away from and towards our Divine Source, the Origin of the Universe.



The section marked ‘Blind Evolution’ represents the first thirty-eight years of my life, as I had very little awareness of what I was learning or why. All I knew was that what I had been taught in religion, science, and economics between the ages of eight and eighteen, when I was majoring in mathematics at university, did not make any sense. So my ontogeny began to break free of cultural phylogeny at a comparatively early age, unlike most of my contemporaries, whose ontogenies recapitulated the phylogeny of the culture we were born into.

However, it wasn’t until 1980, when I was engaged in developing a national marketing programme for decisions support systems for IBM in London, that my ontogeny began to break clean away from Western civilization in order to recapitulate the Cosmogonic Cycle, as I can now see. As the diagram indicates, I passed through an apocalyptic death and rebirth process. This life-changing event was apocalyptic because *apocalypse* derives from Greek *apokalupsis*, from *apokaluptein* ‘to uncover’ or ‘to reveal’, from the prefix *apo* ‘from, away’ and *kaluptra* ‘veil’. So *apocalypse* literally means ‘draw the veil away from’, indicating the disclosure of something hidden from the mass of humanity: the Principle of Unity, providing me with the means to unify the nonphysical and physical causes of change in the Universe in Wholeness.

As I describe in ‘Integral Relational Logic’, it was as if a big bang erupted in the depths of my psyche, giving birth to a radically new universe, new, at least, to the West. For IRL did not come into existence through random mutations of the DNA molecule, which is the explanation for evolutionary processes

given in James Watson's *DNA: The Secret of Life*. Rather, a better explanation for this phenomenon is that it arose through the action of Kundalini, as Muktananda describes in *Kundalini: The Secret of Life*: Kundalini "creates the universe out of Her own being, and it is She Herself who becomes this universe. She becomes all the elements of the universe and enters into all the different forms that we see around us."

An increasing number of people are experiencing Kundalini awakenings today, as the multitude of books on the subject appearing testify. But while such life-changing events are not unusual, they were little studied by psychologists until 1989, when William R. Miller set out with Janet C'de Baca to scientifically study what they call *quantum change*, "drawing on both the concept of a quantum leap and unpredictability in quantum mechanics". To this end, a writer for the *Albuquerque Journal* wrote an engaging feature story on quantum change, inviting people to describe their experiences in confidential interviews. Miller and C'de Baca received eighty-nine telephone calls, leading to fifty-five interviews. These case studies then provided the basis for a tentative theory of these remarkable events, published in 2001, as *Quantum Change: When Epiphanies and Sudden Insights Transform Ordinary Lives*.

What they found is that quantum changes could be categorized in two types, with much overlap between them: insightful and mystical. We could also call the former cognitive, while Miller and C'de Baca call only the latter epiphanic. In a sudden insight, "a person comes to a new realization, a new way of thinking," rather like the familiar 'aha' experience, but much deeper and of such a magnitude as "to leave the person stunned or breathless". In such cases, "There may be no immediate sense of being acted upon or in the grip of something beyond the self, as is usually the case with epiphanies."

On the other hand, mystical transformations, or epiphanies, are experienced as quite out of the ordinary, in many respects resembling classic descriptions of mystical experiences. However, as often as not, these are transitory, while with an epiphany the person knows immediately that something major has happened and that life will never be the same again. "What epitomizes the mystical type is the noetic sense of being acted upon by something outside and greater than oneself."

But while such experiences can be described, often in lyrical language, how can psychologists explain these phenomena within a discipline and worldview much influenced by the so-called natural sciences? Well, in the penultimate chapter of their book, Miller and C'de Baca made an attempt to develop such an explanation, but in the end said, "Perhaps there is something flawed in the way we think about human change. Perhaps we do not yet comprehend enough about psychological and spiritual reality to understand why quantum changes occur."

Then, having been shown the Principle of Unity—the fundamental design principle of the Universe at midsummer 1980—my learning began to accelerate at a superhyperexponential rate of development as I learned to colluminate, to see the Universe holographically. Then, in April 1982, when I was helping to design a new management accounting system for the Kuwait Institute for Scientific Research, I became aware that all the divergent streams of evolution since the most recent big bang had converged within me at evolution's Omega Point, much as Teilhard prophesied in *The Human Phenomenon*, written a couple of years before I was born. In just two years, fourteen billion years of evolution from Alpha to Omega had recapitulated themselves within this being that I am in a gigantic, apocalyptic, creative process.

