




Evolution *of the* Six Vedangas

seen through the lens of Varanasi

Indian Institute of Technology Kharagpur
The Science & Heritage Initiative



EVOLUTION OF THE SIX VEDANGAS

ऊर्ध्वमूलमधःशाखमश्वत्थं प्राहुरव्ययम् ।
छन्दांसि यस्य पर्णानि यस्तं वेद स वेदवित् ॥१॥

ūrdhva-mūlam adhaḥ-śhākhamaśhvatttham prāhur avyayam
chhandānsi yasya parṇāni yas taṁ veda sa veda-vit

(Purushottam Yoga: Bhagabat Gita: 15.1)

.....The problem of Vedic Exegesis then is the problem of reviving the spirit and re-creating the inner experience of the atmosphere in which the Mantras took shape.....like the mystic Asswattha tree 'with its root above and the branches below', the Vedic tradition, in a broad sense, stands at the very source of almost all forms of Indian spiritual cults. And the interpretation of this tradition can be attempted with high results if we do not place the Vedas on the isolated heights of the past, but with a total vision of the present retrace our steps to the roots discovering, with a penetrating insight, the links at every step. **But this movement in breadth must be supplemented by a movement in depth.'**

– Shri Anirvan

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Forward

It is probably true quite generally that in the history of human thinking the most fruitful developments frequently take place at those points where two different lines of thought meet.

– Werner Heisenberg

Preamble

The Department of Higher Education, Ministry of Human Resources Development, Government of India has steered a series of national and regional level workshops, for launching pilot projects, for creating centers of excellence based on a spirit of inter and intra-institutional convergence promoting research, development, innovation (RDI) initiatives. The idea is to pro-activate and augment a ‘people-centric’ course of India’s future growth plans, strategies and development programs based on clusters of projects to be executed by IITs and other allied institutes.

Addressing the aforesaid course, the Indian Institute of Technology Kharagpur has made a distinctive and fore-running headway for creating and initiating a cluster of projects under the ‘Science Heritage Interface’ scheme of Government of India. Other IITs and Institutes of national importance have also followed.

The present report is one of many to represent the progress. The report represents the effort to forward the vision of IIT Kharagpur, which will serve both as an umbrella to plan, design and activate a ‘people-centric’ ground reality for a cluster of

projects. The vision is based on the twin foundations of Indo-centric theme and an operational-cum-organizational structure of scientific exploration, at the same time. These projects represent inter and intra-institutional convergence of research, development, innovation (RDI) initiatives. The vision is called ‘SANDHI’. ‘SANDHI’ literally means convergence and confluence. ‘SandHI’ is also the platform of inter-disciplinary and inter-institutional assimilation. SandHI is the acronym of ‘Science-Heritage Initiative’.

Under ‘SANDHI’, there are four levels of activity: First, a deeper level of philosophical research based on scientific exploration; Secondly, an outward recovery of Indian heritage systems based on the epistemological domain of Indian science and technology driven traditions; thirdly, a re-positioning of traditional community planning and engineering systems based on the Indian ethos; leading to a fourth and demonstrative level, i.e., a pro-active resurrection of traditional knowledge systems of India based on creative economy regeneration and marketing in various corners of reality – concerning the people, their economy, their folk and the all-round livability of the surrounding they belong to.

The background

To best address these levels, SandHI has three bandwidths of projects. First, it has a deeper level, where deep science and heritage interface based projects have been designed. Secondly, there are large scale Geo-exploratory and geo-technical riparian based paleo-hydrological investigations; epigraphic investigation and iconographic-archaeological interpretations; and contemporary application/ tourism revival based projects, which are also inclusive of a Mega iconic project on ‘Varanasi’, the living and sustainable river-based urban habitat of India and the world for over 3500 years or more. Third and finally, SandHI has formulated a set of creative economic generation projects of which one is to re-explore the application and design of terracotta

technology as a building material based on a pilot project in Kumartuli belt, Kolkata.

Variety and network of Projects – exploration through cooperative inquiry constituting level one, which is an agglomeration of deep science and heritage interface based projects. These are:

- Two language based projects
- Two music projects and
- Two iconography-shape grammar driven heritage and historical exploration projects

The two language projects are for developing a scientific rationale of the huge and abstruse ambit of the Indo-European Language Systems (IELS) applying a range of approaches from computational linguistic algorithms (lab-tested) to cognitive geo-spatial and ethnographic pool-mapping techniques (empirical-graphic) that are based on the trans-personal edifice of ‘Hierarchy of needs’; and also a sonic (etymologic/ articulation based) matching innovations (fresh approach) technique using signal processing software applied on the basis of varnamala (the hierarchy of vowels and consonants based on the sonic etymologic of the word or the code that is soft (sabda) and its meaning or cognition/ recognition pattern/ the value or the hard worth (artha).

The two music projects aim at Decoding and Exploring Ancient Classification of Indian Classical Music through Machine Learning Methods and Audience Response. The first project looks at the decoding of Ancient Classifications of Indian Ragas and the second project aims at a deep evaluation of Audience Response to Indian Classical Music Classification.

The two iconographic projects are trying to establish a scientific correlation between 2-D footprints of the built environment (Architecture) based on a Ecologic-Climatic construct and anthropocentric patterns and establish a relationship with 3-D systems of iconographic patterns or ‘footprints’ called ‘Mandala’ as evident in designs of Temple, Sacred Precincts and General Settlement forms in Indian architecture and also in regions and countries beyond India.

The second Iconography driven project is attempting to establish linkages between iconographic re-interpretation of architecture and engineering patterns of Vedic and Buddhist periods based on:

1. Identification of underlying common patterns: built-forms; shape grammar; principles of design; styles and continuity embedded in the two layers
2. Earmarking a methodology to establish the continuity and re-interpretation of Indian history

Additionally there are four other deep exploratory projects namely:

1. The Effect of Meditation, Pranayam and Meditative Sounds on the Cognitive and Emotional Performance of Human Brain: a study using an integrated signal and image-based approach
2. Improving ‘End-of-Life Care’ (EoLC) for the Elderly by Integrating Indic Perspectives on Ageing and Dying called ‘Vanaprastha/Sannyasamarga leading to ‘Moksha’

3. Reconfiguring Dāna (Generosity) as a new Institutional Financial Mechanism for Social Enterprises based on Indic perspectives
4. Exploring historical Evidence, Myth and Geophysical Modelling to Assess the Tectonic Movement and Risks Associated with the Odisha Coastal ‘Heritage’ Belt

The interesting part is the relative association and convergence of various projects, like Language and Music – sharing a system of notations, syntax and grammar; Music and Meditation – converging to a common platform of therapeutic objective and cathartic healing; Iconography and Music – extracting common patterns of audience-response and audience-demand-systems and so on. To aim is to arrive at the spirit of grand thought, the grand convergence. This is SandHI.

The present book traces the ‘Evolution of the Six Vedangas’ seen through the lens of Varanasi. Normally, in scholarly and intellectual circles, Indian Spirituality is only portrayed as Vedantic or Upanishadic, taking us beyond this world to that immutable but un-manifest world of some Absolute Truth. But Indian Spirituality also has the other wing. Called the *Anga* of the Vedas, i.e., in Vedanga, the universe and the individuals in it are also embraced. Just not the primordial roots transcending the universe, but also covering the branches and networks in creation itself, is the whole objective of Vedanga.

The systemic arts and science of Vedanga owe a lot to the very ancient City of Varanasi, which the present book traces. The evolution of the heart of Chhanda in particular, and within which, the recovery of Gayatri by the seven sages, from Bhrigu (Bhargha devasya dhimahi) to Viswamitra, has intimate relationship with Varanasi.

The deliberations in this book are presented in seven sections. It begins with a preamble offering a background followed by a short but meaningful deliberation on the four cardinal and temporal directions of Vedic epistemology, viz. Purva, which represents both east and the past, the source, the light from behind and before; Uttara, which is both north and also considers the future, the output, the possibilities; Paschima, which is both the shadow, the sciograph of that original immutable Absolute truth which is just not static but dynamic too. It is moving, casting a shadow, which is the universe itself, the ‘Scio’ (chhyaya) that portrays a continuous flow of being and becoming of many and one in the universe; and finally, we have Dakshina, which is the fulfillment of realization, achieved through sacrifice and tapasya.

- **Section 1: The Network of Vedic Angas or Wings, called Vedangas.** Here, a systematic and sequential discussion is forwarded to explain the six wings of Vedanga. They are namely,

1. *Siksha* - which is achieved through systemic and disciplined intuition of language system
 2. *Chhanda* - the essence of Prosody and inner resonance in form of development of meters tying up the upper and lower worlds;
 3. *Vyakarana* - the deep structure and array of the language system that holds the development culture, communication and human evolution;
 4. *Nirukta* - the arrival at the root and etymon of language systems and their underlying objective;
 5. *Jyotisha* - an establishment of the individual aspirant's position in the universal matrix of truth-light-consciousness ensemble based on the heterogeneity of beings and non-linearity cosmic changes; all based on the carrying capacities of users (past samskaras) in the universal being and becoming (future opportunities of improvement); and
 6. *Kalpa* - a final outlay of the creative flow based on the temporal continuum of culture and civilization itself.
- **Section 2: Five essential features of Vedangas.** The five features are interdependence, interconnectivity, decentralization, cyclic essence or non-linearity, and an acceptance of multiplicity resonating to that one backdrop of unity and transcendence. The five features constitute the wings of Vedanta. They are like ramification or branches of a tree originating from a common root, but manifesting outward with a possibility of full and diverse foliage and floral variety. Within Vedanga, Chhanda represents the key, the linkage, the resonance between the domains of the lower world of manifestation and immanence of the soul and the upper world of liberation, and merger of the soul in absolute transcendence. Often, the term Veda, or Srutis is equivalent to Chhanda (Purushottama Yoga, Bhagabat Gita, 15.1).
 - **Section 3: World Views** that expands on the various features of ramification, networking and divergence of Vedanga. It is represented in the form of a TREE. We know that,
 1. Trees are fundamental to religion (Bodhi tree; Tree of wisdom) and science (graph theory; stratification);
 2. Trees are Dendrograms (Tree-graphs) in information sciences, computing and statistics. Trees are fundamental to neural networking and science of evolutionary stratification;
 3. Trees represent the twin flows of evolution and involution, like a two-way connectivity between the seed and the sprouting of that seed to a full branching
 4. Trees are the primal essence of Vedanga, covering the systemic ramification of language systems as the carrier of culture over many and manyrungs/ tiers of human history and evolution.
 5. Trees represent the linking of the branches of language system based on a certain position of culture and literature at its root. For example, the case of Indo-European language systems based on the etymological foundation of all language systems in Sanskrit, and finally, the etymon of etymons (the master root or Logos of the Universe), as evident in Vedangas, the Nirukta. The three pillars of Vedangas namely Siksha, Vyakarana and Nirukta cover these aspects sequentially.

On the other hand, we are equally concerned with application, the purpose of growth of development of an individual, the race as a whole like the Indians or Greeks, or a country, or a cultural system that is anthropocentric and climate-sensitive that is tropical and temperate. Here the focus and placement on the harmony-resonance between the internal preparedness of the individual becomes very important. The constructs of Vedanga is initiated and raised through the following fundamental questions:

 - Aspirant who seeks and asks who am I?
 - What am I doing here in this universe?
 - What is the purpose of my life?
 - How am I different from the animal world?
 - What is the role of morality and ethics in my evolution?

- Am I responsible? Who is responsible?
- After material living and comfort (food, shelter, sex), how far am I developed in language, communication, arts and the sciences (culture)?
- Is culture the last rung in evolution? Or there is an even higher reality ?
(Based on Maslow's hierarchy of Needs)
- What is the relationship of my standing with the outer world?
- What is the variety and carrying-capacity of mine, and each and every users over space, time and culture and the impact of the ensemble called samskaras (deep psychic impressions accrued of many lives)**-environment-genetics?
- And finally, what is the inherent dynamics of human evolution itself seen and placed over time? And how am I individually placed in this?

