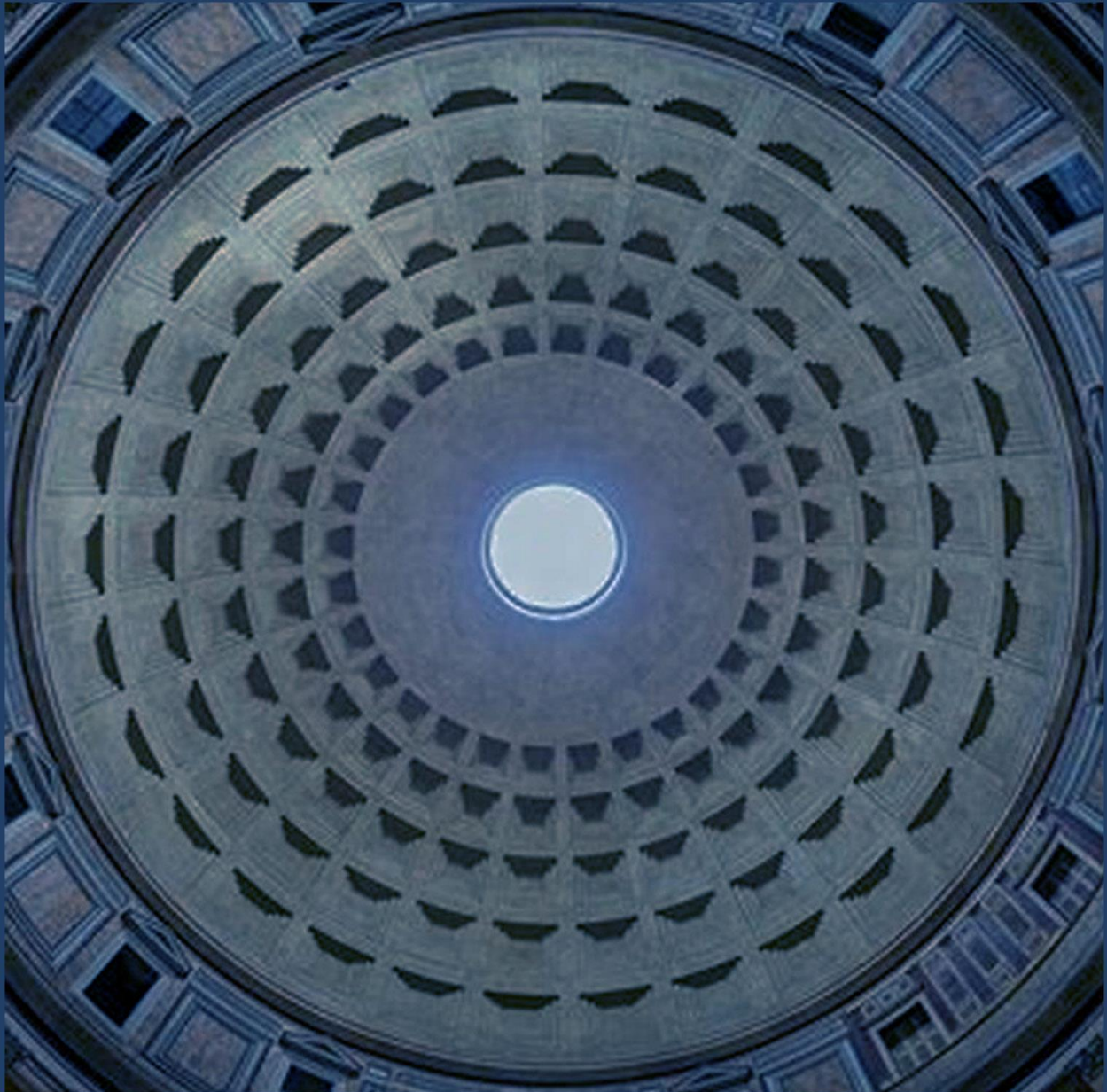
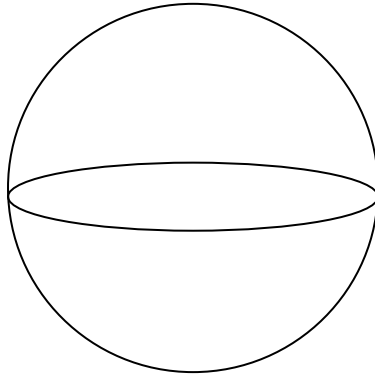


FULLCIRCLE



The Geometry of Modern Metaphysics

Stephen M. Nanninga



An Exercise in Jnana Yoga

Much has been written in recent decades about the intriguing parallels between modern physics and ancient philosophy. What is needed is a way to conceptually illustrate the scientific and mystical principles involved that does not necessarily require a background in physics or metaphysics.

Fortunately, an interpretation of unified field physics provides a geometric picture of the Universe that clearly displays the principles of the ancient mystical wisdom. The geometry provides insight into the most challenging details of both fields of study while showing how they actually *support and clarify* each other.

“I have only passed a thread through gems pierced by the hard work of great scholars.” – Kalidasa

(not included in Kindle edition):

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1. Introduction

Metaphysical cosmology is not generally taken seriously within the framework of modern scientific thought. This is understandable. Metaphysics by nature is nonobjective, so it is ruled out by definition in conventional science where theories and ideas must remain just that until verified objectively.

However, as we come to understand our universe as a whole, we begin to realize that modern physics *is* metaphysics in a rediscovered and more perfected form. Classical science, the objectively-knowable perspective on reality and the entire universe it describes, can be recognized as an objective expression of a transcendental state of reality which, by virtue of its unchangeable unified condition, is even more real than the physical universe itself.

The value of a metaphysical system of teaching is often misunderstood within the framework of modern organized religions. This is unfortunate. When religious traditions become so dogmatically entangled that they lose any form of metaphysical understanding of the transcendental omnipresence, they become essentially stagnant and blind to what a spiritual universe is all about.

Students of comparative religion and those familiar with the ancient mystical philosophies do not have a problem with the abstract universal principles of metaphysics and how they relate to the parochialisms of theological traditions. Ideally, the ultimate goal of any spiritual tradition should be to bring the seeker to a state of spiritual awareness in which all such traditions are assimilated, and at the same time, not needed in their dogmatic form.

And the end of all our exploring
will be to arrive where we started,
and know the place for the first time.

T. S. Eliot

2. The Metaphysics of Nondualism

Sri Aurobindo, an Indian philosopher and sage of the highest order, tells us that [“An evolution of consciousness is the central motive of terrestrial existence.”](#)¹ The evolution of consciousness is also the evolution of the soul, on both the individual level and the Universal level.

Those who have explored the ancient philosophy of the East or the modern physics of the West are well aware of the strange concepts and ideas being expressed. They will have a head start in recognizing the intuitive beauty of the parallels. Yet the most important and exciting ideas can be grasped by anyone who is interested in exploring the deepest mysteries of the Universe. No doubt it will require some mental gymnastics. A little geometric visualization, however, can be of considerable help.

Our worldview is typically based on logic and objective reason, but it turns out that those deepest mysteries of the Universe challenge the very foundation of that worldview. Today's physics, for example, shows us that to think of the Universe as being composed of separate particles scattered around in space is actually a limited view of an underlying unified state of reality. The experience of separateness does indeed seem to be illusory, just as sages and mystics have been telling us since before we can remember.

The synthesis of scientific and spiritual thought, which has actually been happening for a very long time, requires (1) the recognition that science has already transcended the physical world, and (2) that spiritual reality be understood at the metaphysical level. At the same time, metaphysics deals with universal principles which naturally transcend religious dogma and help us get beyond the idea of a personified Creator. Of course, everyone must follow their own path to spiritual realizations.

The central principle of the great wisdom of the East is **Nondualistic Mysticism**: There is only one True Reality, and That never changes. It is a single state of Being, transcendental, timeless, formless. Ultimately, there is *only* that One Reality.

transcendental, yet omnipresent
timeless, yet the source of spacetime
formless, yet the creative essence of all form

The physical Universe is merely a fragmented and transient expression of that One Reality. Reality is Spirit. Reality is Consciousness. Although we in the West tend to refer to this as Eastern philosophy, the mystical foundation is common to all spiritual traditions and has been better referred to as the **Ancient Wisdom**.

It has long been pointed out that this vision of Oneness from the ancient teachings seems to find a modern parallel in science's vision of a unified Superforce which creates everything. The most exciting aspect of the parallel, however, is the way in which one discipline can help us to understand the other. For this reason, and for those seekers of spiritual understanding not willing to ignore what science has learned, a modern metaphysical system is invaluable.

Of course, no metaphysical system can represent the transcendental in its true form. By definition, transcendental reality is *unknowable*, and to attribute any form whatsoever to the One Reality is **idolatry**. A metaphysical system is merely a tool to help bring forth *realizations* of those higher realities which cannot be fully represented in three-dimensional space, let alone on a two-dimensional page.

The reason we can talk about higher-dimensional realities within three-dimensional space is because, in the same way we can understand how a circle drawn on paper can represent a sphere, we can use the conceptual space of our mind to understand how a limited objective model can represent a higher reality. This conceptual mind-space takes us beyond the simple logic of concrete thought and gives us the capacity for abstract and complex conceptual thought. In metaphysical philosophy, it is called the **higher mind** and is understood to reside within the higher dimensions of **depth-consciousness** known as the **soul**, and those dimensions do indeed go beyond three-dimensional physical space.

Consciousness and the mind do not originate from, nor are they contained within, the brain. Multidimensional depth-consciousness is the body-soul-spirit connection, the realm of meditation, like an axis of transcendence from the physical body, through the soul, to the spiritual essence of being. Its source is our force of **spirit**, our innermost reality, which is always unified with the One Reality. That is the heart of Nondualism and the Ancient Wisdom.



The metaphysical difference between the soul and the spirit is important and basically simple. The spirit is timeless while the soul evolves. The spirit is eternal, unchanging, and is as ethereal as a vector of force. It is the light, the life force, within the soul. The soul has depth, higher-dimensional structure, and evolves with time, both during an incarnation and between incarnations.