This might seem strange, for normally, our creative energies produce structures in the relativistic world of form, such as a painting, symphony, novel, opera house, washing machine, scientific theory, software product, proof of a mathematical theorem, this document, or whatever. However, there is one creative process that terminates in Formless, Nondual Wholeness at evolution's Omega Point, its glorious culmination: the entire process of evolution from Alpha to Omega.

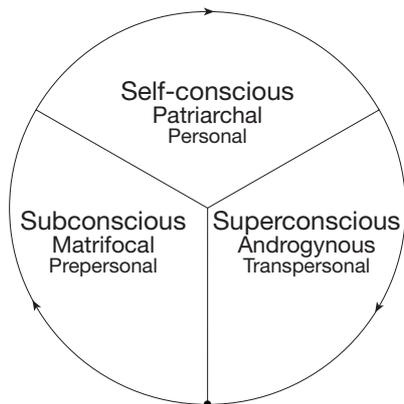
### Recapitulating the Cosmogonic Cycle

As this was an unprecedented event in human history, it has taken most of my energies since then to understand what has happened to me in my lifetime, returning to the Alpha Point by the complementary process of involution, as described in Section ‘Transcending the Categories’ in ‘Integral Relational Logic’. In a sense, this realization is not new. As I have discovered, Nondual Wholeness is just the other side of the coin from Nondual Oneness, which mystics through the ages have discovered through various meditative and contemplative practices. Furthermore, I have realized that no one can return Home to Wholeness, for none of us have ever left Home. Wholeness, the union of Wholeness and Oneness in a primary-secondary relationship, is the True Nature, Authentic Self, and Genuine Identity of everyone on Earth.

The overall effect of this very unusual ontogeny is that my own individual consciousness has expanded and deepened to such an extent that it is now coterminous with Consciousness itself. By recapitulating the Cosmogonic Cycle, I have come to understand myself, who I am, and of my relationship to the Divine Cosmos, explained a little more in Subsection ‘Who are we?’ in ‘Integral Relational Logic’.

### A phylogenetic perspective

However, this does not mean that human phylogeny will necessarily consciously recapitulate the Cosmogonic Cycle before *Homo sapiens sapiens* becomes extinct within a few generations. Indeed, in spite of and because of the great awakening of Love, Consciousness, and Intelligence taking place today, it looks most unlikely that ‘wise-wise human’ will awaken sufficiently to fully understand what is happening to our species. Nevertheless, let us look at the prospects to see if a miracle could happen.



Formless Alpha/Omega Point of Evolution

We can best begin by showing Ken Wilber’s three-epoch model of human phylogeny as the recapitulation of the Cosmogonic Cycle, from Alpha to Omega and back again. Here, the subconscious, matricentric stage is the Great Mother Goddess epoch, corresponding to the transition from the biosphere to the noosphere in Teilhard’s model. The self-conscious, patriarchal stage is the 5,000-year process of noogenesis, leading to the eschatological super-conscious, androgynous epoch at the end of time.