****It takes us to transmigration, metempsychosis based on the causation of karma (hetu, karya, karana)*

The application part, the working of Vedanga in us, the individual is represented by the other three, namely Chhanda, Jyotisha, Kalpa. The ultimate motive is to understand the co-evolution between the two ends (anta) namely:

1. The juxtaposition of the reductionist Linear and the holistic Non-Linear patterns of evolution;
2. The Microcosm and the Macrocosm – the two extremes (Mahat and Aham-driven Cosmology of Samkhya);
3. The Dicotyledonous co-existence of the Tree and the seed, and the cycles between the two; and
4. The Personal (within the Aham or individual I-consciousness) and Trans-personated or the Impersonal (Beyond Mahat or the Collective Consciousness or Hiranyagarbha) standpoints in any existence.

- **Section 4: Vedangas from Vedic Cosmology: in search of a relationship.** This section expands from the Cosmogony of the Vedas, based on the formation of the Septuplet Matrix. The Matrix, the womb is structurally governed and poetically orchestrated by the wisdom of the Seven primordial Sages of the Angirasas (essence of the Sapta-Rishis). Two important features are:

1. Thus the Anga (wing) of these greatest of Rishis is the recovery of a two-way flow of truth-consciousness and immortality (rasas) that outflows from a meeting point between the vast and the small, with Vedangas being the most important resonating link between the two extremes.
2. The link is based on the augmentation of language system, the evolution of the system into subsequent word formation, vibrations that may be culminating to the Word, The final Mantra expressed from truth-light (Jyoti) and established over cycles of time and two-way evolution (Kalpa). The Jiva becomes Shiva. The Yogi becomes Maha Yogi and he or she shines as the signature of immortality (Omkara-Vigraha).

- **Section 5: Brahma-Jyamala-Sukta (Jamala),** which expands on the twin, 'Shiva and Shakti' or 'Parama-Purusha and Parama-Prakriti' in eternal union. Section 5 elaborates the understanding based on an analogy of Vedic cosmology and modern physics, based on which the cyclic array of Jyotisha and Kalpa are featured.

- **Section 6: Abstraction of Tree in Modern Computational Logic:** it is a section that expands on the current ideas and constructs of consciousness moving from Red-field to Green-fields. The works of Carl Gustav Jung, Abraham Maslow and Ken Wilber have been applied in light of the works of Sri Aurobindo. A structure of evolution and involution is proposed.

- **Section 7: Conclusions - The wings of Truth of Vedanta – Evolution of Gayatri** is the terminating note of the book tracing the unfathomable origins of Vedangas in world's most ancient and sustainable habitat, Varanasi.

PURVA: A Priori

THE FIRST CARDINAL: FROM VEDAS to VEDANTA (Transcendent and Impersonal) & Vedangas (The Impersonal personified as the Macrocosmic in the Personal)



“

‘In the first place, we have to understand a little about our scriptures. Two ideals of truth are in our scriptures, the one is what we call the eternal, and the other is not so authoritative yet binding under particular circumstances, times and places. The eternal relations, which deal with the nature of soul, and of God, and the relations between souls and God, are embodied in what we call the Shrutis, the Vedas. The next set of truths is what we call Smritis, as embodied in the works of Manu, Yagnavalkya, and other writers, and also in the Puranas, down to the Tantras. This second class of books and teachings is subordinate to the Shrutis, inasmuch as whenever any one of these contradicts anything in the Shrutis, the Shrutis must prevail. This is the Law. The idea is that the framework of the destiny and goal of man has been all delineated in the Vedas, the details have been left to be worked out in the Smritis and Puranas.....

This is a peculiarity which we have to understand – that our religion preaches an **Impersonal Personal God**. It preaches any amount of impersonal laws (THAT) + any amount of personality (Thou), but the very fountainhead of our religion is in the Shrutis, the Vedas, which are perfectly impersonal; the persons all come in the Smritis and Puranas, the great Avatars, Incarnations of Gods, Prophets and so forth.....

Our first principle is that all that is necessary for the perfection of man, and attaining unto freedom is there, in the Vedas. You cannot find anything new. You cannot go beyond a perfect unity, which is the goal of all knowledge; this has been already reached there, and it is impossible to go beyond that unity. **Religious knowledge became COMPLETE when TAT TVAM ASI (Thou art THAT) was discovered, and that was in the Vedas.** What remained was the guidance of people from time to time, according to different times and places, according to different circumstances and environments; people had to be guided along the old, old path, and for this these great teachers came, these great sages..... This is the idea in India.’

”

Swami Vivekananda
The Sages of India

UTTARA: A Posteriori

THE SECOND CARDINAL: INDIAN LITERATURE TRADITIONS



‘Tradition divides the Vedic literature into four sections, viz. Mantra-Samhita, Brahmana, Aranyaka, and Vedanta or Upanishads. An older division is into Mantra and Brahmana, where Mantra forms the original body of literature of which Brahmana is the exposition. Aranyaka and Upanishad in this case form a part of Brahmana. From this point of view of a change in the mode of expression (and not assuming a rigid sequence in time), the literature that began with Mantra, naturally ends with Upanishad. Of the whole of this literature, the part that contains the Upanishad is comparatively less obscure, because their language is less symbolical, while the approach is more psychological and intellectual.

A symbol is the sensuous expression of a mystical experience; and unless we have that quickness of mind, which can seize an object of sense and create a dreamland around it, suggestive of something elusively transcendent, symbolism usually falls flat. It requires an atmosphere quite different from that of rationalism.

While rationalism seeks to translate the concrete into the abstract, symbolism as an art tries to transform the abstract of the intuition into concrete images. The Aryan literature began with this symbolism in the Mantra-Samhitas and gradually drifted to rationalism. The Upanishads mark the period of transition, and their rationalistic bias makes them more intelligible to the modern mind, which apparently mistakes them for production of maturer thought.

Symbolism was pushed into the background, though it could not be killed, and found expression in other fields of literary activity. But a major link with the past was broken; and the interpretation of the ancient symbols becomes an impossible task, unless we can create again the subjective atmosphere in which they were born.

.....The problem of Vedic Exegesis then is the problem of reviving the spirit and re-creating the inner experience of the atmosphere in which the Mantras took shape.....like the mystic Asswattha tree ‘with its root above and the branches below’, the Vedic tradition, in a broad sense, stands at the very source of almost all forms of Indian spiritual cults. And the interpretation of this tradition can be attempted with high results if we do not place the Vedas on the isolated heights of the past, but with a total vision of the present retrace our steps to the roots discovering, with a penetrating insight, the links at every step. **But this movement in breadth must be supplemented by a movement in depth.**



Shri Anirvan

VEDANGAS or Vedic Exegesis
The Early Phases, Part II, Essay 17
The Cultural Heritage of India, Volume I

PASCHIMA: A true follower

THE THIRD CARDINAL: VEDAS AND PURANAS

INDIA'S HISTORICAL FRAMEWORK OF VEDANGAS as a TRANSIT



'In the Vedic way, humanity becomes that absolute impersonal being – the Brahman by virtue of tapasya, which is an earnest and steadfast path of contemplation and meditation. And in the Puranic way, God, as the personified divine being comes to salvage the longing human mind. As a result, the human becomes an intimate divinized associate of the supreme. Vairagya – is apathy for the disjointed and transient and an affinity for the unified and the divine. Viraha is an earnest longing for the beloved divinity. Both are ways to reach the supreme state of being. These are considered to be the two paths to a final journey towards unity, which is divinity itself. This is the realization of human evolution as held by Indians since times of remote antiquity. The Vedic way is hardly evident in other countries; the Puranic way is the predominant one in different forms in all other nations. But, the more puritan and original form of the Puranic way is seen alone in India. Whereas in other countries, the different forms of the Puranic way are mostly distant and diluted derivatives of the original form and they have been tailored to meet the easy and opportunity-driven necessities of the material existence. The focus of this derivation is mostly tailored by a 'personal-savior' prescription having the least emphasis on the necessity of a self-driven responsibility and diligence for soul-searching and final salvation. That is why there have had emerged a concept of 'Eternal Entombment' – a Sepulcher, where sleeps waiting through eternity for final mercy and permanent absorption in the 'Heaven' – often represented by the Garden of Eden.

The Vedantic way is a sub-set of the Vedic way. In the Puranic way, human beings are unable to become that absolute being by virtue of self-driven diligence and perseverance and that is why, the Absolute as Personified descends to the lower planes of human inability and incertitude with an eye to value-addition and recovery. Simultaneously and gradually, the 'path-finder' also becomes the 'end of the path'. This spirit and the duet of the 'path-finder' and the 'path-seeker' are expected to finally coalesce to a state of oneness – which is non-dualistic and absolute. For the sake of clarity in the early stages of progression, the two paths are seen as ways governed by non-dualism and dualism i.e. the Adwaita (a-duet) form of religious practice and the dwaita (duet) form of religious followings, respectively. This dwaita form has been diluted in other countries. Or it can be said to have been fashioned down to lower levels by the materially driven societies. That is why, even the Puranic way have given away to the mundane or selfish opportunities of individualism. But, the recovery of the higher moral, ethical and refined aesthetic sides of humanity has to be honestly emphasized – this is mostly missing in the religion of the other lands.

The absolute Brahman of the Vedic way has matured in the impersonal realization called 'Shiva' of the Tantras. The abstraction of 'Shiva' is of extreme greatness, as 'Shiva' is potent in all beings. In times today, this abstraction is all-assimilative. Either it is an impersonal abstraction of 'The Shiva' or it is 'The Buddha' – both covering all personifications, as evident in the personality of Sri Ramakrishna.

‘The birth of Sri Krishna is in the midst of a prison-cell is a parable of the state of bondage, helplessness, captivity. Why? The parable explains our own state in this world. His birth extends to embrace or co-exist at this end – here amidst the current weak and helpless state of humanity. But from there the parable marches to the other imagery of Krishna as the ‘Lord’, seated in complete sovereignty and omnipotence – the Lordship of the spiraling cosmic play – the Golaka. To that great and the vast, which he represents, he is taking us all. In the pastures of Vrindavana, he is the player of the reed – the divine seven-perforated flute. Just not by his descent, but also by virtue of our ascent and upward struggles and urges for that vast – lies the implications of the real significance and applicability of a religion.

But in other countries, the part of self-diligence, the path of austere upward catharsis has taken a back seat. Instead the Lord alone is portrayed as a one-tract personal savior defying the abstraction of God both as ‘God of fear’ to ‘God of love’. If ‘God of Love’ is also true, then how can a religion hail alone the bloody picture of crucifix as the highest ideal? The words had been changed and manipulated accordingly.

The Vedic way has said that any human being by virtue of the intrinsic divinity will be able to reach some day his highest state of self-esteem – to that highest level of consciousness. This is ‘Original Divinity’. This is the Concept of Adwaita of the highest and complete kind. Tat-tvam-asi – ‘Thou Art That’. It is from this bedrock of Indian civilization, the impersonal religion of the continuity of personal realization has been forwarded. This is the way of the Rishis, who represent an impersonal lineage of realization called the Vedas. And the other one is the Puranic way. In here, the impersonal realization is personified to begin with – seen as a Godhead, who reveals himself like a human being, stands beside the many ordinary backing up their salvation, and recovers them from their dissipated and disjointed state. Here he becomes the Lord of salvation. Here planted is the seed of ‘Bhakti-bada’ – the path of devotion that sprouts to emerge as the full tree of bliss, Ananda, whose roots are one and that Absolute.

He has come down at the level of despair and helplessness. But it does not end here. From there, with his help from above and within (original divinity), humanity, bit by bit, being by being, attempts to struggle and ascend and march forward. That is the highest message. Thus the combined effect of ‘non-dualism’-driven and ‘dualism’-driven spirituality have been the source of different approaches and cults in the Puranas and similar others. This is mainly the case of India and her historical evolution. And ‘dualism’-driven spirituality alone has led to different religious manifestations in other parts of the world and that too with dilution. What is still seen in India is its near-to-original or purer form of dualism-driven spirituality backed by the non-dualism strand. But other forms are largely polluted by the materially driven conflicts and selfish opportunities prevailing and increasing in other countries. That is the historical evolution of the rest of the world. In effect it is the key to understand the underlying differences.’