It is interesting to note that since the soul is made of the higher dimensions of the Universe, it always remains within the higher dimensions. The soul never actually travels through physical space. It is the **true self** around which external realities manifest, even between incarnations. During a transition, the soul vacates the body by retracting from the physical and going within, into the higher dimensions, like the way consciousness retracts into the astral dimension during sleep. Even though there may be a temporary experience of being outside the body within the physical world during an out-of-body experience, for example, the soul itself is never actually separated from the higher dimensions. The timeless unity of the higher dimensions is fundamental to the nondualistic nature of the One Reality.

It is our higher mind, giving us the capacity for abstract thought as well as for transcendental realization and enlightenment, which distinguishes us from the other animals of our world. According to theosophical sources, it arises from the

fact that we have an individualized soul, while other animals have a group soul specific to their species. Without a higher mind, a chimpanzee is not likely to ponder the infinity of space, but having a group soul, it will have superb powers of species-level instinct. They each have their own individual spirit, but not an individualized soul. All souls, individual or collective, reside within and never leave the same higher-dimensional region of the Universe.

To help get a handle on the metaphysics of Nondualism, it is important to realize that the Ultimate Reality of Transcendental Unity is not anywhere 'out there' in physical space. The higher dimensions of depth-consciousness are within us in the same way that the higher dimensions of physics are within every atom. As higher dimensions are reached, higher states of unification are realized. More than a mere parallel, this is where physics and metaphysics actually coincide and reflect each other.

It is important to keep in mind that the lower dimensions are created by the higher dimensions. In transcendental meditation, we approach and experience these higher dimensions within consciousness, recognizing each higher dimension, in turn, as being the more real level of our essence of being.

Consciousness thus proceeds from the more limited to the more comprehensive, from lesser to greater intensity, from lower to higher dimensions, and each higher dimension includes the lower ones by coordinating its elements in a wider and more intricate structure of relationships. ... Thus the reality of a lower dimension is not devaluated or eliminated by the higher one, but only relativized.

Lama Anagarika Govinda

*Creative Meditation and Multi-Dimensional Consciousness*²

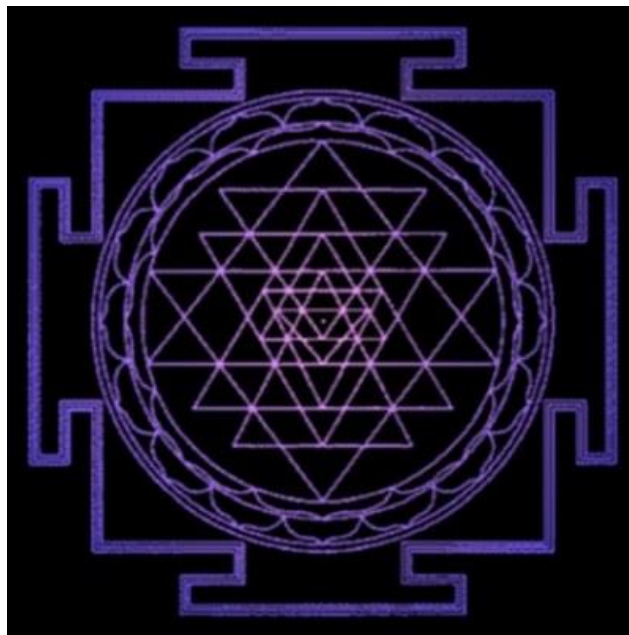
As a lower dimension such as the physical plane is transcended, it is recognized as being a limited and conditional experience of the higher dimensions. From the perspective of a higher dimension, the lower dimensions do not really exist as such – they have no real substance unto themselves. The ultimate realization is to

find that all that really exists is the highest dimension, and that the levels of Creation are a continuous projection from that highest dimension, creating what we experience as the physical dimension with which we tend to identify.

Like the surface of a sphere with multiple internal layers, the dimension we know as the physical world with our physical body is simply an outer shell created by higher-dimensional realities, with the central singularity shining forth as the highest dimension, the source of all that is. If the CosmicLight of that highest dimension were to suddenly blink out, the entire Universe would just as suddenly cease to exist.

We meditate upon that Divine Sun,
the true Light of the Shining Ones.
May it illuminate our minds.

The Gayatri Verse of the Vedas



3. Words and Traditions

Reference to the Sanskrit classics, such as the Vedas (knowledge, wisdom) and Upanishads, is particularly useful because their metaphysical foundation is well-preserved and the terminology is familiar to those who have studied philosophy and comparative religion. **Brahman** and **Atman**, for example, refer to the Universal Spirit and the individual spirit, or Universal Consciousness and individual consciousness. In the nondualism of Advaita Vedanta, the Atman, our spirit and *seed* of consciousness, is an integral part of Brahman, much like how a ring on a sphere is an integral part of the sphere. The ring is a full dimension less than the sphere and has no reality whatsoever without the sphere.



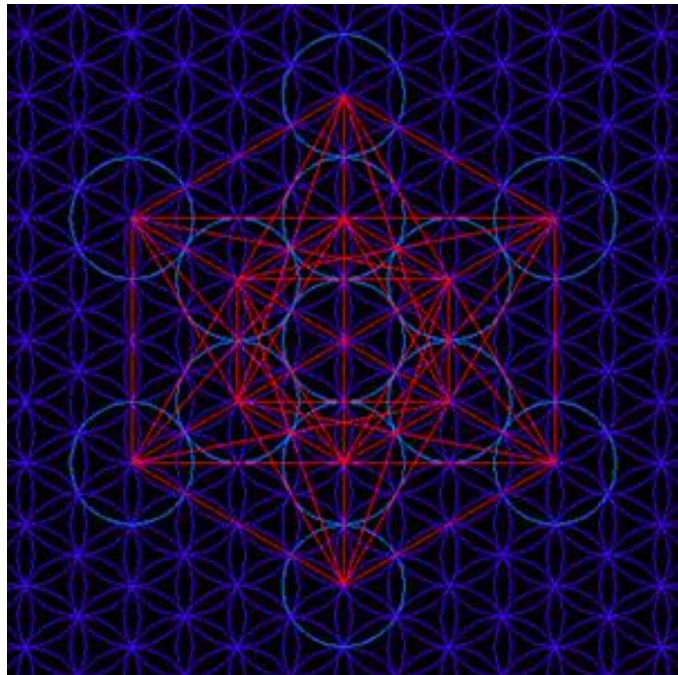
In the Hebrew mystical tradition of the **Kabbalah**, the equivalent to Brahman is called **Ein-Sof** (The Endless One). It should be understood that the underlying principles are universal and are the same for *all* spiritual traditions. Similarly, all bioforms that happen to share our Universe are, by necessity, part of the same Universal Life force that we are. This becomes obvious as the metaphysical realities and essential Oneness of the Universe are understood.

The state of reality represented by Brahman (Ein-Sof) transcends even the Creator God, Brahma (IHVH, Yahweh), and contains all three aspects of the Hindu Trinity, the **Trikaya**, within itself. Brahman is simultaneously Brahma-Vishnu-Shiva, Creator-Preserver-Transformer, while remaining unchanged (as the **Godhead**, all three modes of Godhood in one). Obviously, this requires an understanding which goes beyond the idea of 'theological deities with bodies' toward purely abstract mystical principles.

As represented by the simple geometric beauty of the Roman Pantheon (cover image), a higher truth underlies all the anthropomorphized body forms of theology. Recognizing this more abstract level of spiritual understanding as being more real is called **nonth**eism (which is not atheism) and is characteristic of Buddhism, for example, and metaphysics in general.

Metaphysically understood, the Trikaya represents the creation process, which is happening continuously. All stages of the creation process exist simultaneously, just as all higher dimensions of physics exist simultaneously. Even though Western scenarios tend to express Creation as a time-bound process, such as in Genesis and the Big Bang Theory, it is important to keep in mind that the creation process is continuous. "This infinite fullness [the visible Universe] shines forth from That infinite fullness [the invisible Brahman]." (Brihadaranyaka Upanishad) Vedic and Kabbalistic texts do speak of pre-Creation states of Being as part of a system of cycles within cycles covering eons of time. Throughout all the cycles, the unified state of the One Reality remains unchanged.

The metaphysics of Nondualism recognizes the underlying **polarity** which creates the Trikaya as more fundamental, more real. In this way, **duality** (separateness) is recognized as an expression of polarity (represented by a vector, an arrow) and the illusion of separateness is transcended. For example, the duality of the positive and negative electric charges arises from the polarity of the electric force field, a single reality, and a more fundamental level of reality.



The polarity inherent in the Trikaya is actually the creative property of Brahman itself, and as a direct result, it is also inherent within Atman. This polarity within Atman is an expression of our force of spirit and is the source of individual consciousness. Its three-fold nature manifests in the past-present-future experience of time. The interaction between Brahman and Atman creates the field of Creation around us. The geometric relationship between Brahman and Atman and how it initiates the emergence of a diverse Creation from the One Reality is called **Sacred Geometry**.

Ancient Sanskrit has metaphysically-descriptive expressions for the Trikaya and the way in which it manifests, such as in the three modes of existence, Sattva, Rajas, and Tamas, and in the word Saccidananda, a combination of three Sanskrit words meaning Being-Consciousness-Bliss, or, existence, consciousness of existence, and love of existence, all inseparable aspects of Brahman.

In Western terms, and in the language of metaphysical philosophy, the Greek word **Logos** has been used to refer to the creative property of the transcendental **Mythos**. By definition, Logos (Om, the Word) is the *perfect expression* of Mythos, and is therefore also known as the *ideal 'object' of meditation*.

Logos is the First Cause of Creation ("[In the beginning was the Word, ...](#)" [Christian Bible, John 1:1](#)) as well as the creative polarity which defines the laws of physics and makes everything happen. We experience it constantly. With the creation process recognized as continuous, the philosophical notion of First Cause does not refer to a time-bound phenomenon that happened in the past, but rather to the timeless (continuous and unchanging) creative cause of the Universe.

At the metaphysical level, Logos has the intrinsic property of polarity, the dynamic essence of force, the perfect expression of Mythos. The *realization* of Logos, in its transcendental wholeness, implies the existence of the otherwise unknowable Mythos. Geometrically thinking, if Logos was a sphere, Mythos would be its central point. Without the sphere, the central point is unknowable. At the same time, the sphere cannot exist without the central point.