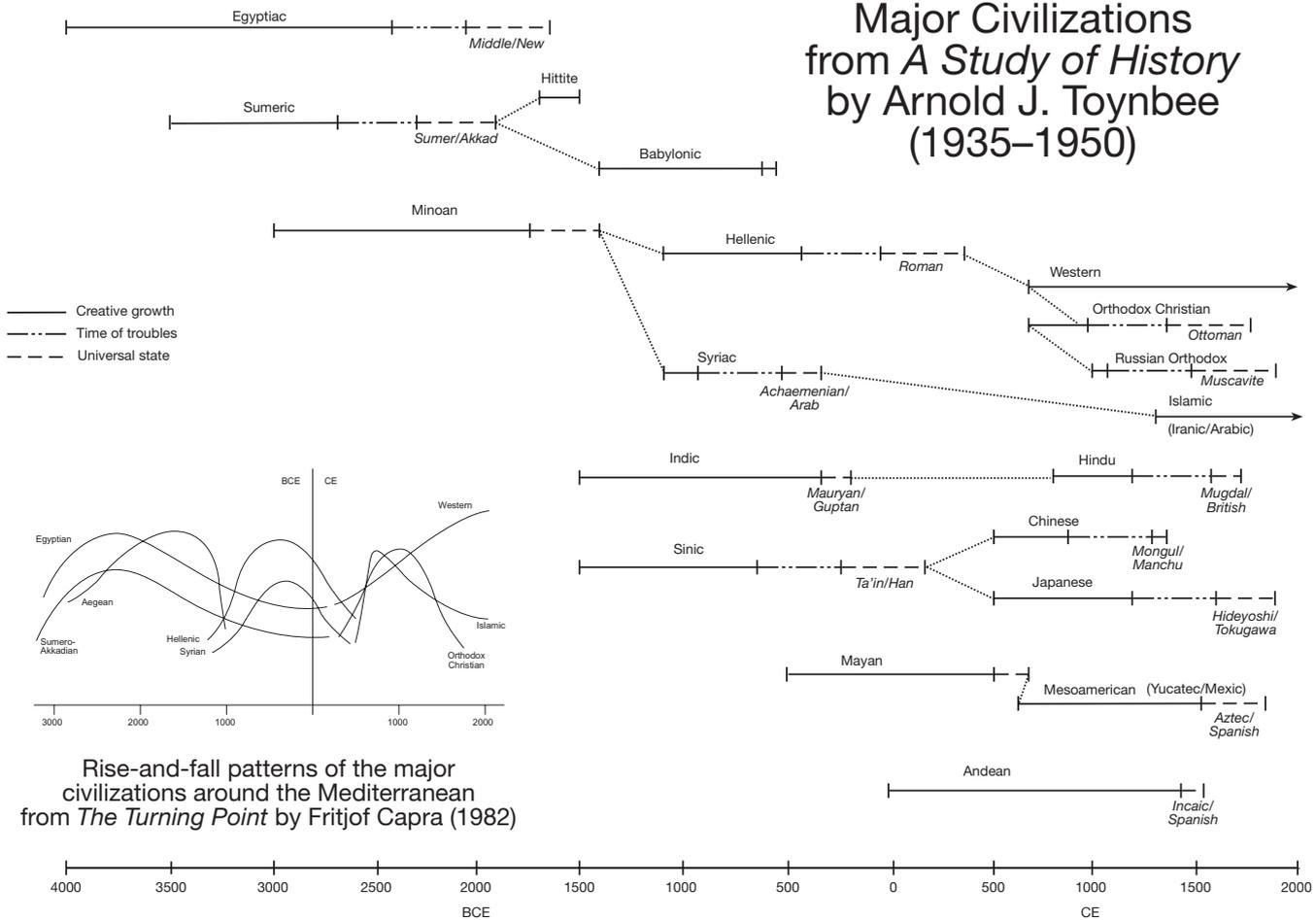
Now, the first and third epochs in this model have some similarities because what is happening today is that we are rediscovering the ancient wisdom of our forebears, before the egoic mind began to dominate human affairs, with both great benefits and catastrophic effects. However, as Ken points out, to confuse the two is to fall for the pre-trans fallacy. We are actually moving forward into a superintelligent Age of Light, not moving back to some Golden Age that the myths have described.

But for this to happen, all the civilizations that have dominated human affairs during the patriarchal epoch have to come to an end. The diagram on the next page provides a timeline of the 20-odd major civilizations that Arnold Toynbee identified in his monumental *A Study of History* together with a diagram taken from Fritjof Capra’s *The Turning Point: Science, Society and the Rising Culture* showing the life-and-death cycles of civilizations around the Mediterranean.

With evolution now passing through the most momentous turning point in its fourteen billion-year history, it is time for Western and Islamic civilizations to die, along with the peculiar atheistic communist/capitalist Chinese culture. For we cannot get to where we are going as a species by starting where we are today. If our children and grandchildren are to have any chance of understanding them-

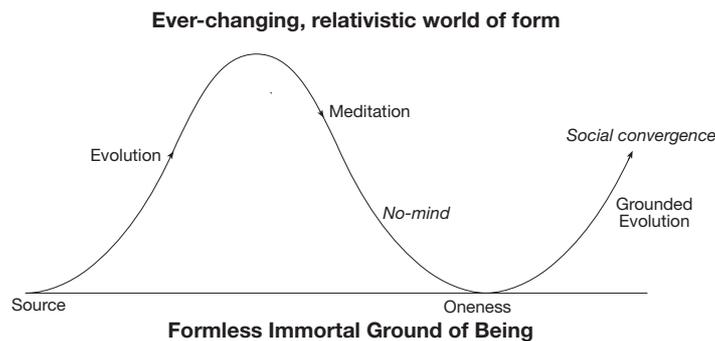
Understanding Ourselves

Major Civilizations  
from *A Study of History*  
by Arnold J. Toynbee  
(1935–1950)



selves, recapitulating the Cosmogonic Cycle and incarnating human phylogeny as a whole in their ontogenies, we need to help them to start afresh at the very beginning, at the Alpha Point of evolution.