Swami Ramananda
Santa Prasanga

DAKSHINA: a sacrifice that is realized

THE FOURTH CARDINAL: INDIA'S SCIENTIFIC IMAGERIES



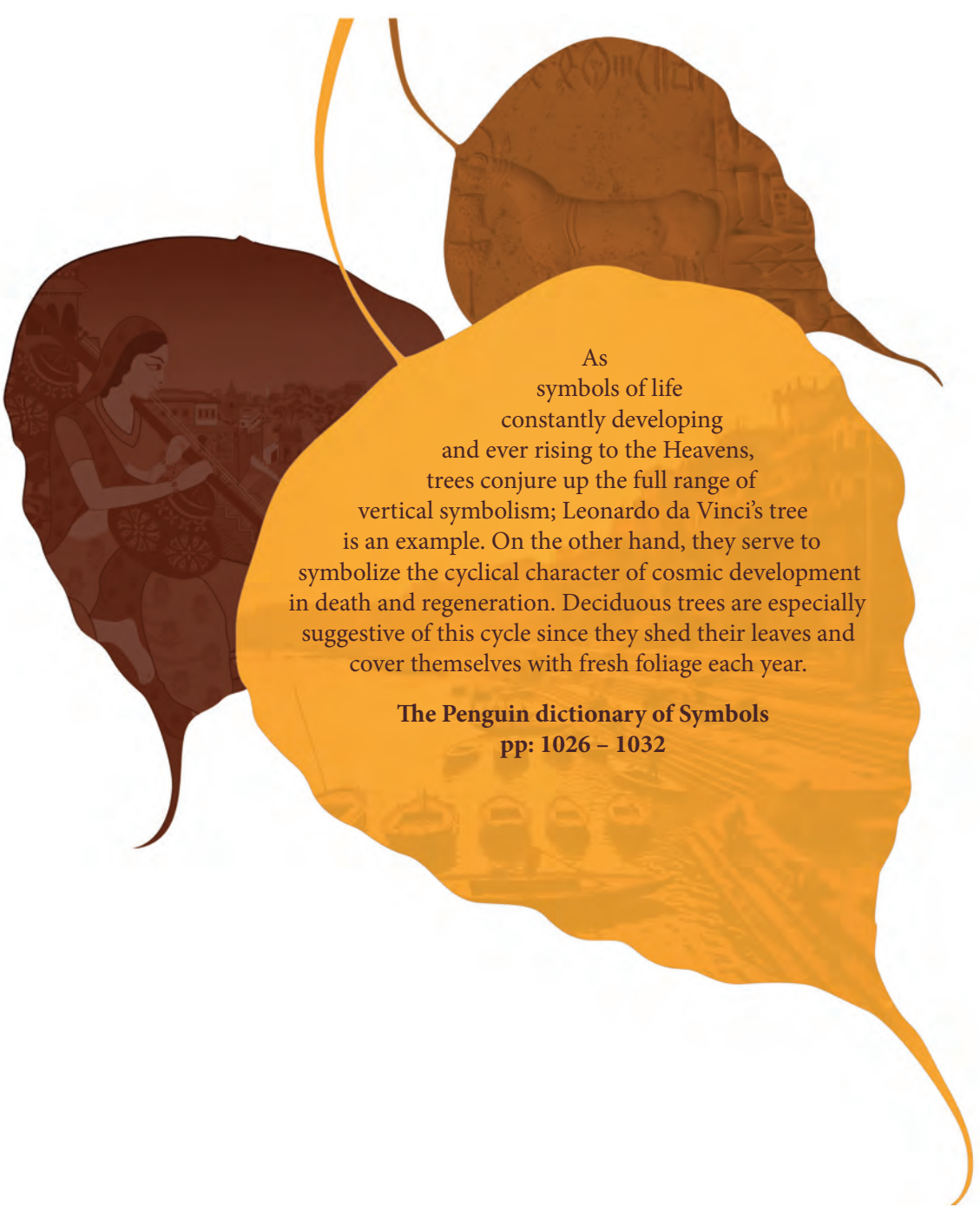
‘Classical science has emphasized stability and equilibrium. We see today a different world – the world of fluctuation, of evolution, of instabilities and we have to understand where this comes from. Essentially I will tell you about ‘Chaos’ to show you that with ‘Chaos’ we enter a new physics and mathematics, which may, in my opinion, lead to revolution in science comparable to the ones due to quantum mechanics and relativity.

I like to show you that the idea of physics is in some sense changing. The classical idea of that is a kind of geometry in which ‘Time’ does not play an important role. Certainly there is no difference between future and past. But, of course, the problem of ‘Time’ is of many philosophical aspects.

Every great civilization like Indian civilization has speculated about the nature of ‘Time’. Is the universe ruled by deterministic laws? There is no conflict between being and becoming. It is the central problem studied in the Vedas – this problem of overcoming the position of being and becoming. I am not an expert on the Vedas. But certainly when you look at the cosmic dance of Shiva or the dream of Vishnu you see how to overcome the aspects of being to becoming.’



Ilya Prigogine
Nobel Laureate, Chemistry, 1977



As
symbols of life
constantly developing
and ever rising to the Heavens,
trees conjure up the full range of
vertical symbolism; Leonardo da Vinci's tree
is an example. On the other hand, they serve to
symbolize the cyclical character of cosmic development
in death and regeneration. Deciduous trees are especially
suggestive of this cycle since they shed their leaves and
cover themselves with fresh foliage each year.

The Penguin dictionary of Symbols
pp: 1026 - 1032

SECTION ONE

**THE NETWORK
OF VEDIC ANGAS
(WINGS)**

**CALLED
VEDANGAS**

Vedangas literally mean the limbs or the Angas (wings) of the Vedas. The Vedangas are six in number. Just like the wings of the body or a system, they perform various supportive and augmenting functions in the penetration, continuity and innovations of the Vedas and the Vedic traditions.

The six Vedangas are:

1 Siksha



It represents the study of sounds and pronunciation associated with each syllable that constitute the mantra or the deep mantic tradition. The sounds and the pronunciation embedded within the syntax, and the syllable that constitutes an agglomeration of syntax (like vowels and consonants) process the thermodynamic property of the language system. The property is the basis of an inner Agni (the igneous principle or psychic fire) that needs to be kindled and elevated. It is achieved through intense concentration and good morality, which is the whole purpose of Tapasya.

Finally, at an advanced stage it becomes Yoga, which processes the unification of the microcosmic self with the Vast Transcendental self, and the journey is achieved with the aid of the universal self or field-consciousness (Mahat) of the macrocosm.

Sikshan is equivalent to suction, which is a process by which two surfaces or interfaces of two systems stick together, when the air between them is removed. It leads to rapture (Samadhi), where the two systems become one. In Yoga, it is analogous to Kumbhaka or a system, which is transcended by exceeding or going beyond the path of breathing, as a characteristics of mortal life.

Shiksha (śikṣā) is driven by the phonetics and the phonology of pronunciation, as a process of internalization. It is a moral, ethical and a disciplined property of the aspirant in converting the pattern of external language systems (Vaikhari = Beaker or the pitcher like external property of language system) to an internal system (Madhyama = Medium or intermediate), and finally, reaching a vast luminescent visible living system that constitutes the lifeline of the universal flow of things (Pashyanti = Patient). From this point, the Yogi moves into a system, which is absorbed in the vast of all vast (Para = Para), the transcendent and the infinite.

The focus of Siksha is on understanding the range and deep taxonomy of Sanskrit alphabets, which we call the Varnamala (The garland of letters). Yoga systematically leads to a cumulative accent of the sound features of each alphabet, along with the quantity, stress, melody and rules of the intrinsic combination of words. At a matured stage, the recitation of a Mantra or syllabic or seed (Vija) sound is promoted, which finally proceeds to the seed of all seeds, the OM.

The 164th sukta of the Rig Veda is by Seer Dirghatama, and the whole sukta can be taken as an ancient reference to explain the evolution of the Vedangas.

The whole purpose of the mantra tradition is to couple Rik (the starter Mantra) into a reciprocal mantra, the Sama (Psalm), which is the rhythmic or melodious mantra. Thus, dry structure of language system is transformed into a Jamala (a duet) of Rik-Sama, catching up to the tunes of cosmic harmony and melody, which is Chhanda (Chanting).

Here, the vast ethereal spans of the Cosmos as an ensemble of word-formation, becomes essentially visible as a rainbow, or an arc of many hues or tones called Pashyanti. As the Srutis say:

*Om tad vishnohparamampadamsada
pashyanti surayo diviva chakshur-atatam
tadviprasovipanyavo jagrivamsaha
samindhatevishnoryat paramampadam*

Rig Veda 1.22.20

2 Chhanda



Chhanda represents the next step. With chhanda, the Yogi gets an access to the mastery of rhyme and meter of the mantic tradition.

Chhanda takes the initiated from the structure of language system to the waves of deep aesthetics that are actually embedded in the language system and a system that constitutes various harmonies in creation. It takes the elevated mind to Rasa, which is flow of universal aesthetics and bliss, vide the poetic meters. Chhanda includes the set of relationship based on fixed number of syllables per verse, and those further based on fixed number of constituent text per verse.

The simple word analogous to Chhanda is chant.

The Chhandas, have both linear and non-linear systems. The system at times is identified with the “seven birds” or “seven mouths of Brihaspati”, who is also configured as the Hiranyagarbha or the Creative womb of the Universe. He is the ‘Brahma’ of the Puranas or ‘Brahmanaspati’ of the Vedas. But all three means the Priest, the bearer of the Logos or Vak (the ensemble of the cosmic Vocal system and the octaves constituting the river of wisdom in the Vedas, she is known as Saraswati).

The seven major ancient Sanskrit metres are the three 8-syllable Gayatri, the four 8-syllable Anustubh, the four 11-syllable Tristubh, the four 12-syllable Jagati, and the mixed padas or metres named Ushnih, Brihati and Pankti:

गायत्रेणप्रतमिमितीअर्कमर्केणसामत्रैषट्भेनवाकम् ।
वाकेनवाकंद्वपिदाचतुष्पदाक्षरेणममितेसप्तवाणीः ॥२४॥

*With the Gayatri, he measures a song; with the song – a chant;
with the Tristubh – a recited stanza;
With the stanza of two feet and four feet – a hymn; with the syllable
they measure the seven voices. ॥24॥*

—Rigveda 1.164.24

3 Vyakarana



Vyākaraṇa means “separation, distinction, discrimination, analysis, explanation” of the constituent mantra, and it also refers to the Vedic field of language analysis, specifically grammatical analysis, which augments a writer or a composer to express his or her creative will based on the norms of the Cosmic Word, and help a reader discriminate accurate language, from disjointed and disorganized ones.

Much before the accepted or known school of Acharya Panini, some of these pre-Pāṇinian scholars mentioned by Pāṇini, are great sages like Apisali, Kasyapa, Gargya, Galava, Cakravarmana, Bharadvaja, Sakatayana, Sakalya, Senaka and Sphoṭayāna. Their contribution needs to be explored, in addition to Panini. The Pre-Panini grammar of the Vedic Rishis like Gargya and Bharadvaja are more poetic and rhythmical.

The Word, which is both a visible luminescent thermodynamic property of the Cosmic matrix, is also a vocal audio property of radiations like an all-emanating Sun. The Sun, the epicentre of all Devas, the Suras, is considered to be an eternal form of energy, harmony and rhythm, in the Vedas. The energy system is condensed in the form of the 12 cardinal Solar principles called the Adityas.

The worship of the Adityas is one with the potential system and a process to transform a latent mind and realize the soul. The Chhanda Gayatri is one of such, where the acceptable centralizing rays of the sun (Varenya Varga/Bharga) is chosen among unacceptable ones, which are decentralizing and creative. The Rishi in support are the Bhargabi Rishis, whose role is pioneering among the Vedic sages.