As metaphysical principles, Mythos and Logos are equivalent to the first and second bodies of the Trikaya, inseparable aspects of the One Reality. (“... and the Word was with God, and the Word was God.” John 1:1)

In Sanskrit, Logos is called the **Dharmakaya** (the perfect embodiment of Divine Law, or Divine Will). In its transcendental wholeness, it is Universal Consciousness and the Lifeforce of the Universe. It is the ethereal *seed syllable* of Creation, known as **Om (Aum)**.

That (the invisible Brahman) is full [infinite],
this [visible Universe] (the visible Brahman) is full.
This full (visible Brahman) proceeds from That full (invisible Brahman).
On grasping the fullness of this full (visible Brahman)
there is left That full (invisible Brahman).

Om is the Akasha Brahman – the [timeless] primeval akasha [Lifeforce].
It is also the manifest akasha [the physical forces of the Universe].
This (Om) is the Veda (the means of knowledge),
thus the knowers of Brahman know.
One knows through it all that has to be known.

Brihadaranyaka Upanishad
V Adhyaya, 1 Brahmana, 1

[Expansions in normal parentheses are by the original translator.]



4. The Way of Jnana Yoga

In the Western world, the term yoga has become associated mainly with posture-based exercises for fitness and stress relief. The Sanskrit word **yoga** (yoking, union), in its primary and classical sense, refers to a system of practice meant to help one reconnect with the inner spirit, recognizing it as one's primary reality and its timeless unity with the One Reality.

The study of metaphysics, and even conventional physics, provides insight along the path of **Jnana Yoga**, one of the three primary yoga paths mentioned in the Bhagavad Gita: Bhakti Yoga (the way of devotion, worship), Karma Yoga (the way of selfless action, good works), and Jnana Yoga (the way of knowledge, intellect). Sometimes a fourth is added, called Dhyana Yoga (the way of meditation), though it is not widely accepted that it is a classification unto itself, but rather should be considered an aspect or form of Jnana Yoga or even Bhakti Yoga, depending on what is meditated upon.

Together, the three primary classifications are called the Trimarga, the three classical paths to the liberation of the human spirit. In one combination or other, they form the foundation of all schools of yoga, past and present, and even apply to *all* spiritual traditions. For example, Raja Yoga is primarily Jnana and Bhakti Yoga and Christianity is primarily Bhakti and Karma Yoga.

The knowledge referred to by Jnana Yoga is spiritual wisdom, including the discrimination between what is illusion and what is real, between the transient material world and the unchangeable ultimate Reality. Traditionally, such knowledge is attained by deep meditation on the scriptures, particularly the



Upanishads. Today, modern physics can also offer insights and realizations into the true nature of the Universe and our ultimate oneness with all of Creation which profoundly affect spiritual awareness and the individual soul.

Devotional ritual and compassion are important in their own right, of course, but a lack of metaphysical education over the ages, especially in the West, has resulted in an intolerance between devotional paths. Most disturbing is the absence of metaphysical understanding and obvious lack of any mystical experience among most religious teachers and clergy. It is perhaps ironic that the birth of science and the age of reason in the West would eventually lead to a rebirth of metaphysical knowledge and a new way with which to share it.

Historically, Jnana Yoga has been more prominent within esoteric mystery schools and among the Gnostics and Kabbalists, for example. Most notably, it is the essence of the Upanishadic texts of the East and is the primary theme of the famous writings of Sri Shankaracharya. These texts and writings go directly to the nondualistic foundation of the Vedic, Hindu, and Buddhist traditions, known as Advaita Vedanta, and provide a direct approach to spiritual understanding.

Jnana Yoga is more suited to those whose powerful intellects mistrust the emotional fervour of worship. It is the Yoga of pure discrimination. It transcends the intellect through the intellect. It needs no Iswara, no altar, no image, no ritual. It seeks a more immediate approach to Brahman. This path may perhaps be more direct, but it is also hard and steep.

Swami Prabhavananda

from his Introduction to

Shankara's Crest-Jewel of Discrimination ³

Although Shankara included aspects of Bhakti Yoga in his teachings, he considered Jnana Yoga to be far superior to any other path to liberation and enlightenment. It seems that modern science is providing us with a new language to more easily explore this difficult yet very effective ancient path.

Is unified field physics a realization of a transcendental omnipresence? Is such "cosmic awareness" actually illuminating our spiritual dimension within a spiritual

universe? These questions, of course, will never be answered by physical theory – they are intrinsically beyond the reach of objective expression. It is increasingly obvious, however, that such questions will also never be rendered frivolous by physical theory, which instead is laying the possibility clearly in the open.

The fact that we are actually in a position to understand modern physics as a rediscovery of ancient metaphysics is a measure of Mankind's open-minded progress in spite of our shortcomings and blunders along the way. It has been known for a very long time that objective communication does not lend itself to the expression of transcendental concept. "The eye does not go thither, nor speech, nor mind. We do not know, we do not understand, how anyone can teach it." (Talavakara Upanishad)

According to the Ancient Wisdom, the most fundamental problems of the human condition are attributed to our ignorance of the true nature of Reality – a condition called, in Sanskrit, **avidya** (no wisdom, without knowledge). The 'devilness' of the material world is the way in which it makes us believe we are separate, creating ego-centered action, when in fact we should know in our hearts that we are *not* separate. True spiritual awareness transcends all cultures and all religions while appreciating the beauty and truth in every one of them.

We may be re-learning an ancient system of spiritual understanding but we have the opportunity to understand it on a new and conceptually very clear level. There seems to be no reason why we should not act with an intuitive mindfulness of transcendental unity in every moment of our lives. Of course, that is the ideal -- to be spiritually aware in *every* objective action, thus eliminating selfish motivations and actions, the source of bad karma. It is, of course, easier to talk of ideal actions than to live them, but if the essence of the Ancient Wisdom can be shared in a new and powerful way, we could take a huge step toward eliminating most of our problems.

5. Sacred Geometry

There is nothing in this universe apart from God. ... and though the Deity is no doubt infinitely greater than the universe which is His creation, every part and particle of that universe, from the tiniest atom to the mightiest planet, is essentially, entirely and thoroughly divine.

J. J. Van der Leeuw
The Fire of Creation ⁴

For the same reason, we can say that all geometry is sacred, along with all mathematics and all the laws of physics. The fundamental constants and relationships that science has found in the physical world are also fundamental clues to our relationship to the higher metaphysical dimensions. Geometric relationships such as the golden ratio and the natural logarithm, etc., as well as science's view of the time scale of the Big Bang universe and its parallel with the physics of the subatomic world, are all important to metaphysical geometry.



However, in the strict sense of the meaning, when we refer to *Sacred Geometry* we are talking about visual methods, ancient or modern, of representing the metaphysical relationship between our physical existence and the spiritual source of existence -- between the consciousness of the individual and the Universal Consciousness of the transcendental dimension.

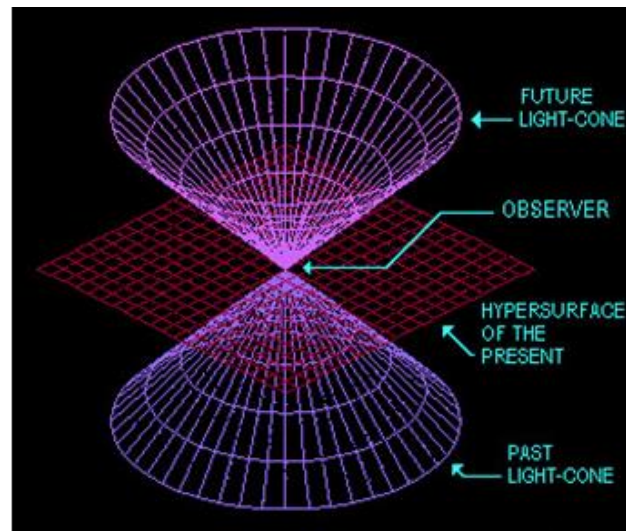
This relationship is the seed of Creation, a dynamic process at the root of our existence. It is the First Cause of all individual modes of being and is experienced as consciousness and the passage of time within the individual – the source of the experience of ‘otherness’ and the entire field of objective spacetime.

Sacred Geometry, then, is a way of conceptualizing and illustrating the fundamental principles of a spiritual universe: *Transcendental Omnipresence*, the

One Source of all that is, and *Polarity*, its intrinsic creative aspect, the Force of Creation (Logos, the Word, Om, etc.).

When we model a three-dimensional sphere on a two-dimensional page, we easily understand that the resulting circle is a limited representation. Modeling more than three dimensions becomes a little more difficult since the conceptual pictures in our mind seem to be limited to the same three dimensions that the space of our objective experience is limited to. However, the mind is perfectly capable of conceptualizing more than three dimensions even though they cannot all be visualized at the same time.

This is exactly what is done with the **spacetime diagram**, called the Minkowski diagram for the developer of the concept of the four-dimensional spacetime continuum. By 'collapsing' one dimension of space, all of three-dimensional space is represented by a flat plane, called a **hypersurface**. In this way, the passage of time can be represented by the perpendicular movement of that plane. Because light takes time to travel through space, the three-dimensional space that we see at any one time is represented by the surface of our **past light-cone**. This cone can also be thought of as a continuous series of ever-widening rings, each ring representing a particular distance away from the observer in all directions -- the interior surface of a spherical plane.



Imagine, for example, the spherical plane surrounding you at this moment at a distance of one light-second (about 186,000 miles – most of the way to the moon). The interior surface of that sphere is represented in a Minkowski diagram by a ring one second back along the past light-cone, defined by where the hypersurface of one second ago intersects the light-cone. The **hypersurface of the present** does not intersect the past light-cone at all, except at the singularity of

the observer. The human mind is able to understand that such models are limited representations of more complex extra-dimensional conditions, and the model can help us to better understand the extra-dimensional relationships represented in that limited way.

Often, in physics and metaphysics both, different geometric forms are used to represent the same state of reality, usually as representing different qualities, relationships, or perspectives of the same thing. In fact, many different geometries have been used throughout history to represent cosmological and metaphysical relationships.