But, are today's evolutionary leaders helping the next generations to recapitulate the Cosmogonic Cycle in its entirety? Not really, despite the popularity of Joseph Campbell's *The Hero with a Thousand Faces*, as this diagram illustrates.



This diagram has arisen from Andrew Cohen's *Evolutionary Enlightenment*, addressing a vital need in society today. Normally, when people recapitulate the Cosmogonic Cycle by taking the short cut to God, as depicted in the small bell curve on page 7, they say that they are fully liberated and awakened, living in *Heaven*, originally perceived as where the gods live, called *Nirvāna* 'extinction' or *Moksha* 'liberation' in the East. However, while such a spiritual journey heals us of schizophrenia, detached from Reality, it does not enable us to heal our fragmented minds, thereby healing us of the delusionary beliefs taught in religion, science, medicine, mathematics, law, politics, and business today.

For people's direct experience of the Divine, often influenced by Eastern mysticism, shows quite clearly that Western civilization is a culture living far removed from Reality, based as it is on the false

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belief that we human beings are separate from God, Nature, and each other. So we urgently need to rebuild society on the realization that our Authentic Self is Divine, taking evolution in a quite new direction, as described in Subsection 'Becoming free of our ancestry' on page 5.

However, as we are species in transition, what this means is not yet fully understood. Perhaps this is not surprising, for as Max Planck sadly remarked in his *Scientific Autobiography*, "a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

Since then, Andrew has expanded on what this means, as much as a social activist as a spiritual teacher. As he says in *Evolutionary Enlightenment*, published in 2011, "*This spiritual impulse moves in two directions simultaneously.*" Continuing, "The path that most mystics in the enlightenment tradition have taken is not the future-oriented one; it is the perennial meditative path that countless seekers have followed for millennia in the pursuit of spiritual illumination," in the Timeless.

However, as Andrew is realizing, this is not sufficient. As he says, "I believe the spiritual impulse today is calling us not away from the world but toward that big next step we need to take *in* our world." For once we have found the Truth, "We will find ourselves compelled not to rest there, but to reenter the fray of the creative process." "Traditional enlightenment is about being free from history altogether. The new evolutionary enlightenment is about creating the future unendingly."

However, despite being a leading evolutionary leader, Andrew cannot provide a clear definition of what evolution is to his followers. For instance, in his quote of the week on 25th February 2013, he answered the question, "What is evolution?" with this statement: "Whenever I explain what evolution is, I say simply this: Evolution is a cosmic process that is going somewhere in and through time." This is far too vague to serve as guiding principle for our species at this critical time, falling far short of the definition of evolution on page 12.

Sadly, however, Andrew has confused the horizontal and vertical dimensions of time, perhaps arising from similar confusions in Aurobindo Ghose and Ken Wilber's concepts of evolution and involution. A problem arises when we look at evolution and involution from the perspective of the horizontal dimension of time, for it appears that evolution progresses from matter to body to mind to soul to spirit in hierarchical levels of increasing consciousness, traditionally called the Great Chain of Being, explored by Arthur O. Lovejoy in the William James Lectures in 1933.

As Ken says in *Up from Eden*, "Thus history, from this viewpoint, is basically the unfolding of those successively higher-order structures, starting from the lowest (matter and body) and ending with the highest (spirit and ultimate wholeness)." And to Aurobindo in 'Involution and Evolution' in *The Supramental Manifestation and Other Writings*, "The word *evolution* carries with it in its intrinsic sense, in the idea at its root the necessity of a previous involution."

But in the Eternal Now, which alone is Reality, nothing precedes evolution. All beings in the relativistic world of form emerge directly from our Divine Source and return there at the end of their lifespans. This fundamental model of evolutionary and involutory processes applies equally in the hydrosphere, biosphere, and noosphere. From this perspective, both matter and mind follow essentially the same patterns. So despite appearances to the contrary, in Reality creativity takes place in the Eternal Now, culminating in Wholeness at evolution's Omega Point.

What this means is that it has taken evolution some fourteen billion years to reveal to intelligent beings that the entire enterprise is nothing but an illusion, a principle tenaciously taught by the Advaita sage Vijai Shankar, a former medical practitioner and researcher, at the Academy of Absolute

Understanding. Another Advaita sage, Ramesh S. Balsekar, formerly president of the Bank of India, makes a similar point in his magnum opus *the Ultimate Understanding*. It is from this perspective of Absolute and Ultimate Understanding that we can view our lives in the relativistic world of form with Total Understanding.