Language system therefore evolves to express the transient material world first. Thereafter, the objective is to express the subtle and the psychic (pshukkos) feelings, which is next; and finally, to arrive at the flux of causation (Karana) by which the eternal human desire for understanding the full meaning of life and its position in the universe, are best targeted.

The elevation takes the Yogi to access the verbal roots of the language system, the etymon, the atomic self of cosmic vibration. It takes the Springing Yogi back to the Autumnal or what we call the Fall. The Autumnal point returns the power of the Word from the seed of seeds, the Mula-vija, which is Nirukta. The return to creation or a path back to the Cosmos, is similar to the returns to scale that is evident in a Life Cycle.

The ascendant or the springing back to unity is Yoga; and descendant and the falling back to manifestation, diversity and heterogeneity is Tantra based on the principle of numbers (Samkhya).

Thus, by combining Yoga and Samkhya, a complete system of knowledge supporting creation, the purpose and processes of rolling or springing up, which we call evolution (sambhuti), and the falling back, which we call involution (asambhuti) is best accessed by the Yogi.



4 Nirukta



Nirukta means “a system of expression which is uttered, pronounced, explained, expressed, defined, and made loud, with full awareness of its origin and the purpose of going away from that origin. It is like a movement from a Tree to its fruits, and the seed, from where the next Tree is re-sprouted. Thus death and resurrection of a chthonian or vegetation or agrarian cycle are also evident in the rules of the Cosmos.

The Cycle traces the seed, the etymological interpretation of the Word, and often also means “the deep poetical derivation” or “the full explanation of a word”, itself.

The same word may have different implications at the syntactic level; but its inherent semantics are finally interconnected across space, time and highest utility, what we call semiotics.

Words like ‘Purva’ and ‘Uttara’ mean both the East and the North, spatially; but they also mean, what is past and the future, temporally. The exegesis, empowers Word-formation on a range of ideas and abstraction, where space and time are established as one final identity and a continuum by the Vedic sages.

Hence, the two archik (Cantos or Chapters), represent the luminescent fire-expressions (Archi) of rhythms of the past and the rhythms of the future. It is etymologically equivalent to the Arka (Sun), and they also hold the two phases of the Sama Veda and the parable of clouds in the Megh-dutam by Poet Kalidas. The words that we are referring here are:

- Purva-Archika and Uttar-Archika of the Sama Veda (Sruti)
- Purva-Megha and Uttar-Megha of Megh-dutam (Work by Poet Kalidas)

Thus, the Ark of the Word also means the Covenant, a bond between the Vast and the small. In Semitic religions, it is also the Ark or primordial boat (equivalent to Beth-el or the Vedas). The Floods represent the beginning of creation after a previous cycle, and the First Navy-man (Naiah or Noah) represents the primordial human Mind (Manu or Man).

In Egypt, the twin Nile-boats of the ascendant and the descendant suns are therefore reminiscent of these complementary connections. The Pyramids are built with an idea of a network between the First principle of mortality (Mansion of the KA) to the celestial reciprocal principle of immortality (The bird of the BA). If the two are linked, i.e., Ka-Ba then takes the boat further to the divine Elysium, the EL (or Ilah). Hence, the ancient Ka-Ba-Lah or the Mansion of the Ka-Ba, continued to pervade Semitic faiths.

Incidentally, the Nile Boat follows the 12 Zodiac cycle, representing an astral parade, which is a non-linear journey of the Sun-God. The God is Atum or Re (Rah) that distantly corresponds to the 12 signs of astral rhythms of Vedic Cosmogony, based on the four cardinals, the Chahar-Bagh of ancient Persia, or the Garden of Adonis in Greece, or the later Garden of Eden in Semitic systems. In India, it is the quadrangular primal cross, called the Chatur-Vedi.

It takes the inner Fire (Pyre), latent in the Phura (the Pura or the pharaoh), which is in the Middle (Medes or Madhyama), from where the soul is resurrected retracing the path back to the celestial footprint, for which the ancient Egyptians continued to believe in the ideas of incarnation, reincarnation, causation and immortality in the earliest of their times. The connections between the Vast and the small, represented both an island (Aisle) and the sea around it. It is analogous to a periphery of a circuitous journey and a still center within it (equivalent to a Nabhi, the solar plexus, or the Nave). These are fascinating shape grammar that paved the ways of the Vedic altar on the one hand, and lead to the origins of the Gothic Mandala.

In Christian tradition it is a circuit, a round-about, called Kiriche (Germanic) Kirke (Irish) or the Circe (Greek), which is semantically what we call the Church. The origin of the Church is therefore from either a double apse or a half apse of a Basilica, echoing the distant Chaitya halls of India. The Buddhists inherited that from the later Vedic sources, and later the Christians from the Buddhists in the Eastern Mediterranean.

Therefore, the mystery of global interconnections of history itself rests in an understanding of the Wings of the Vedas, the Vedangas. It is revealed as we touch the fifth wing (Anga) of the House (Beth) of the Supreme Divinity.

We call that the fifth wing, the wing of the 12 astral principles or the ZODIAC, which is analogous to Jyotisha, and the complementary wheel of time, which is Kalpa at the universal level, as the final sixth wing.

The Madhu-kanda of the Chandogya Upanishad says:

*āditpratnasya retasaḥ |
udvayaṃ tamasaspari jyotiḥ paśyanta uttaram+svaḥ
paśyanta uttaram devaṃ devatrā sūryamaganma
jyotiruttamamiti jyotiruttamamiti || 3.17.7 ||*

The Cosmic Sun is conceived as the Beehive; and Sages are the Bees. The Sages reach that summit, the light of lights, where the supreme orb of light cycles are accessed, and the highest Word is revealed. It is jyotiruttamamiti (Uttama Jyoti).



5 Jyotisha



Finally, Jyotisha brings us to the four quadrants of the turning of the Cosmic Wheel as the Wheel of the realized Brahmaspati. In the Vedas, it is called Brahma-Chakra. The great sages like Bhrigu and Parashara produced a great lineages of such enlightened understanding.

The understanding is that of the quadrant, the simile of the cross and the circle encircling the cross that lead to the two equinoxes and the two solstices.

The four quadrants are the four rhythms of the universe. It is the journey of the individual souls to infinite via the universal and that happens in 4 stages:

1. Return or springing forth of the individual to the Universal self, as denoted as the point of Aries or the Ram);
2. Then the Universal merges with the Infinite, discovered at Jamala or Gemini and beyond;
3. Then the infinite expands and leads to its fall or separation which is actually Liberation or Libra. This is the balance of things, the Li, the Law, the Scale or Tula. An Avatar descends to liberate the earthly being.
4. Finally, the creative entropy increases as there is a larger separation of the individual souls in the dark matters and waters of creation. This is a point at Capricornus.

In Capricorn, there is an iconography of the Makara, which is a Celestial elephantine-crocodile shaped icon coined by elevated Indian artists. In the mystical tradition of the Capricornus, we can trace a departure and a separation of the Vedic truths from that of Egypt, which is not the Indian Makara (Crocodile) but a horned bearded Goat.

In Egypt and all Semitic faiths that draw from Egypt, the point of Capri-cornus or the separation of matter from spirit becomes extremely significant. It finally becomes the Fall of Man, a very powerful theme in the Semitic belief system leading to a separation of Good from Evil and an upbringing of the constructs of 'Original Sin'.

In India, and partly, with the Greeks, the turning back to Easter or Spring and a return to the Origin continued as meditation and Yoga (gnosis) continued as a living tradition of Seers, undisrupted over ages. In India it lead to the merger of Good and Evil to an One-Force system of Divinity and a tracing back to the 'Original Divinity' itself.

The western Capricorns is the Key to the story of departure from 'Original Divinity' to 'Original Sin', from where the Chaldean-Balylonian-Egyptian-Semitic astrological system (the Sepharial) got attached to the idea of 'damnation; Original Sin; and a salvation through a system of faith or conversion through organized religion'.

In India, it continued with the Origin, and the principle of Original Divinity, based on a total understanding of Time/ Tamma/ Timeous. Till about the time of the Orphics, and its two last followers, Plato and Pythagoras, Greek philosophy retained its original oriental character, after which the Stoics departed from the Asiatic Milesian (Miletus, 1700 BCE; Land of Hittites) system of knowledge.

The Olympian system finally became rigid, materialistic and too rational in the name of science and logic. It began with Aristotle. He separated from Plato, as the great artist Raphael depicts.



School of Athens: Plato and Aristotle differs – by Raphael

6 Kalpa



Kalpa became the most important Sanskrit word as it forwards a long schema of the temporal scale of the Vedic time, scale and gravity. The wheel of Time is a system that is “proper, competent, and therefore sacred over time”.

The dynamics of evolution and involution and the interrelationship between the two as the microcosm (pinda) and the macrocosm (Brahmanda) provides the causation of the ceremonial and the manifested over time. In India, it has been the bedrock of the story of evolution. The law of Causation, ‘Satyam Ritam Brihat’ is the bedrock of the Aryan sages. It represents, the “cosmic time”, a one day for the impersonal Hiranyagarbha, or the personified quadrangular four-headed Brahma, as a long time span, equivalent to around 4.32 billion human years.

Words like ‘Kalpa-lata’, ‘Kalpa-taru’, and ‘Kalpantara’ are signatures of the various time-shifts or Kalantaras over long time periods. Hence, the word, Calendar, and the immutable power of Time or Kala or Brahman, which is expressed as Shakti or Kalakara. In the Svetasvatara Upanishad, and finally, in the Mundaka, the power is depicted as Kali.

The chain of four quadrants, or the 12 suns or the signs of Zodiacs, represent The Śrautasūtras (Shrauta-sutra) in Kalpa Shahtras.

Some early Śrautasūtras were composed by Sages like Baudhyana and Vadhula Sūtras. From there, the first derivative, The Śulbasūtra (or Shulva-sutras) were initiated to deal with the mathematical methodology to construct altar geometries for the Vedic rituals.

It is evident that the Sanskrit word “Shulba” means cord, and these texts are “rules of the cord” or ‘The Arch’ or ‘The funicular line’ of the Bow (Jya or Dhanwa).