In a late Sumerian cuneiform text of ca 2000 BC ... the name of the goddess-mother of the universe, Nammu, is denoted by an ideogram signifying "sea", and she is given praise as "the mother who gave birth to Heaven-and-Earth [ama tu an-ki]." Moreover, a second tablet of about the same date ... tells that when this "Heaven-and-Earth" emerged from the primal sea, its form was of a mountain whose summit, Heaven (An), was male, and lower portion, Earth (Ki), female; further, that from this dual being the air-god Enlil was born, by whom the two were separated. ...

But this, almost to the letter, is the myth preserved in the classical [Greek] legend of Earth and Heaven, Gaia and Ouranos, separated by their son Kronos. We recognize it also in the ancient Egyptian representation of the separation of Heaven and Earth by the air-god Shu, or ... by a god bearing on his head a mountain sign -- except that in Egypt the sexes of the world-parents are reversed, Heaven (Nut) being female, and Earth (Geb) male.

Joseph Campbell
*The Mythic Image*⁵

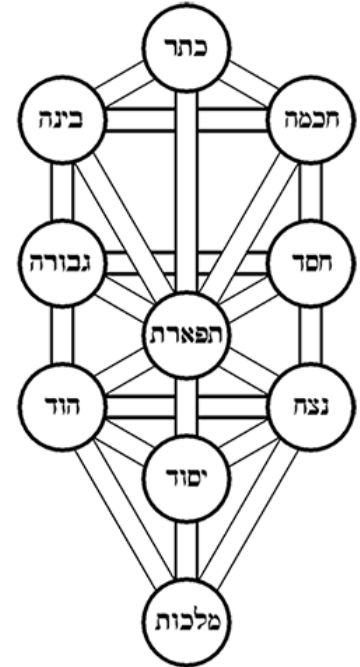
We should always keep in mind that metaphysical geometries are a way of modeling higher-dimensional relationships that are more real than the geometries themselves. What is most important is to develop an intuitive understanding of the metaphysical relationships and principles being modeled, and as powerful as they are as teaching tools, we must not get too hung up on the

models themselves. The realization of transcendental unity is the goal of any metaphysical system or spiritual teaching.

In the Zohar texts of the Hebrew Kabbalah, the geometry of the **Tree of Life** is fundamental. It is composed of ten Sefirot, or spheres of influence, and twenty-two paths.

Each Sefirah [singular] has distinctive properties, qualities, and, kabbalistically, lessons to be absorbed and mastered. Together, arranged in Right, Left, and Central Columns, the ten make up what kabbalists call "the Tree of Life". As we increase our spiritual competency by ascending each Sefirah, we simultaneously increase our spiritual capacity.

Rav P. S. Berg
The Essential Zohar ⁶



Also from the Kabbalah, this geometry represents **Ein-Sof**, the transcendental One Reality, and the angelic hierarchies.

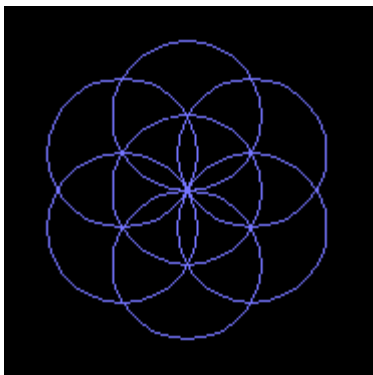
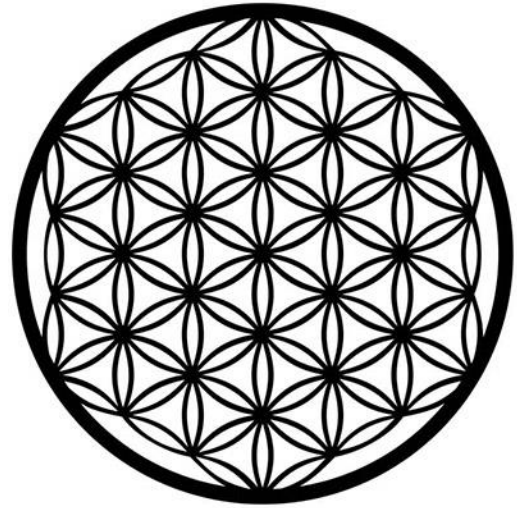


The **Flower of Life** pattern can be traced back to ancient times. It has been found in Egypt, Turkey, Lebanon, Europe, India, Japan, etc., and in ancient Buddhist and Chinese temples. It is generally incorporated into religious structures.

The code of the FLOWER OF LIFE actually contains all the wisdom found in the Universe, similar to the genetic code contained within our own DNA. This geometric code goes beyond ordinary forms of teaching and lies beneath the very structure of reality itself.

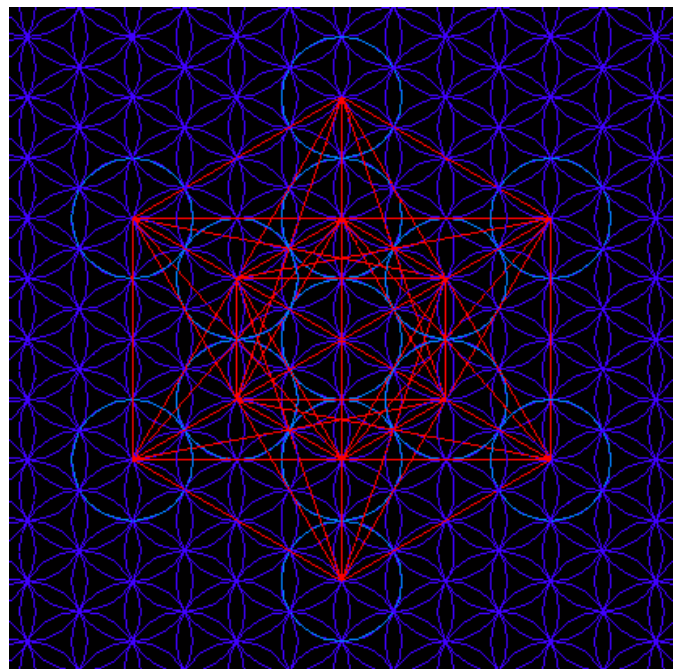
All the harmonics of light, sound and music exist within this geometric structure.

Drunvalo Melchizedek



The seven inner circles, as a set, is called the **Seed of Life**.

The **Fruit of Life** (lighter blue circles) and Metatron's Cube (red lines), representing the male and female movements of Creation



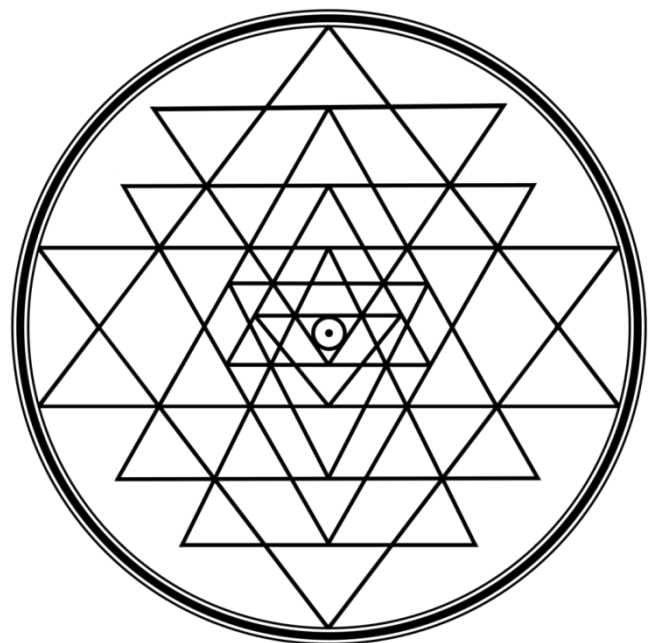
The six-pointed star is found in the Hindu and Buddhist traditions as well as in the Hebrew tradition. It is common in Tibetan Buddhist mandalas, particularly the **Vajravaraahi Mandala**. In chakra symbolism, it represents the heart chakra.

In Tibetan it is called chos-kyi 'byung-gna, the *origin of phenomena*, which is exactly what is represented by the Flower of Life geometry.



The **Sri Yantra**, or Yantra of Creation, has been known within the Hindu and Buddhist traditions and since the earliest Vedic times as the most powerful and beautiful of all yantras. The triangles represent the male and female movements of Creation and the central point is called *Bindu*, the transcendental source.

It represents the timeless creative principle of the Universe, the continuous unfoldment of all realms of creation from the central source. With that mindfulness, it is used as an object of meditation.



Probably the most interesting and most beautiful examples of Sacred Geometry are represented by the simplest picture possible, representing the most transcendental vision possible. The Gnostics of the 12th century had a geometric vision of Logos as “an intelligible sphere whose center is everywhere and circumference nowhere”.⁷

The earliest known illustration of Sacred Geometry is mentioned by Helena Blavatsky in the opening pages of the *Secret Doctrine*. She is writing this in the late 19th century and refers to a text from prehistory called *The Book of Dzyan*.

An Archaic Manuscript ... is before the writer’s eye. On the first page is an immaculate white disk within a dull black background. On the following page, the same disk, but with a central point. The first, the student knows to represent Kosmos in Eternity, before the reawakening of still slumbering Energy, the emanation of the Word in later systems. The point in the hitherto immaculate disk ... denotes the dawn of differentiation.

H. P. Blavatsky

*The Secret Doctrine - Vol. 1, Cosmogogenesis*⁸

These last two most simple geometries have a striking parallel to the concept of a *hyperspherical polarity*, the polarity between *singularity and infinity* in a higher dimension, like the polarity between the *Singularity* of the Big Bang and the *infinite void* of pre-Creation, before the birth of physical space and time.

Interestingly, in fact, mystical philosophy recognizes this polarity between the extremes as the essence of Universal Consciousness, the Lifeforce of the Universe. This timeless state is also known as, recall, Logos, the Word, is represented in Hindu theology by Vishnu, the Preserver, the second body of the Trikaya, and is also represented by **Om**, the *seed syllable of Creation*.



6. Quasars and Quanta

Not only is science finding it increasingly difficult to keep itself separated from philosophical speculation, but as we develop our abstract understanding of the Universe as a whole, the fields of physics and metaphysics seem to be losing their distinction altogether. More than ever, as we examine our field of spacetime from every possible perspective, we probe our consciousness for the mystical Truth. The intuitive beauty of the resulting realizations calls to mind the timeless words of the English poet John Keats: “Beauty is Truth, Truth Beauty.”