This leads to another major confusion, which arises from the term *conscious evolution*, no doubt arising from Julian Huxley, who wrote in the foreword to first English translation of Pierre Teilhard de Chardin's *The Phenomenon of Man*, "in modern scientific man, evolution was at last becoming conscious of itself—a phrase which I found delighted Père Teilhard." It is interesting to note that Richard Dawkins is also delighted by this statement, as he told the world at a debate at Oxford University in February 2012 on science and religion with Rowan Williams, then the Archbishop of Canterbury.

But how do today's evolutionary leaders view conscious evolution? Well, Andrew is co-chairing The Evolutionary Leaders Council with Barbara Marx Hubbard, engaged in a global dialogue on The Meaning of Conscious Evolution. It seems that this council is an offshoot of a meeting that was convened by the Chopra Foundation, the Source of Synergy Foundation, and the Association for Global New Thought on 26th July 2008, leading to 'A Call to Conscious Evolution: Our Moment of Choice'.

In *Conscious Evolution*, Barbara suggests that conscious evolution "is a quest to understand the processes of developmental change", a new worldview that is the opening of the next stage of human development, "the second great event in the history of the universe", the first being the most recent big bang which supposedly brought it into existence. And on her website, she answers the question "What is Conscious Evolution?" in part with this passage:

In simple terms Conscious Evolution takes place when we intend to grow in consciousness and use our increasing awareness to guide our actions and achieve a positive future. Bela H. Banathy, author of *Guided Evolution of Society*, offers this additional understanding of Conscious Evolution: It is a process by which we can individually and collectively take responsibility for our future. It is a process of giving direction to the evolution of human systems by purposeful action. And most importantly, Conscious Evolution enables us, if we take responsibility for it, to use our creative power to guide our own lives and the evolution of the systems and the communities in which we live and work. It is a process by which individuals and groups, families, organizations, and societies can envision and create images of what should be, and bring those images to life by design.

However, there is much more to conscious evolution than this. We see in 'Integral Relational Logic', the second article in this trilogy, that humans have been forming concepts of numbers such as three for thousands of years without being conscious of the fact that they are implicitly using the concept of set in order to do so. Indeed, it is only when we recognize the central role that set plays in concept formation that evolution can become fully conscious of itself, which leads to the necessity for a new word: *evolutionary*, to denote such phylogenetic ontogenies.

In *Evolutionaries*, Carter Phipps writes "*Evolutionist* is defined in dictionaries as a person who is an 'adherent to the theory of evolution'. ... It is a term often contrasted with *creationist*." He then goes on to write, "Evolutionary is a play on the word *revolutionary*, and I mean it to convey something of the revolutionary nature of evolution as an idea. Evolutionaries *are* revolutionaries." Carter then gives three critical characteristics common to evolutionaries:

Evolutionaries are cross-disciplinary generalists.

Evolutionaries are developing the capacity to cognize the vast times scales of evolutionary history.

Evolutionaries embody a new spirit of optimism.

However, behind people's wishes for evolution to lead us into a utopian society lies the ego, generally driven by un- and subconscious conditioning, taking us away from our goal to realize the Nonmanifest while living in the world. Andrew Cohen has realized this difficulty, for he announced in a blog on 26th

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June 2013 that he was taking a sabbatical from his leadership of the EnlightenNext movement. For while he has long taught that enlightenment is about transcending the ego, some of his closest students have pointed out to him that his ego is still alive and well, effectively blocking evolution from reaching its glorious culmination in society as a whole. So turning his teaching onto himself is a tremendously courageous and honest step, which augers well for the evolutionary movement as a whole.

For in the words of Vimala Thakar in *Spirituality and Social Action: A Holistic Approach*, “In a time when the survival of the human race is in question, continuing with the status quo is to cooperate with insanity, to contribute to chaos.” She therefore asks, “Do we have the vitality to go beyond narrow, one-sided views of human life and to open ourselves to totality, wholeness?” For as she says, “The call of the hour is to move beyond the fragmentary, to awaken to total revolution.” Nothing less than Total Revolution, Total Freedom, and Total Understanding will enable us to recapitulate the Cosmogonic Cycle as a species, humbly fulfilling our destiny as Divine, Cosmic beings, living in love, peace, and harmony with each other and our environment.