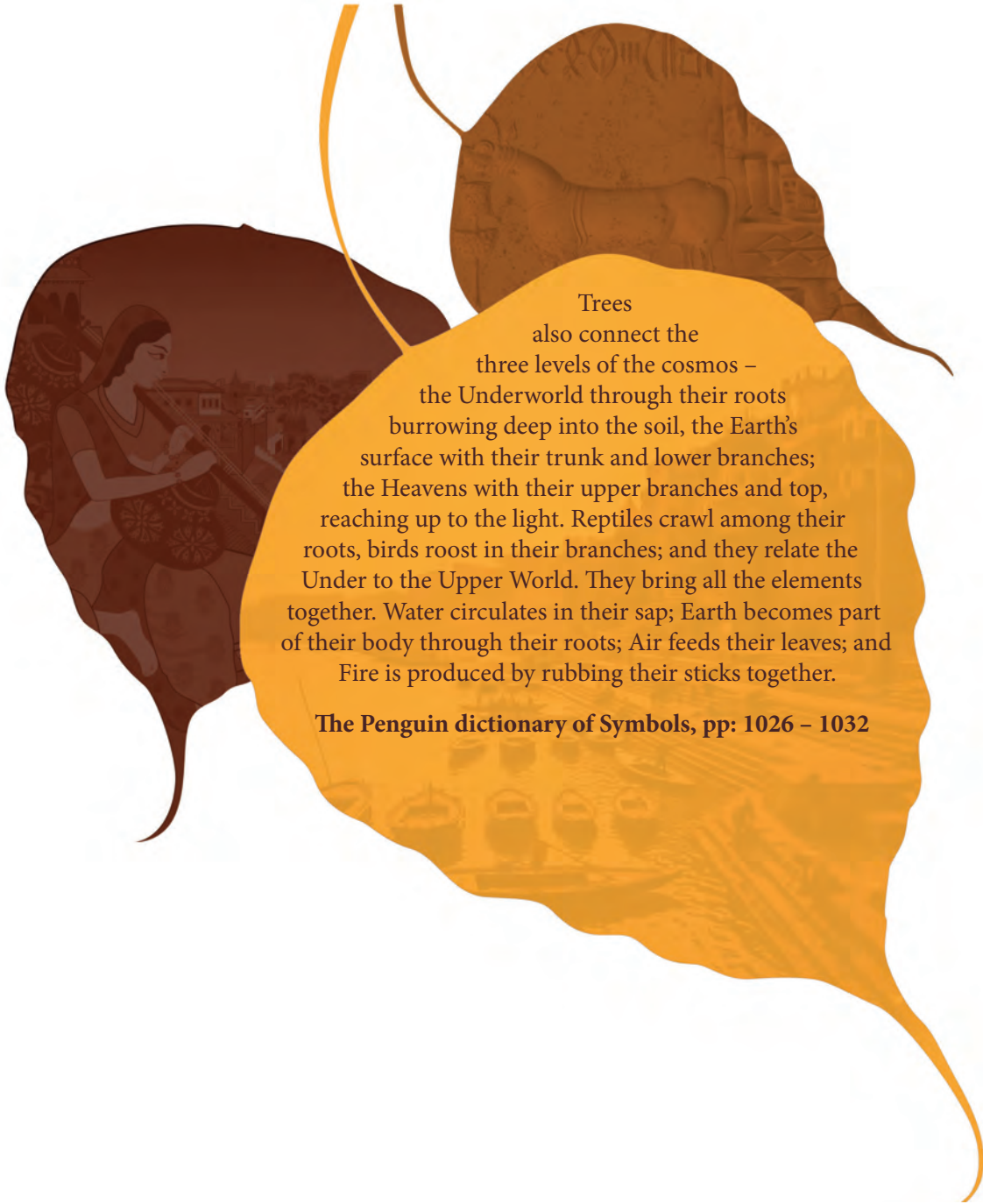
The various meters (matras) of the Chords (heart points or marmas), was the beginning of system of knowledge called Jya-matra, which is Geo-metry. It is here, the first vocabulary of the built environment or Vaastu Sthapatya Shashtra (Rig Veda, 7th Mandala) awaits its first genesis.

The real beginnings of the mystery of the Bow or the Pinak (Bow shaped Lyre), are from the lineage of the great Saint Bhargabi Dhanwantari, who is both the master-archer, and the chord-bearer of wholeness, health and hygiene. It takes readers back to a very ancient age, the age of Bhargabi Samhita, which was a second portion of the Atharva Veda. It finally became the first gathas of Athaurvan Zarathushtra, the great Prophet of Airyan or Iran.

Thus the study of Vedic Exegesis or the Vedangas is a must to recover in totality the whole TREE or networking of truth at all levels, from the highest spiritual to the lowest manifested. Sri Anirvan says:

“.....The problem of Vedic Exegesis then is the problem of reviving the spirit and re-creating the inner experience of the atmosphere in which the Mantras took shape.....like the mystic Asswattha tree ‘with its root above and the branches below’, the Vedic tradition, in a broad sense, stands at the very source of almost all forms of Indian spiritual cults.

And the interpretation of this tradition can be attempted with high results if we do not place the Vedas on the isolated heights of the past, but with a total vision of the present retrace our steps to the roots discovering, with a penetrating insight, the links at every step. But this movement in breadth must be supplemented by a movement in depth.”



Trees
also connect the
three levels of the cosmos –
the Underworld through their roots
burrowing deep into the soil, the Earth's
surface with their trunk and lower branches;
the Heavens with their upper branches and top,
reaching up to the light. Reptiles crawl among their
roots, birds roost in their branches; and they relate the
Under to the Upper World. They bring all the elements
together. Water circulates in their sap; Earth becomes part
of their body through their roots; Air feeds their leaves; and
Fire is produced by rubbing their sticks together.

The Penguin dictionary of Symbols, pp: 1026 – 1032

SECTION TWO

FIVE FEATURES
OF VEDANGAS

1

INTERDEPENDENCE



The chain of interdependence from one network to other networks, or between the flows of information transfer within a network, is common in both evolution in nature and the neural technology that is evident. Adjustments, adaptation or block-chains from one element of design to another element in the flow can have knock-on effects on the performance or relationships of other elements.

The design of a piece of content in micro-evolution is both a standalone object and a function of a positional or an interconnected sequence. This is the foundation of numbers, as conceived by the Vedic Seers in the systems of macro-evolution,

i.e, the cosmos. Thus, when content changes, the connections to other content will, to varying degrees, change too.

Thus development of language as a part of evolution (Siksha), the culmination of language as rhythms and meters (Chhanda), the realization of the causation (Karana) language systems as a deeper system of consonants, vowels, syntaxes and semantics (Vya-karana), the collapse of all that to a larger embedded pool of conscious flow of interdependence and etymons (Nirukta) leading to a Universal in a nutshell or seed Logos integrating time (Kalpa) and diverse manifestation (Jyotisha) is the whole foundation of Vedangas.

2

INTERCONNECTIVITY



One may think of a pedagogy or a curricula in which all subjects were connected dynamically? Wings of stratification or networks garner aspirers to explore the surprising connectedness and multiple degrees of separation between apparent diversity of topics like Physics and music; or geography and political science.

Much of rhythms and proportions of Modes are both physical-musical and a lot of our existential understanding is geo-political.

Thus cross-linking a variety of available knowledge systems from plant biology to music, or algebra to sociology, reinforces the holistic nature of existence on the one hand, and the response of a diverse array of humanity in it, where someone will love to play a guitar more than doing another soul hankering for ecological studies.

The variety in the temporal (kalpa) and the light-cycle of subtle-to-visible manifestation (Jyotisha) are therefore both a bio-technical and esoteric-philosophical system of understanding that is only accessible by Yoga.

Thus Vedangas offer a cross-cutting array (Bhyuya) of rays emanating from the inner sun in the Vast (organized by the Mother in her womb, the matrix or Matariswan in the Vedas) of opportunities. It is equivalent to the 'Brahma-Yoni', the genesis point, containing inside the Womb, the Matrix of all creation, as embraced in Gayatri, a lead Chhanda.

3

DECENTRALISATION



The Cosmic schema of things is an extremely rich internet of things, undoubtedly the deepest network which has had the biggest impact on human evolution as a whole and also individually.

Thus, three sons born in a similar geographical space (ecology and Environment), in a same family of parents (genetics) still display varied evolution and multiple choice (Jyotisha) based on a decentralised network. The natal data (Purva-pragna of the Vrihad.Aranyak Upanishad) that configures transmigration

of soul (Sutra.atman or fluxes in Isha Upanishd or Buddhist cosmogony) over time are distributed across the network without a specific reliance on any particular local hub or immediate central hierarchy, but to a large wheel of things in seed (Nirukta) and time (Kalpa).

A variety, heterogeneity and a process of continuous freedom in decentralization in the Vast (Chi) are juxtaposed with strict control and a common principle of causation (Li) in the Universe. They co-exist.

4

NONLINEARITY



The flow of seasons and their annual repetition, the cycles of death and re-birth in flora and fauna, show that nothing in nature is as linear as it seems.

The system of learning is therefore non-linear and the flow of Vedangas from an open-ended system of analyses (Siksha) to the variety of evolution in cosmic light arrays (Jyotisha) and time-cycles (Kalpa) is a perfect illustration of a nonlinear system.

The human wisdom in the creative ladder of consciousness connects the dots spatially, conceptually and temporally, rather than just following a straight line of progress. A system of inquiry cannot measure the educational value of a book or lesson to an individual purely based on the volume of information it contains.

5

MULTIPLICITY



The ultimate language of cosmic happiness and altruism remains through the interpenetrating wings of a two-way wisdom on ‘The One penetrating the Many’ and ‘The Many penetrating the One’.

Thus multiplicity and unity are not opposites but complementary and dialogical.

Networks therefore are time-cyclic (Kalpa) having a flowing (dynamic) collections of data (statics) that can exponentially yet comfortably increase in quantity and complexity. The role of multiplicity is to enhance the ONE exuding to the many in this universe (which is descent) and also involution, as that principle of That one from the other side of infinity is also involved here, as Chaitya Purusha of Kapilo-updesha (Bhagabata-Puranam).

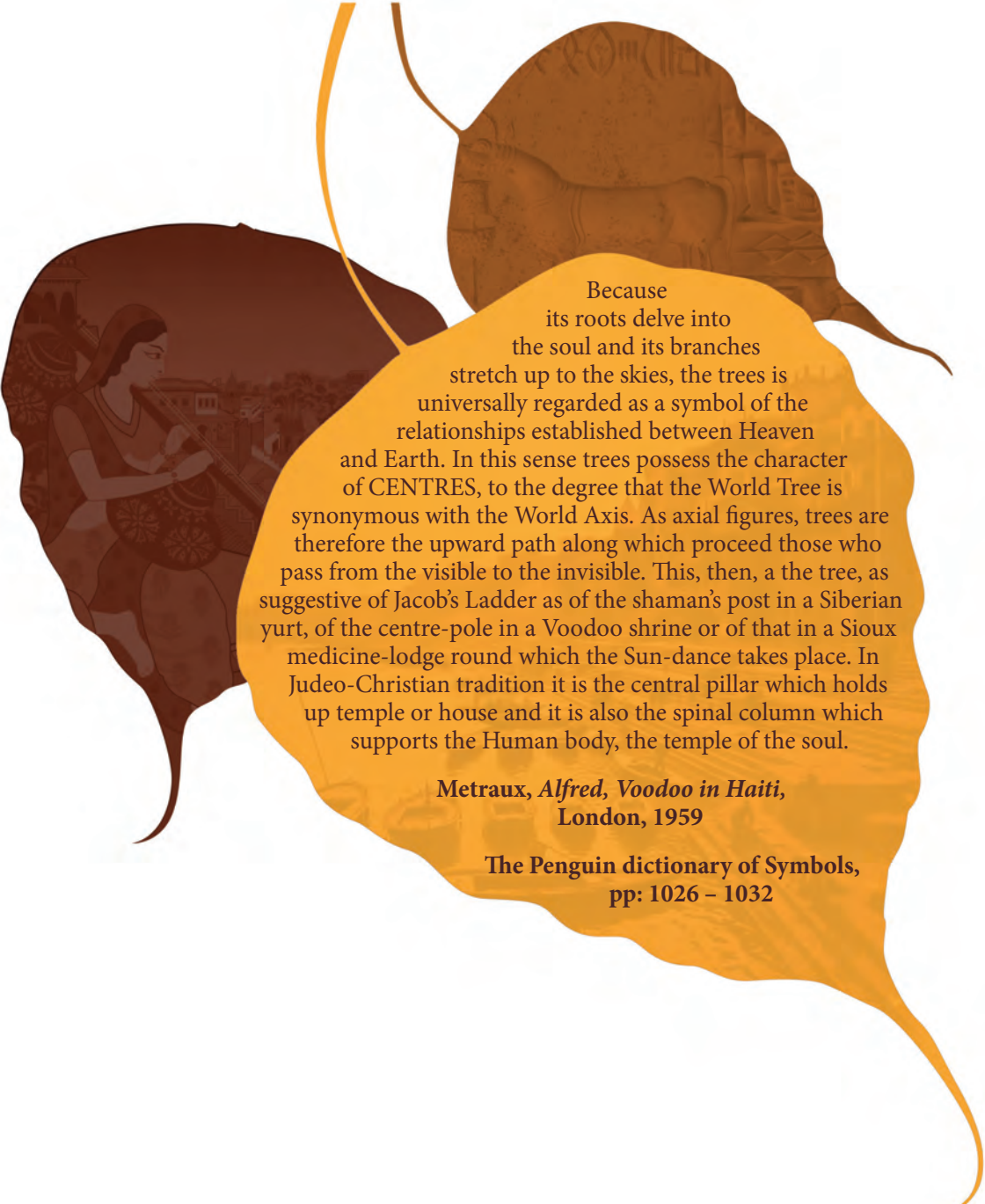
The vibrant consciousness involved on this side of infinity is pushing the many to retrace that one unity, which is ascent and

Evolution. The system of Vedangas is a necessary structure to augment the process of change.