The scientific fields of cosmology and particle physics can seem to be remote and unimportant studies as far as the human condition is concerned, yet they actually provide insight into the nature of life itself. They profoundly affect our awareness of existence and how we perceive it.

Most intriguing, science has recognized that our Universe is not simply composed of separate particles. Modern physics has uncovered a unified state of the Universe that not only existed in the first stages of the Big Bang, but exists even now as a unified state in a higher dimension. It has been called the **Superforce** of unified field physics, the **Theory of Everything**. Our consciousness, our bodies, and every particle in the Universe are an inseparable part of this higher dimension, as if the physical world was merely a transient projection from a pristine higher realm that never changes.

When astronomers spot a new supernova in the Andromeda Galaxy, they know they are seeing an event which actually happened more than two million years ago. This, of course, is because the light from the supernova took that long to travel through space.

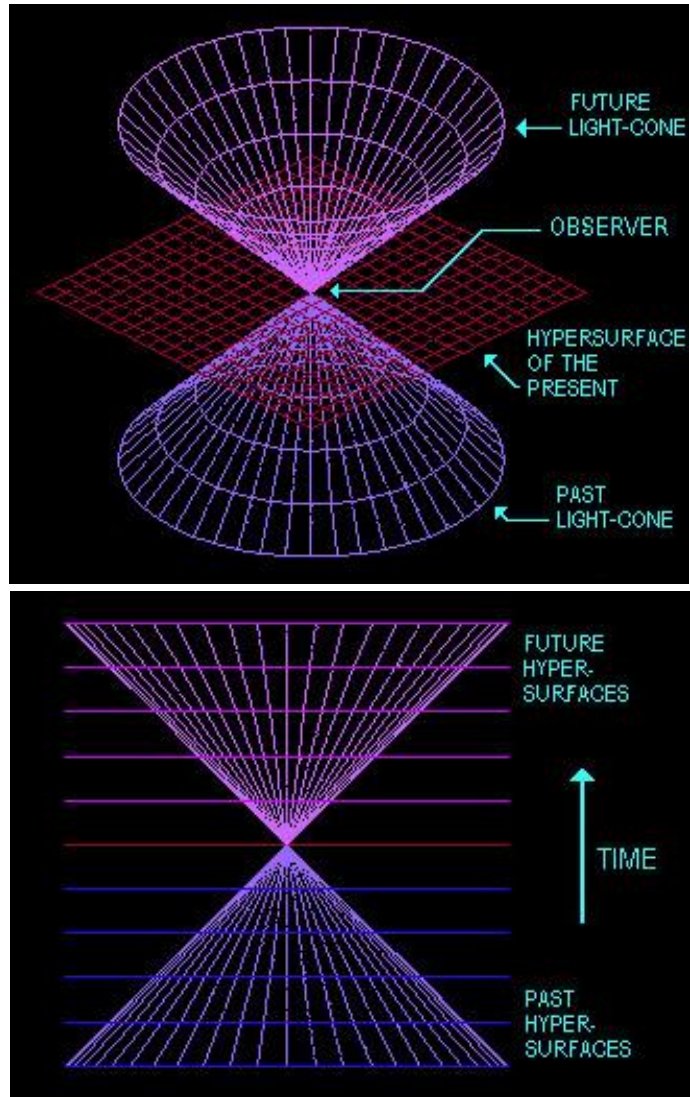
Looking deeper and deeper into space, we find that the realm of the galaxy gradually gives way to the realm of the quasar, a mysterious object with the mass and energy of an entire galaxy, and in most cases, many times the energy of our

own galaxy, concentrated into a relatively small spherical volume, like about the size of our solar system. The farther into space we are looking, the further back in time we are seeing.

In this way, space and time are interwoven into a single continuum known as **spacetime**, represented geometrically by the spacetime diagram.

The geometry of spacetime is the framework for our understanding of the entire physical world. Yet, each of us has a unique past light-cone which defines for us the present state of the Universe. This means that no one can ever precisely agree on what is happening at any given moment. All the 'wherewhens' of spacetime are *relative*. This also means that the hypersurface of the present, the actual present state of the Universe, is *never* seen. In doing the work of science, the physicist must make a clear distinction between "that which actually is" and "that which only appears to be". Disturbingly, everything seems to fall into the latter category.

The light-cone shows us that all observations and measurements must be made with a primary attention to the relationship between observers, between reference frames. This is the foundation of Einstein's **Special Relativity**. (It is called *Special* Relativity because, as an initial formulation, it only included *non-inertial* reference frames; that is, reference frames that are not accelerating with



respect to each other. **General Relativity**, on the other hand, does include accelerating reference frames and turns out to be a geometric theory of gravity.) Everything we see at any given moment, including our own bodies, is on the *surface* of our past light-cone. It is composed of a continuum of rings sliced from a continuum of past hypersurfaces, each of which had previously been a hypersurface of the present.

This continuous series of ever-widening rings corresponds to the continuous series of ever-widening spheres that surround us. As time passes, the hypersurface of the present becomes a past hypersurface, and its light-cone shifts with it. What were the current set of events one second ago are now on a cone *within* our current past light-cone. Thus our past light-cone is continuously changing, flowing, leaving behind a continuous series of former past light-cones within the current past light-cone.

Beyond the galaxies and quasars, beyond the microwave background radiation, the diverging field of infinity around us is represented by the largest ring at the base of our past light-cone. It is the furthest back in time that we can see and is essentially a reversed image of the **Universal Singularity** of the Big Bang.

The name for this cosmic creation event was coined in ridicule by cosmologists who at the time did not support the strange idea of a starting point for the Universe, let alone a starting point for space and time. The event was nothing like an explosion at all, but more like the super-intense force field near the singularity of a black hole. In fact, the conditions in the earliest stages of the Universe are very similar to the conditions we would find right now deep within any atom.

There has been a persistent view of the material world in which every object is composed of separate particles, called atoms, which are themselves composed of still more separate particles, called subatomic particles. Those particles which cannot be divided into smaller parts are called elementary particles, or **quanta**, making them the ultimate substance of the entire universe. This picture of things gives us a useable model of what the physical world seems to be, but the more

we come to understand what quanta are, the more we begin to see how limited this classical view is. Today, for example, a quantum 'particle' is more properly considered to be a quantum *process*.

We are familiar with the fact that the bodies we find ourselves living in are made of countless atoms forged long ago in the nuclear reactors of the stars. Taking this a step further, all atoms are composed of the primordial quanta born in the first stages of the Big Bang. The entire history of the Universe is encoded into the atoms of our bodies, so as strange as it may seem, we are actually not far removed from the beginning of the Universe even at this very moment.

It was discovered early on that a quantum somehow displays the characteristics of both a particle and a wave, though never both at the same time. It seems that it all depends on what we use to detect it. This very strange condition is called the **wave-particle duality**. The fact that a quantum can be found to be either one or the other of these two mutually-exclusive states of reality indicates that its actual reality is something else entirely.

[“All matter originates and exists only by virtue of a force.” \(Max Planck\)](#) In quantum field theory, quanta are treated as point particles, singularities, and the atom is best thought of as a resonating pattern of quantum force fields. The closer we look into the atom, the more intense these processes become and the more any notion of solidity seems to 'zoom away' to a deeper level. In a very real sense, the realm of the quantum is just as far away as the farthest reaches of deep space, as if an atom was a very tiny and very deep spacetime vortex.

As convenient as it is for science to think of the universe as being composed of separate particles scattered around in empty space, this classical view of things simply does not provide a complete picture of the way things are. Even the classical notion of empty space has been replaced with the **quantum vacuum**, a continuous process of creation and destruction on the tiniest scale.

The theoretical core of modern physics deals with **Unified Field Theories** which attempt to express the four fundamental forces of the Universe as aspects of a single Universal Superforce. With subtle differences, they all share the same key

principles of Relativity and quantum physics. Which model is 'most correct' is not as important as the realization of universal oneness to which they all point.

The mathematics used to describe quantum physics presents, and cannot avoid, a number of strange implications that defy normal objective logic. Besides the wave-particle duality, the principle of **complementarity** shows itself in the fact that certain physical properties of quanta, such as position and momentum, cannot be precisely known at the same time – if we measure one property, the other becomes indeterminable. This **indeterminism** is known as *Heisenberg's Uncertainty Principle* and the wave-particle duality is directly related. Also, the probabilistic nature of the **quantum wavefunction** suggests that, before a measurement is made, *all possible outcomes* of that measurement must be thought of as actually existing, in some way, as a set of superimposed realities.

Perhaps most bizarre, it seems that the quanta which define matter and energy all across the Universe are somehow connected as if they had *no spatial separation*. This feature of quantum theory is known as **nonlocality**, referring to nonlocal (spacetime-independent) connections. Today it is generally called **quantum entanglement**. Clearly, quantum mechanics cannot be interpreted in the terms of classical Newtonian mechanics.

Nevertheless, the mathematics works extremely well for describing what has been observed experimentally in the subatomic realm. In the early days of quantum theory, it was generally believed that the strange implications arose from the use of **matrix mechanics** and there was hope that a more rational interpretation would someday become clear. Einstein was disturbed by the way quantum theory challenged the logical objective view of the Universe.



Experiments in recent decades, however, designed to test what is called **Bell's Theorem**, have shown that nonlocality, or quantum entanglement, is indeed a physical characteristic of reality. Today, the phenomenon is even routinely used in

electronic devices. Obviously, a fundamental shift in our understanding of physical reality has been realized and the need for a real interpretation of quantum physics has become more apparent.

Fortunately, an understanding of the mathematics is not necessary to develop an intuitive feel for the concepts involved. Geometry can

$$\begin{pmatrix} a & b \\ c & d \end{pmatrix} \cdot \begin{pmatrix} w & x \\ y & z \end{pmatrix} \rightarrow \begin{pmatrix} a \cdot w + b \cdot y & a \cdot x + b \cdot z \\ c \cdot w + d \cdot y & c \cdot x + d \cdot z \end{pmatrix}$$

be used as a very effective tool to represent the most profound scientific and mystical principles. Using multi-dimensional models we can visualize how separate atoms are actually unified in the quantum realm, and how our entire Universe radiates from a single point in a higher dimension, the timeless Universal Singularity realized both in the zero-point Superforce of unified field physics and in the time-zero of Big Bang cosmology.

We find ourselves in a physical universe of extremes, suspended between the singularities of the quantum world and the infinities of space. It is as if our conscious awareness is a polarity between these two physical extremes. Each realm is equally unreachable, yet each is equally fundamental to our experience of being here this moment.

Aesthetics and intuition are more than ever guiding the scientific community in its quest for understanding the most fundamental principles of the Universe. It is at least satisfying to know that these 'new' visions of reality are fundamentally simple and intuitively beautiful. It would appear that we could say, Beauty is indeed Truth, and physics has become metaphysics.

Then the son of Pandu beheld the entire Universe,
in all its multitudinous diversity,
lodged as one being within the body of the God of gods.

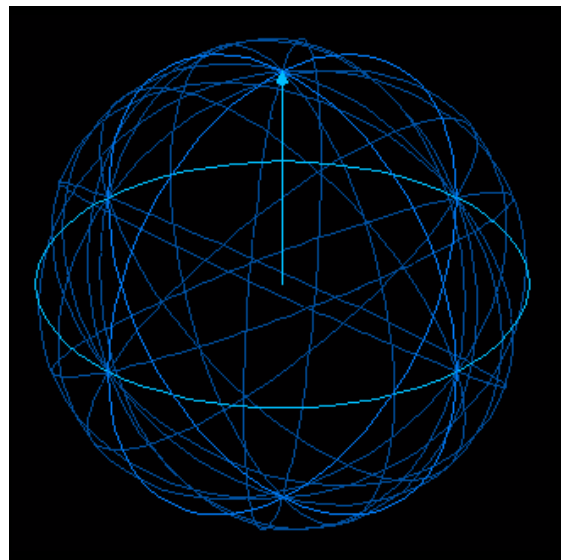
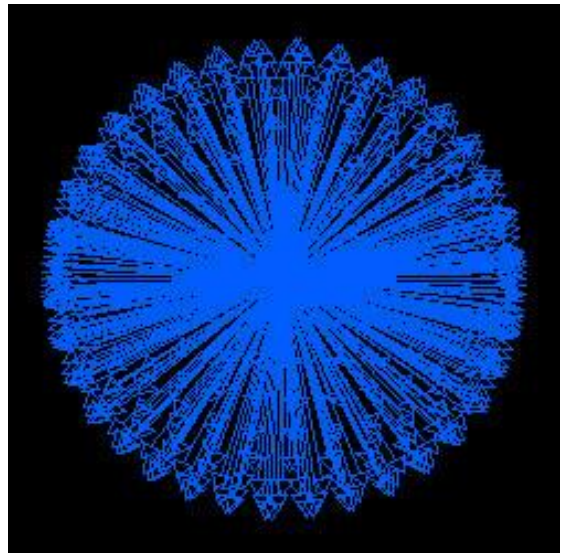
Bhagavad Gita 11,13

7. Physics and Geometry

The mathematics of Relativity and quantum physics is multi-dimensional and complex, yet it describes a reality which is fundamentally simple and based on geometry -- the geometry of quantum fields within the geometry of spacetime. As a representation of reality, geometry is arguably even more fundamental than the mathematics which describes it. The geometry of spacetime existed long before Einstein developed the equations of Relativity. The exact value of π is intrinsic to the geometry of the circle, yet it cannot be precisely expressed as a number.

Recall the 12th-century Gnostics' conception of Logos as "an intelligible sphere whose center is everywhere and circumference nowhere".⁷ Today, this geometric mind-bender could be represented by an **infinite hypersphere**, a four-dimensional sphere with infinite radius. Rather than a typical spherical plane with a surface and a radius, an infinite hypersphere is more precisely thought of as a *spherical state of polarity*, the polarity between singularity and infinity, with the infinity being a dimension beyond our three-dimensional experience of infinity.

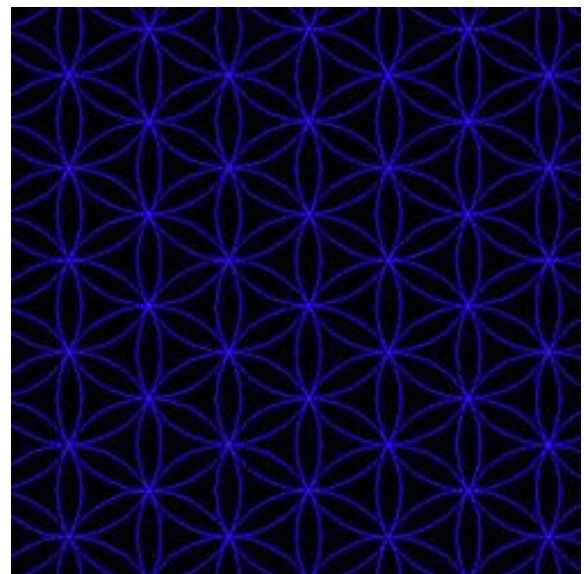
Intriguingly, an interpretation of unified field physics suggests that a **hyperspherical polarity of the Universal Superforce** is the most fundamental expression of existence which can be realized from the physical plane, like a **Geometric Logos**. In this way, all quantum processes which define matter and energy, along with the seed of individual



consciousness, can be represented by simple geometric elements within the hyperspherical geometry. Each element is composed of two complementary aspects, a vector (or ray) and a ring. With this geometry representing the quantum realm in its most fundamental form, it can be thought of as forming the central reality of *any* of the current unified field models, including string theory.

As strange as this might seem, the idea actually makes more sense than having to imagine there must be an infinite number of parallel universes, for example, in order to account for the superposition of all possible realities inherent in the quantum wavefunction. It is especially intriguing considering that it also provides a better understanding of all the other bizarre implications of modern physics while revealing a fascinating insight into the metaphysics of the Ancient Wisdom.

The interpretation referred to is that of the **Kaluza-Klein** model, a classic unified field theory from Einstein's era, forms of which are used in string theory today. It unifies the electromagnetic and gravitational fields in a mathematically beautiful way by adding a fourth dimension of space at the **Planck scale** (about 20 orders of magnitude smaller than a proton). In the Kaluza-Klein model, we are living in a five-dimensional (or more) spacetime in which the fourth dimension of space is confined to tiny Planck-scale spheres, an infinite number of them filling all of space, which are ultimately responsible for all we see and experience.



The unification of all things inherent in the quantum entanglement of modern physics, and in the philosophy of Nondualism, is realized in the possibility that all of those tiny fourth-dimension spheres which fill all of three-dimensional space are actually different rings on the same sphere within that fourth dimension, representing every quantum process in the Universe combined into one reality.

The idea is much like imagining the **Planck time** of the Big Bang (10^{-43} seconds after the Universal Singularity at $t=0$) as a *timeless state* of pure potential which continuously creates our experience of a dynamic Universe, while remaining unchanged in its unified state in its higher dimension.

In this perspective, the Big Bang is literally happening right now at the center of every atom, and is integral to our experience of the dynamic present and the structure of depth-consciousness. Subatomic physics understands that the entire history of the Universe, from the Big Bang to the present, is reflected in the subatomic structure of matter.

Another way to imagine this possibility is to think of atoms as very tiny and very deep vortices of *past spacetime* in the fourth dimension of space reaching all the way back to the Planck time and the Universal Singularity of the Big Bang. From our perspective in the ever-changing present, we see only cross-sections of the vortices, rings, which appear as spheres in three-dimensional space.

In the teachings of the Ancient Wisdom, time is understood to be closely related to the experience of consciousness. In fact, "[The polarity of consciousness is the very same polarity that we experience as time. ... In other words: we do not live in time, but time lives within us; because time is the innermost rhythm of our conscious existence.](#)" (Lama Govinda)²

The space of experience which surrounds us is the external expression of this innermost rhythm, and is called, in Sanskrit, **akasha**. Akasha manifests as the force fields of matterenergy in spacetime, a direct result of the polarities of the Lifeforce within us, the CosmicLight of the Universe.

[This then is the message which we have heard of Him,
and declare unto you, that God is Light,
and in Him is no darkness at all.](#)

[Christian Bible, 1st Epistle of John 1:5](#)

8. The Geometry of Nondualism

Tibetan Mysticism, probably the best preserved understanding of Nondualism, teaches that the polarity of time arises from the experience of the polarity of consciousness. This also manifests as the polarity between subject and object, between consciousness and spacetime. Akasha, the field of spacetime, arises as an external experience of our innermost level of being, a ray of **Prana**, the Universal Life force.

In the highest sense, âkâsha and Prâna cannot be separated, because they condition each other like 'above' and 'below', or 'right' and 'left', ...

If this were not so, the interaction of body and mind, of spiritual and material forces, of matter and consciousness, sense-organs and sense-objects, etc., would be impossible. It is precisely this interaction of which the yogin makes use and upon which the technique of meditation is built.

Lama Anagarika Govinda
*Foundations of Tibetan Mysticism*⁹

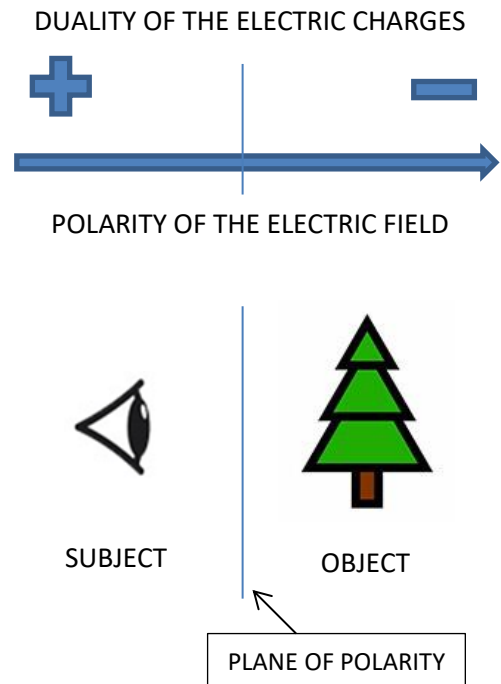
At the root of the geometry of Nondualism is the phenomenon of **polarity**. Basically, it is a single reality with two polar-opposite aspects. Like the concept of force, it is an ethereal reality; that is, it has no tangible physical reality that can be seen or touched. It can, however, have a very real effect on the physical world, and that effect can indeed be seen, felt, or otherwise experienced.