Thus apparent complexity of inter-penetration is an ever-expanding network of knowledge always accommodating the expanding purpose of evolution (Enthalpy or Tapasya), affording learners a greater range of discovery and energy in living exploration and reducing confusion and frustration in existence (entropy). The world of networks is therefore a Wigs of truth, which is round like a Carnot’s Cycle or a Life cycle, and not flat without any skews and kurtosis.

The system of Vedangas is the most ancient and powerful signature of the significance of multiplicity.





Because its roots delve into the soul and its branches stretch up to the skies, the tree is universally regarded as a symbol of the relationships established between Heaven and Earth. In this sense trees possess the character of CENTRES, to the degree that the World Tree is synonymous with the World Axis. As axial figures, trees are therefore the upward path along which proceed those who pass from the visible to the invisible. This, then, is the tree, as suggestive of Jacob's Ladder as of the shaman's post in a Siberian yurt, of the centre-pole in a Voodoo shrine or of that in a Sioux medicine-lodge round which the Sun-dance takes place. In Judeo-Christian tradition it is the central pillar which holds up temple or house and it is also the spinal column which supports the Human body, the temple of the soul.

Metraux, Alfred, Voodoo in Haiti,
London, 1959

The Penguin dictionary of Symbols,
pp: 1026 - 1032

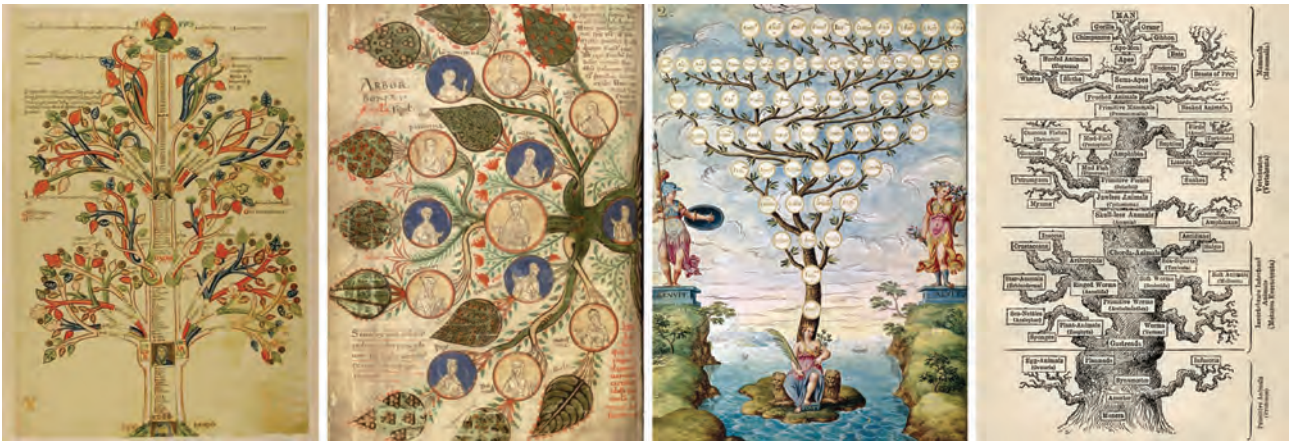
SECTION THREE

**WORLD
VIEWS**

1

TREES or STRATIFIED WINGS OF CONSCIOUS NETWORKS as seen by Western Scholars

“Trees have inspired how people understand the world around them for millennia. The worship of trees, known as dendrolatry, is present in practically all cultures and their ability to represent spreading connections has inspired many to adopt their form for a wide variety of knowledge representations. The tree metaphor can be seen in everything from the religious illustrations created by Joachim of Fiore, the biological classifications of Aristotle and Darwin, and your own lineage represented as family trees.”



(L-R) *Tree of Life* by Joachim of Fiore C12th; *Tree of Virtues* by Lambert of Saint-Omer, 1120; *Genealogical tree* by Paul Veronese, 1568–73; *Tree of Life* by Ernst Haeckel, 1879

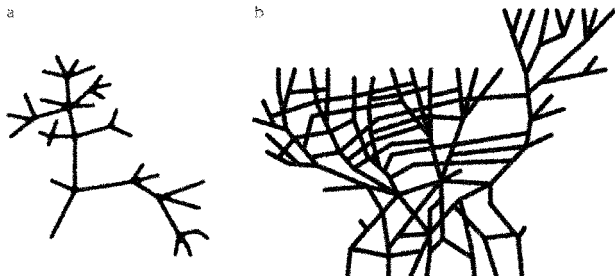
Courtesy: <https://medium.com/the-graph/trees-vs-networks-f7aef799f75e>

2

THE TREE OF EVOLUTION: WINGS OF CHANGE

“As we increasingly spot more and more of these networks around us, we also recognise that they appear to run within an organised complexity—a notion first coined by scientist Warren Weaver. He argues that disparate parts of a system do, on many levels, still interact with each other. These relationships create interdependent systems that can in turn interact with other systems.

For example, Charles Darwin’s *Tree of Life*, a hierarchy of evolution, isn’t as successive as he might have thought. Evolution probably began as the *Net of Life*, a concept promoted by biochemist Ford Doolittle, who argued that because the same bacteria existed within different species, they were directly connected. The map loses its arboreal shape, becoming instead a dense mesh of interconnections.”



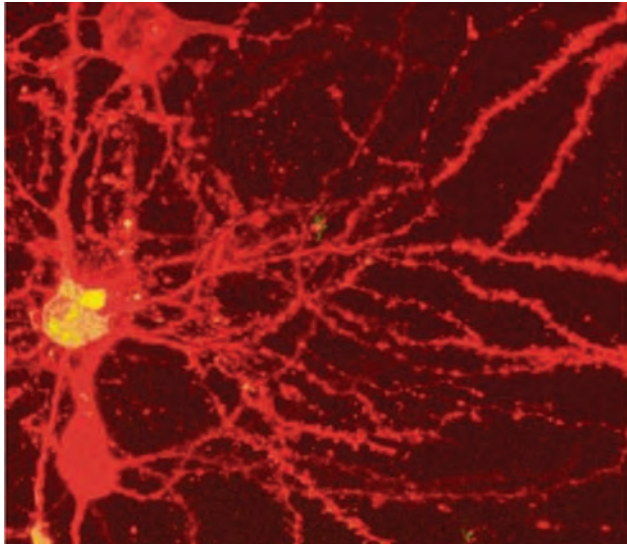
- a. Darwin's first sketch of the *Tree of Life*, 1837
- b. Stylisation of Doolittle's *Net of Life*, 2000

Courtesy: <https://medium.com/the-graph/trees-vs-networks-f7aef799f75e>

3

NETWORKS, WINGS OF LIFE EVERYWHERE!

“Not only is the network a powerful visual identity, it is also a universal structure that comprises many elements of life. Networks are seen at a molecular level, in brain patterns, when mapping social connections, plotting transport infrastructure or power grids and of course in the links of the internet. Manuel Lima even saw strong similarities between the neural pathways of a mouse and the historic growth of cosmic structure across 20 million galaxies.”



Neuronal network in the brain of a mouse, by Mark Miller (left) and a simulation of the growth of cosmic structure, by the Virgo Consortium (right).

Courtesy: <https://medium.com/the-graph/trees-vs-networks-f7aef799f75e>





4

WHY TREE ?

*It is probably true quite generally that in the history of human thinking the most fruitful developments frequently take place at those points **where two different lines of thought meet.***

Werner Heisenberg

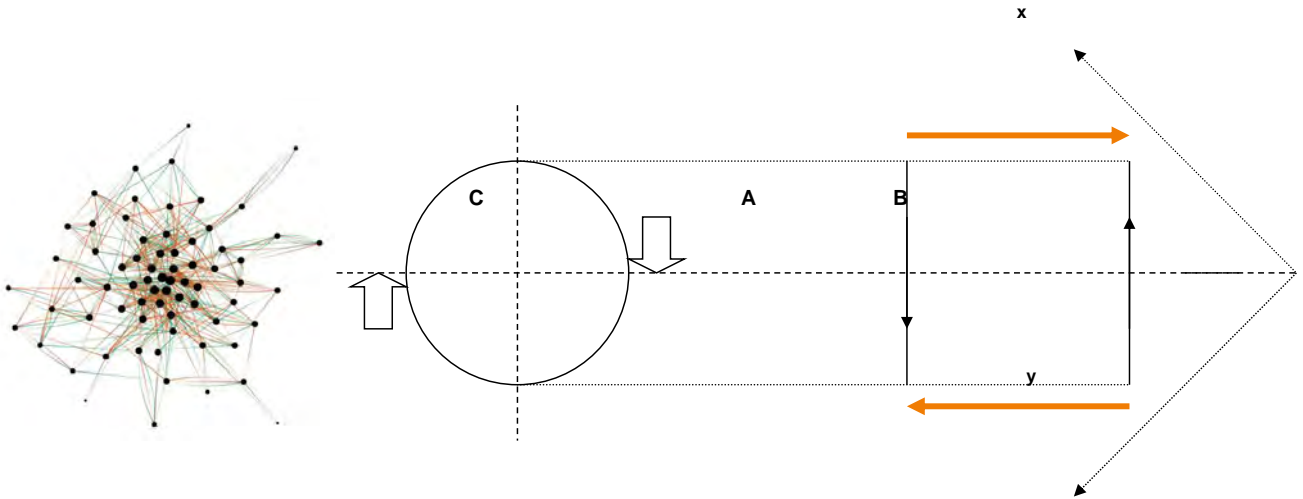
In the Upanishad THE UNIVERSE (as realization) is an inverted TREE.

The Penguin DICTIONARY OF SYMBOLS pp 1099

Clearest possible manifestation of the Brahman...as a descending movement

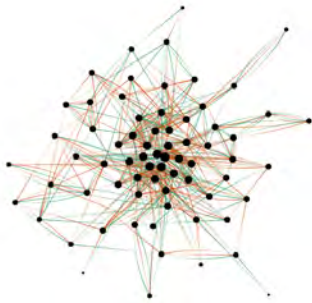
Mircea Eliade

Tracing Non-linearity behind the linear Complementary & Cyclic



The two opposite poles / directions are actually complementary; reciprocal; integral

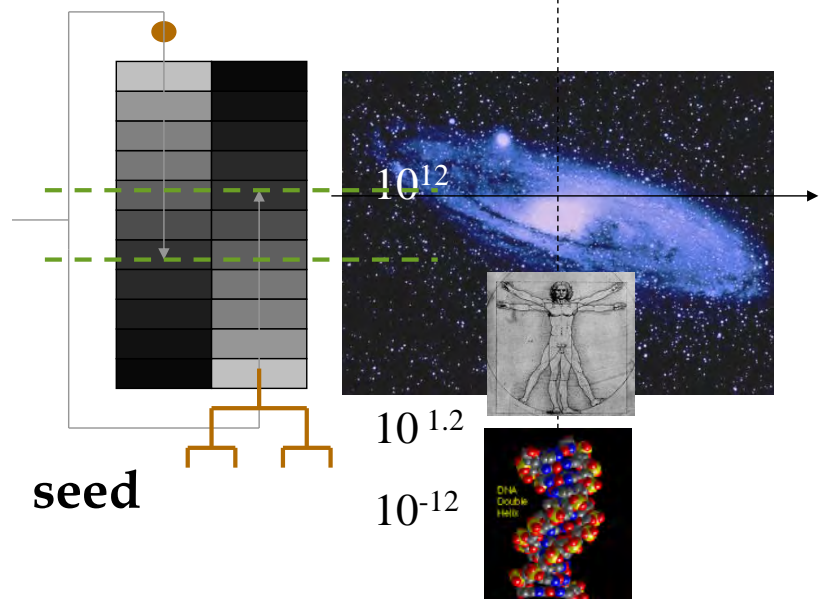
The Macrocosm & the Microcosm



The TREE produces the seed, which again comes up as another TREE, and so on and on; there is no end to it. It represents a continuous cycle of rising and falling.