Polarity is generally represented by a **vector**, which is represented by an arrow, a simple line segment with an arrowhead on one end indicating that one end is the opposite of the other, or that it has a directional quality. It can have a specific length, representing the magnitude of a force, for example, but when used to represent the concept of polarity itself, the vector's length is arbitrary and

meaningless. Polarity can also be represented by a plane perpendicular to the vector.

The eye in the illustration representing the subject should not be thought of as the physical eye. The physical eye, along with the entire physical body, is actually on the object side of the plane of polarity. The body should be recognized as object in the same way that the entire physical body lays upon the surface of the past light-cone in the spacetime diagram. (The subject part of the spacetime diagram, the observer, is represented by the singularity at the tip of the light-cone.)



What is most important to understand about polarity is that it is a unifying principle. In physics and metaphysics both, the polarity underlying a duality is the more real level of reality – the polarity is there first, so to speak, and the separateness of the duality is a physical-level experience of that polarity.

Time is our most fundamental experience of a polarity. The opposite poles are past and future, and the plane of polarity between these two fields is the ever-changing present. This is a good example of polarity not only unifying two poles but also unifying a three-fold experience. This is a very important point – the three-fold time experience is a direct expression of the Universal Trikaya. A *single* state of polarity with a *two-fold* manifestation resulting in a *three-fold* experience is key to understanding how the One Reality builds Creation.

The duality of subject and object should be recognized as resulting from a polarity, a single reality, a single plane of experience with two sides. Without the subjective side, there is no objective side, "for on either side alone nothing could be achieved." (Kausitaki-Brahmana Upanishad) This is a difficult idea to assimilate

within the logic-oriented mind. How can the vastness and diversity of the Universe exist only as the experience of consciousness?

A good way to grasp this is to consider a well-known thought experiment. If a tree falls in the forest and no one is there to hear it, does it make a sound? With the definition of a sound being that which an ear and brain detects, the answer is no, yet the reality of what that sound would be, the compression waves moving through the air molecules, are still there just the same. Likewise, if we were not here to see the Universe as the field of matterenergy in spacetime, it would not be 'out there' as such, yet the actual Reality of what the Universe is, a higher-dimensional Oneness, still remains.

An excellent meditation exercise in Jnana Yoga is to visualize your innermost reality as a pin-point of white light force which has its polar opposite reflected directly as the experience of the blackness of infinity around you.

The close association of space and consciousness can also be seen from the fact that in the higher stages of absorption (dhyana) the experience of the infinity of space (akasanancayatana) immediately leads to the experience of the infinity of consciousness (vijnanancayatana). After the elimination of all thing- and form-ideas or representations, space is the direct and intuitive object of consciousness.

Lama Anagarika Govinda

*Creative Meditation and Multi-Dimensional Consciousness*²

In fact, individual consciousness has a depth of extension equal to that of the Universe itself. As incredible as this may seem, it is a metaphysical reality -- the depth of space is a direct reflection of the magnitude of consciousness.

You can think of the axis of depth-consciousness as like viewing a line (or vector) end-on, looking like a singularity; or, perhaps more mind-blowing, you can think of the depth of space as being even smaller than the radius of an atom. Either way is as correct as the other. However, what is most accurate is to realize that *any* idea or experience of depth of extension in physical space is illusory, but is rather an experience of the *force* of consciousness. *In Reality, there is no actual*

space between anything. The experience of space and separateness is merely the external expression of the force of consciousness, the only real Reality there is.

The language of Sanskrit has two different words for the infinity of space. There is the word **akasha**, the experiential space of individual consciousness already introduced, and there is the word **Tamas**, referring to what would be conceptually understood to be a true absolute void. Akasha, recall, is not an absolute void. It is a space filled with force vectors manifesting as matterenergy in spacetime as well as the apparent void between matter, in the same way that quanta create matter and energy as well as the quantum foam that fills all of 'empty' space.

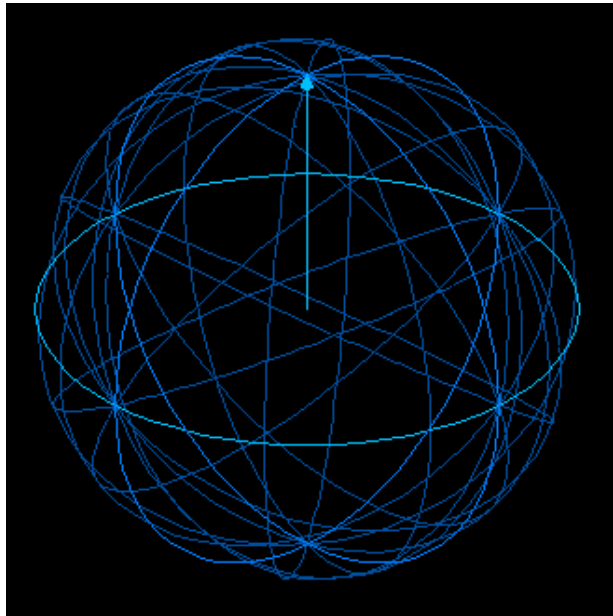
The infinity of Tamas, on the other hand, is the experience of *nothingness* from the perspective of Universal Consciousness and is indeed an absolute void. It is an absolute void by definition, because from the perspective of *all that is*, the only sense of *otherness* is an absolute void. It is important to note that Tamas is not something that exists independently of Universal Consciousness in the same way that no void actually existed for the Big Bang to expand into. (There is no space or time whatsoever at time=0.) These voids are a literal *nothingness*, a no'thing'ness, and only exist as a conceptual construct.

Geometrically, the polarity between consciousness and spacetime can be recognized as a spherical polarity. Whereas a single vector can represent a linear polarity, a spherical polarity must be represented by an infinite number of vectors. Geometrically, a spherical polarity is the polarity between a single point, or singularity, and the infinity around that point, represented by a spherical array of vectors radiating in all directions from the singularity. A spherical array in a higher dimension is called a *hyperspherical* array.

A hyperspherical polarity of the Universal Superforce, a **Universal Hypersphere**, through the interaction of the infinite number of ring-ray elements, and with any one of those elements serving as a reference frame or seed of consciousness, can act as a *Fourier Series generator*, the geometric equivalent to an infinite and superimposed series of harmonic oscillators. This provides a geometric source for the wave mechanics of matterenergy in spacetime, while maintaining an underlying level of *all possible realities* in an unmanifest state. Many will

recognize the key significance of this idea to the wavefunction of quantum physics and in the way matter and energy seem to behave.

This geometric model of unified field physics provides a mechanism for the seemingly strange properties of both Relativity and quantum physics, including the light-cone, the wave-particle duality, the wavefunction, quantum entanglement, the quantum foam of empty space, and 'vibrating strings'. Even the red-shift of the galaxies and the cosmic microwave background radiation, key indicators for an apparently expanding universe with a Universal Singularity as an origin,



could be understood to be the result of the overall spherical curvature of space, a manifestation of the omnipresent hypersphere of the Universal Superforce. From the perspective of the timeless Universal Hypersphere, the physical expansion of the Universe is illusory.

The geometry can also represent such metaphysical principles as the male and female movements of Creation and the polarity of time and consciousness. Perhaps most interesting, it can also beautifully represent the nature of the Trikaya, the three-bodied unfoldment of Creation from the One Reality. The central singularity is the first body of the Trikaya, the 'shining forth' of the infinite number of infinite vectors is the second body, with the 'cosmic dance' of the Universe itself being the third.

Note that a ring on a four-dimensional hypersphere appears as a sphere in three-dimensional space. The more the ring is rotated away from the reference ring, the farther away it appears in 3D space, with a 90-degree rotation representing infinity. Any one ring on the hypersphere is more properly thought of as an infinite number of rays itself, but only those rays limited to that single plane sliced

from the hypersphere. That ring of rays, of course, appears as a spherical array of rays in three-dimensional space. Within our limited space of experience, it is the perfect image of, yet still an integral part of, the Universal Hypersphere.

A harmonic function is a waveform that repeats itself. A *simple* harmonic function, such as a sine wave (or cosine wave), can be generated by a rotating vector, like the hand on a clock. A **Fourier Series** is the sum of a series of sinusoidal harmonic functions, up to an

infinite number of them of varying frequency and amplitude, creating even the most complex

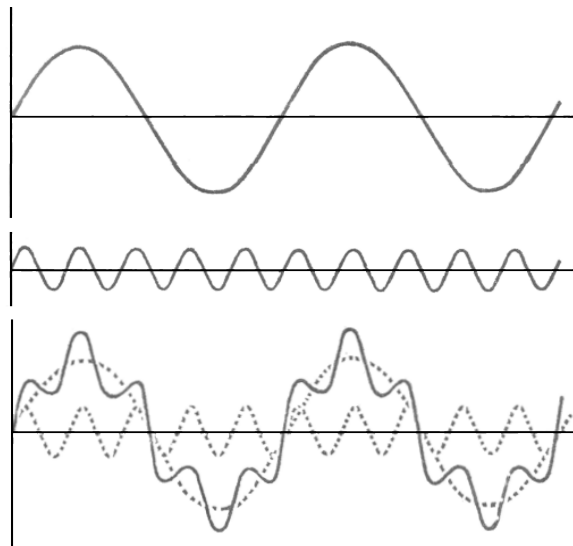
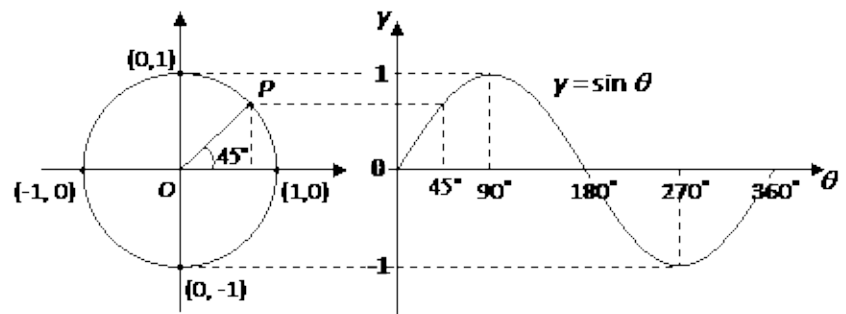
periodic wave form, including the wavefunctions which define quanta. .

Even a square wave, another example of a simple harmonic function, can be represented by the sum of an infinite series of sine waves.

In this way, the entire Universe can be represented by the combination of an infinite number of sinusoidal harmonic functions. There are an infinite number of rings on the hypersphere existing at every possible angle, providing an infinite number of possible harmonic functions which can define an infinite number of complex waveforms

which can define an infinite number of complex waveforms

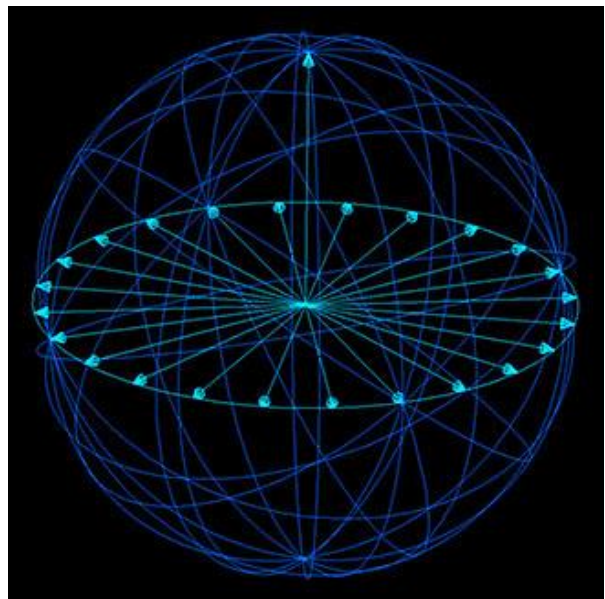
The importance of harmonic functions and the Fourier Series began to come to light in 1865 when James Clerk Maxwell unified electricity and magnetism into the **electromagnetic field**. This was the first great unification in physics since Newton unified gravity and astronomy nearly 200 years earlier and was a huge step



forward in our understanding of the physical world, essentially as much as was Einstein's geometric formulation of gravity in his theory of General Relativity 50 years later. The electromagnetic field defines everything we see and physically feel, including the dynamics of the electron layer of the atom and all of chemistry, and it is all based on harmonic functions.

A complete Unified Theory of the Universe was Einstein's dream and he spent his later years working on it. By 1979, the unification of the electromagnetic force field and one of the nuclear forces was formalized, becoming the basis for a **Grand Unified Theory** which unifies all the forces of the Universe except for gravity. The Kaluza-Klein model, with its five-dimensional spacetime, unifies Maxwell's equations with Einstein's equations. Essentially, the electromagnetic field and the gravitational field become unified in a beautiful symmetry.

The Universal Hypersphere could be thought of as a geometric version of the **Wavefunction of the Universe**, introduced by Hugh Everett in 1956 in a thesis draft and written up by James Hartle and Stephen Hawking in 1983.¹⁰ (It is actually an idealized mathematical expression, using an infinite series of harmonic oscillators, but it does have applications in quantum cosmology.)



The wave function of the Universe ... is essentially a list of all possible histories ... through which the Universe could have evolved to its present quantum state, which itself includes all logically possible particles and arrangements of particles that could exist in the Universe at the present time.

John D. Barrow and Frank J. Tipler
*The Anthropic Cosmological Principle*¹¹

An important philosophical feature of quantum physics is revealed by the wavefunction and the non-deterministic nature of quantum measurement. Quantum indeterminism, along with the underlying level of *all possible realities*, are directly tied to our experience of **free will**. In this way, quantum physics actually *negates* the philosophical problem of the existence of free will in our apparently deterministic Universe.

It is also interesting to note that a four-dimensional hypersphere could be a ring on a five-dimensional hypersphere, which could be a ring on a six-dimensional hypersphere, and so on, each representing a new set of infinite possibilities, and all centered on the same Singularity. Modern string theory is a unified field theory which requires several other space dimensions, the number of which depends on the specific formulation of the theory.

Even though the idea of *rings on a hypersphere* is useful in representing matter-energy in spacetime and individual consciousness, the primary reality of the Universal Hypersphere is not actually a sphere with a surface full of rings as such. This view only comes into play during the experience of time and individual consciousness. The ultimate reality of the Universal Hypersphere, rather, is defined by a spherical array of vectors in a higher dimension, infinite in number and infinite in length. The idea of a *hyperspherical force polarity*, omnipresent and timeless, is fundamental. This state of Reality remains unchanged during the experience of any perceived spacetime unfoldment.

The geometric connection between the Superforce of unified field physics and the Nondualism of the Ancient Wisdom can only be understood if spiritual reality is expressed in the nontheistic terms of metaphysics.

That which cannot be seen nor seized, ...
the eternal, the omnipresent, subtle and infinitesimal;
that it is which the wise regard the source of all being.

Mundaka Upanishad

I Mundaka, 1 Khanda, 6

9. Summary

न चोरहार्यं न च राजहार्यं न भ्रातृभाज्यं न च भारकारी ।
व्यये कृते वर्धत एव नित्यं विद्याधनं सर्वधनप्रधानम् ॥

na chorahAryaM na cha rAjahAryaM na bhrAtR^ibhAjyam na cha bhArakArI |
vyaye kR^ite vardhata eva nityaM vidyAdhanaM sarvadhanapradhAnaM ||

It cannot be stolen by thieves, cannot be taken away by the king, cannot be divided among brothers, and does not cause a load. |

If spent, it always multiplies. The wealth of knowledge is the greatest among all wealths. ||

The wisdom of Spiritual knowledge, **vijnana** (wisdom, discernment), is *knowing* that we are more than the physical body, and that our spiritual essence of being lives independently of the physical cycle. Such knowledge is often based on more than simple belief or book-learning and can be rooted in a life-changing epiphany, such as a revelation during meditation or other mystical experience.

A transcendental state of unity appears as an abstract idea from the perspective of physical knowledge, and we might have to refer to it as a higher dimension, but that higher dimension is *not* separate from our everyday experience of the physical world. On the contrary, it provides the very substance of our experience of living in a Universe.

This essence of mystical knowledge resonates within our deepest level of being, yet it persistently defies our logic-oriented minds. Normal objective logic is based on the experience of material separateness, and as far as our everyday life is concerned, this is what reality is. To the mystic, that is the classical trap.

The physical level of experience is that part of our being which makes us believe we are separate. If we think our physical body is our only reality of selfness, we have fallen into the trap of the ego-self – we have become so fully attached to the material realm that we think our body is our only mode of being. This causes us, for example, to fear death, and we have essentially no awareness of our true multi-dimensional reality and those modes of our being which are independent of the physical body.

The material world is transient – things come and go, bioforms included. To the mystic, all forms of impermanence are a type of non-reality, and in many of the ancient writings we find the physical level being referred to as an illusion. This is not to say that it doesn't really exist, but rather that we experience its true form in a limited, illusory sense.

There is no doubt that the physical experience is real. If we walk into a brick wall, it hurts. Both the wall and the pain are real enough, but the pain will pass, the goose-egg will heal, and the wall will eventually crumble. What is important to realize is that, through all the experiences of change, the true reality which underlies and creates the physical world, including our physical bodies, does *not* change. That level of reality which never changes is the *most real* -- everything else is temporary and illusory. The ultimate substance of the Universe is not separate particles scattered around in space, but rather a timeless condition of Universal Light. If that Light was not shining forth at this very moment, nothing whatsoever would exist.

As a metaphysical geometry, the concept of a Universal Hypersphere is a geometric expression of Logos, the transcendental First Cause of Creation, and the central singularity represents Mythos, the fully transcendental essence of Existence itself. It is thus the metaphysical seed of Sacred Geometry, the emergence of individual consciousness and the experience of Creation. It also provides a geometric picture of today's unified field physics, along with its strange implications, while incorporating human consciousness.

Anyone who has experienced an actual mystical realization of Oneness will tell you that if we were not transcendentally unified, we would not even be here. Of course, that is a subjective experience and belief, and like someone who has had a near-death experience, the effect on awareness and overall worldview is very difficult to share with anyone else in a convincing way.

From the perspective of science, the concept of a transcendental oneness is unprovable. Science does not need such an idea to do objective modeling of the Universe anyway. Without it, however, we are left with the very bizarre observations of Relativity and quantum physics, and the great mysteries of the Universal Singularity of Big Bang cosmology and the Universal Superforce of unified field physics remain largely uninterpreted.



It is clear that our understanding of the Universe has grown exponentially over the ages, and to now find ourselves at a point where scientific physics clearly offers a worldview consistent with the Ancient Wisdom is remarkable and exciting. There is no doubt that this is an important step in the evolution of human awareness.

The integration of physical knowledge and spiritual understanding is a key part of the awakening process that our planet is experiencing today. It will obviously involve a paradigm shift in our objective view of space, time, and matter. This paradigm shift began earlier this century with the birth of Relativity and quantum theory. These scientific theories deal with universal principles, and being firmly

based in the objective logic of the scientific method, their revelations have emerged in the form of very strange, yet deeply embedded, concepts.

Only when we fully integrate mystical knowledge into our worldview do the strange implications of today's physics begin to make sense. At the same time, the language of modern science becomes a great help in understanding what the Ancient Wisdom is all about.

Human consciousness has indeed come full circle. We have arrived where we started in the sense that an ancient understanding has once again been brought to light. At the same time, we have taken a quantum leap forward in the evolution of human awareness.

The Brahman which has been thus described
is the same as the akasha which is around us [the physical forces];

And the akasha which is around us,
is the same as the akasha which is within us [Lifeforce].

And the akasha which is within us,

That is the akasha within the heart [the soul].

That akasha in the heart is omnipresent and unchanging.

He who knows this obtains omnipresent and unchangeable happiness.

Khandogya Upanishad
III Prapathaka, 12 Khanda, 7-9

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