Swami Vivekananda

Tree



Descending framework

The depth and breadth of the Vedic Religious Ideal

The ancient Rig Vedic symbolism: 1.164

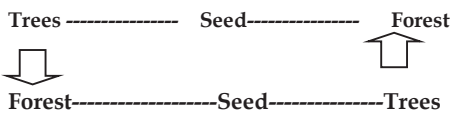
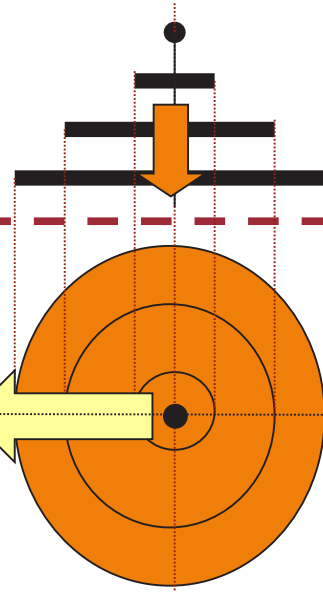
The Kattha Upanishad....

The Gita & earliest Buddhism

High Root (mulam) to low branches (sakham)



Inner Core (antara) to outer periphery (bahir)



The Science of Waves

The TREE produces the seed, which again comes up as another TREE, and so on and on; there is no end to it.

It represents a continuous cycle of rising and falling.

The seed comes out of the TREE, but has some period of inactivity or rather a period of very fine unmanifest action. Out of the seed, exudes the whole TREE containing the next fruits, the next seeds...

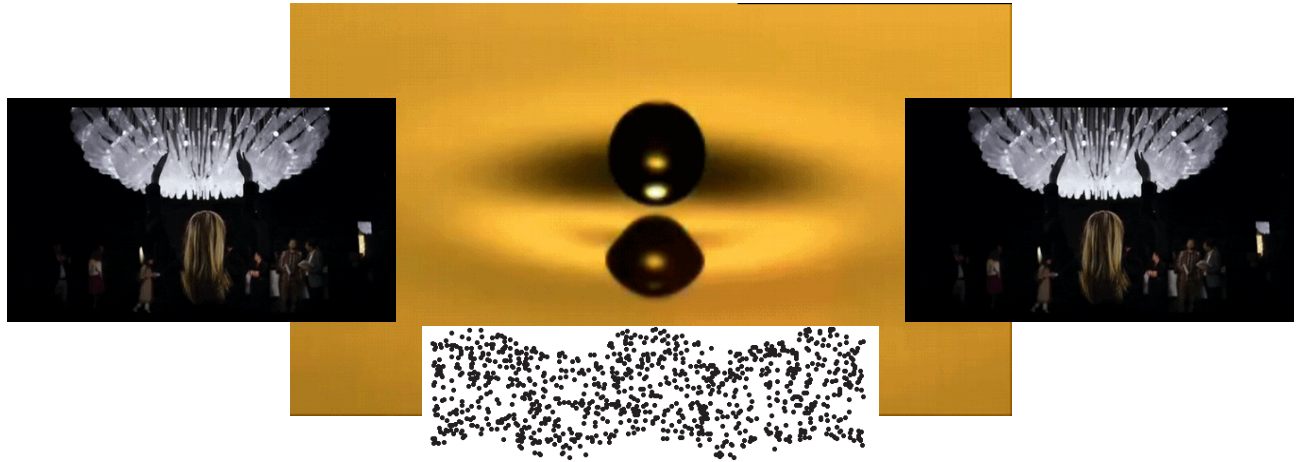


Immanent – full of waves



Transcendent - waveless

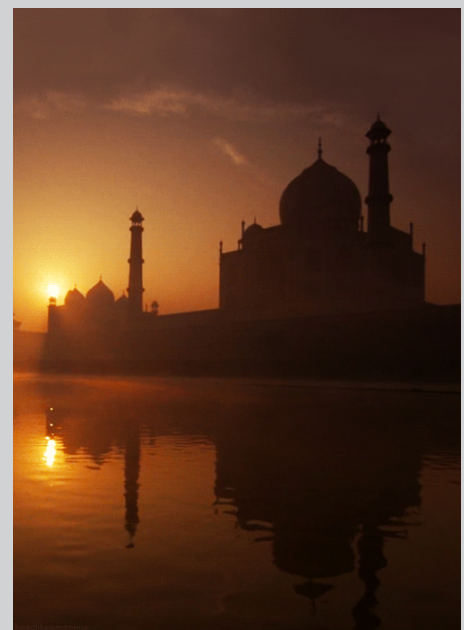
Shish- Mahalam (mirroring)



...the way of practicing Dhyana is not singular and its actual method of cultivation depends upon the functioning of the mind and mental con-comitants (Citta-Chaitya pravritti) of each and every living being (Mahat)

Mahayana Sutra of the Foremost Shurangama
at the Crown of the Great Buddha

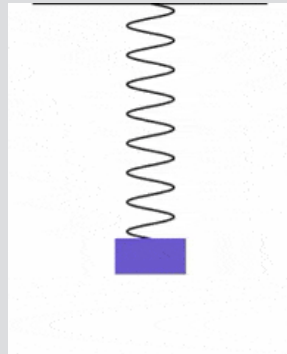
The Garden of Adonis (ODONA): Eden



The association of the TREE OF LIFE with the manifestation of GODHEAD is re-echoed in CHRISTIAN TRADITION, since there is an analogy, or even a renewal of the symbol, between the TREE in the Old Covenant, the TREE of Life in Genesis, and the TREE of the Cross, or the TREE of the New Covenant.

The Penguin Dictionary of Symbols, pp 1028

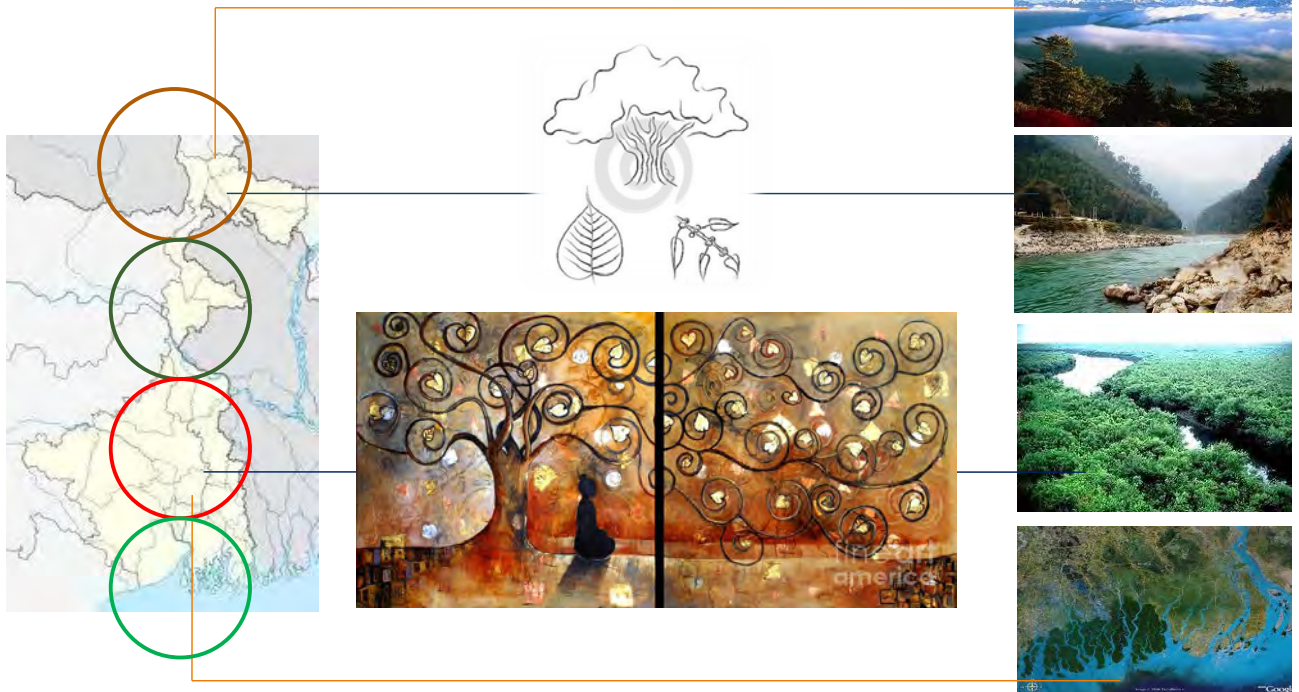
The Ciba tree (Mayan): Lotus in the Navel



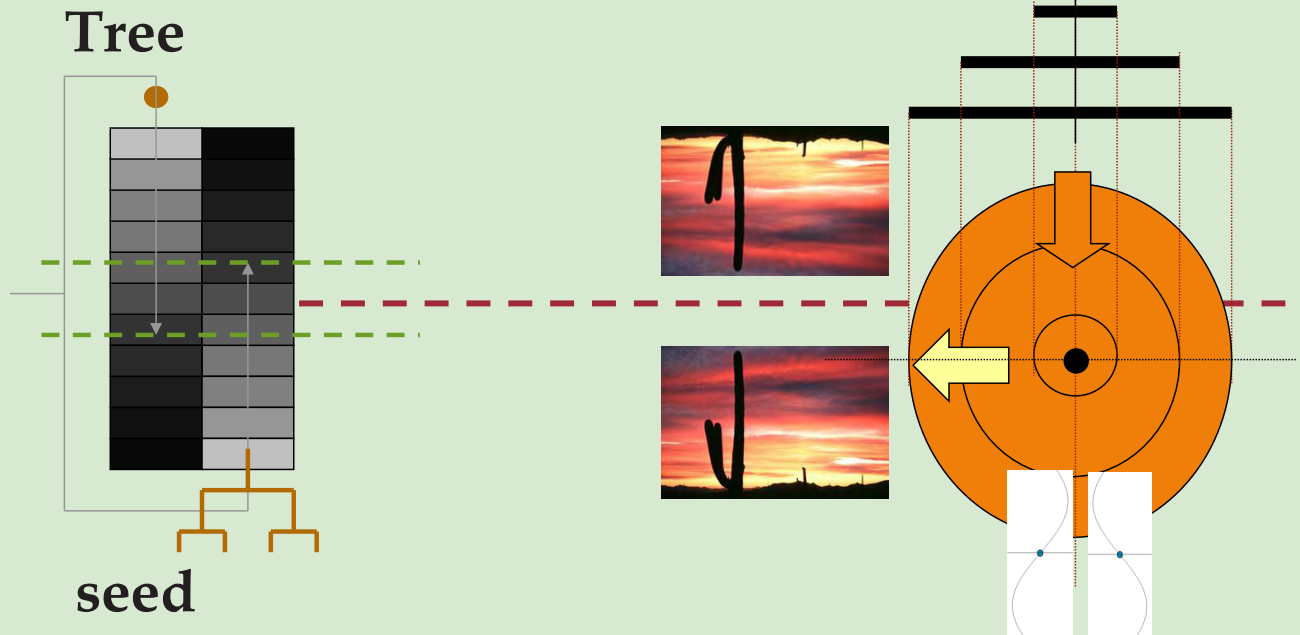
An inscription in Angkor states that its roots are Hiranyagarbha (Brahma), its trunk or passage (Vishnu or Param Purusha) and its branches, Shakti or Vishnu

The Penguin Dictionary of Symbols, pp 1028

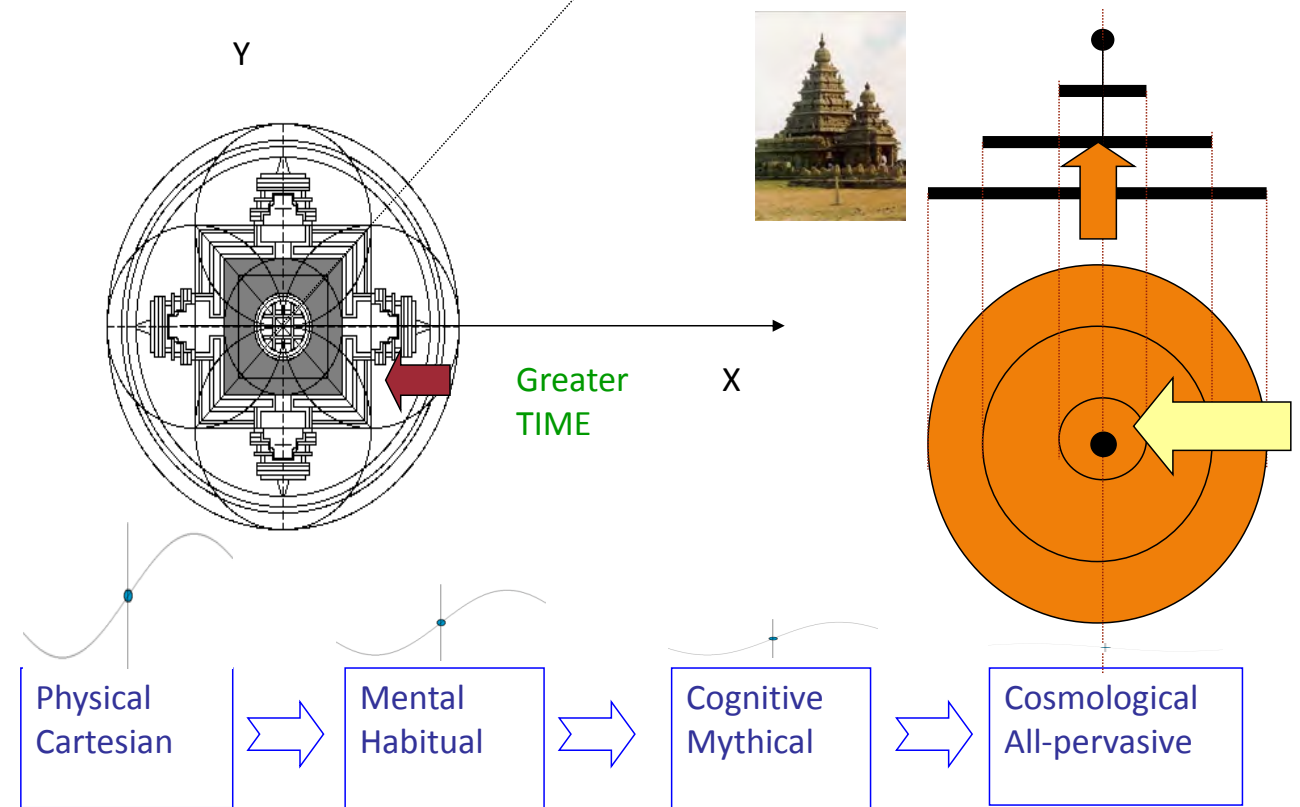
Trees: from ecology to deep ecology



A Dicotyledonous pattern: Networks in a ladder



Iconic to abstraction: Taranga (Trunk) Small to Vast



Life cycles

Out of what has the TREE been produced? Out of the seed; the whole of the TREE was there in the seed. It comes out and becomes manifest.

So, the whole of this universe has been created out of this very universe existing in a minute form. It has been made manifest now. It will go back to that minute form, and again will be made manifest.

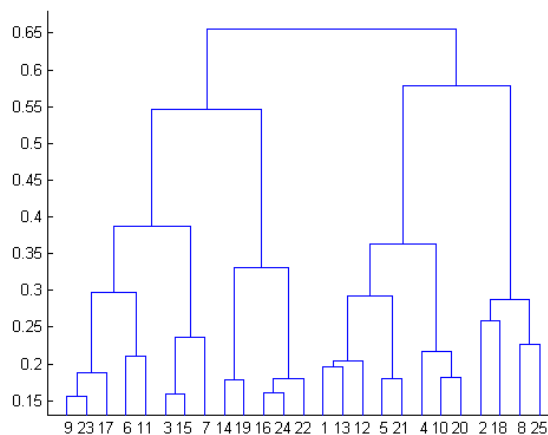
This coming out of the fine and becoming gross, simply changing the arrangements of its parts, as it were, is what in modern times called evolution.



An ancient perspective of natural sustainability:
Death & Resurrection

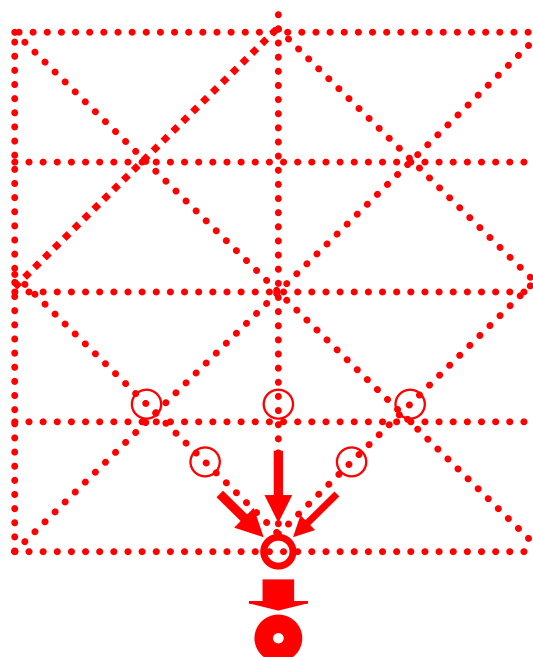
Dendrograms

Red implies disjointedness between the personal-ego level and the rest of the framework



The periodic nodes of turning or tropics: There is one more fact about this rising and falling. The seed comes out of the TREE, but has a period of inactivity or rather a period of very fine unmanifest action.

The seed has to work for some time beneath the soil. It breaks into pieces, degenerates (dies) as it were, and regeneration (resurrects) comes out of that degeneration.

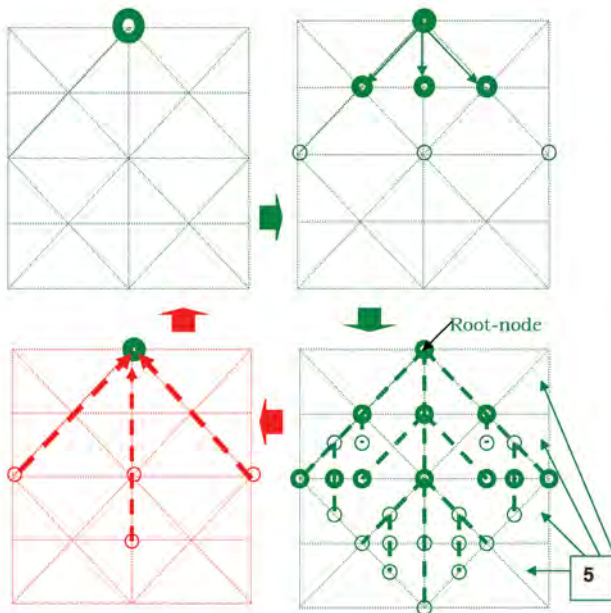
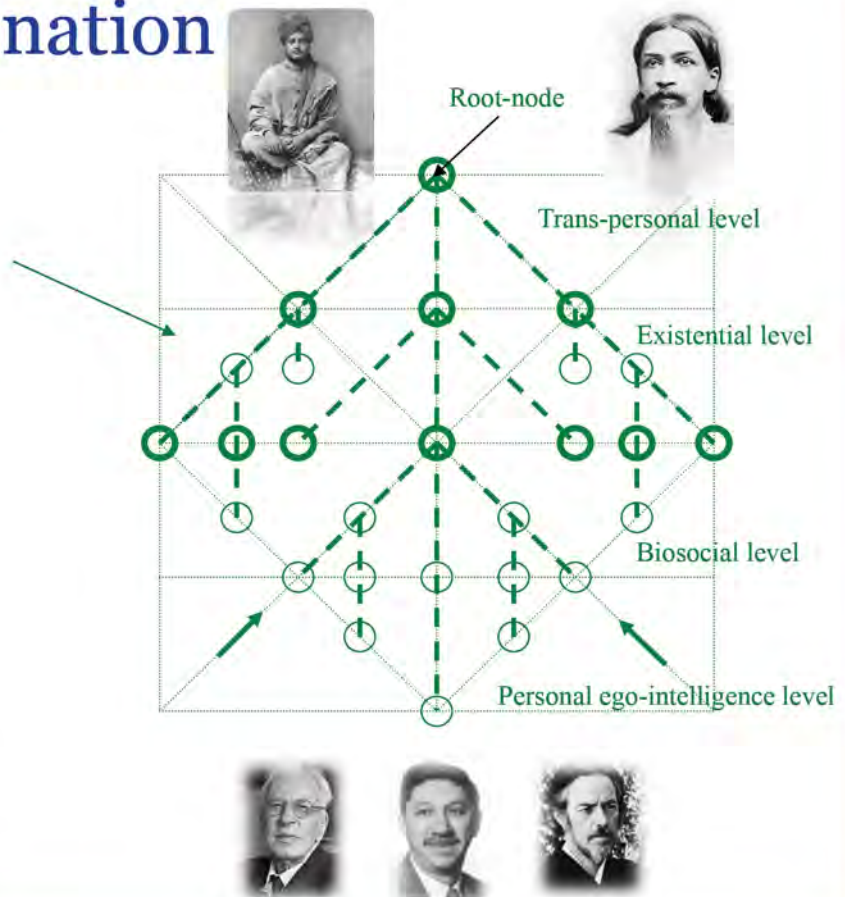


Trans-personation

Green implies the network of junctions between the personal-ego level and the other levels in rest of the framework

Involution precedes evolution: We have to go one step further, and what is that? That every evolution is preceded by an involution. The seed is the mother of the TREE, but another TREE was itself the mother of the seed. The seed is the fine form out of which the big TREE comes, and another big TREE was the form, which is involved in that seed.

The whole of this universe was present in the cosmic fine universe.



Hierarchical Clustering

- Produces a set of nested clusters organized as a hierarchical tree
- Can be visualized as a dendrogram
 - A tree like diagram that records the sequences of

Narrowing to an isolated state (1A) of individual intelligence

Level of narrow ego (1)

De-linked from the spectrums of intelligence at the biosocial level (2) and consequentially the higher ones: Existential level (3), Trans-personal level (4) and ultimately holistic intelligence inherent in the Whole TREE (5)

A Four-stage cycle of sustainable dynamism evident in the stratified framework of the TREE

Starting from bottom right – full TREE (5) with 4-depths or levels;

Bottom left – traversal through the four levels and tracing back to root node of TREE;

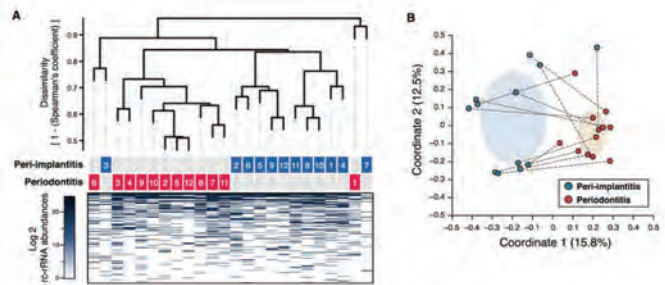
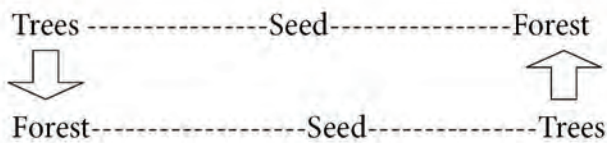
Top Left – Reaping of all levels (or contraction to the trans-personal level or the Root-node);

Top right – Sprouting or extension from the root node;

Individual intelligence that has traversed all four stages attains holistic intelligence by knowing the complete TREE.

Who is involved?

A priori - Recognition of the involutory principle in an evolutionary process: This involution and evolution is going on throughout the whole of nature. The whole series of evolution beginning with the lowest manifestation of life and reaching up to the highest, the most perfect man (Anthropic Principle), must have been the involution of something else. The question is: The involution of what? What was involved?



Co-evolution: tree-line

FROM CONSTRUCTS TO OVERLAYS
 Beyond linearity in Origin and Destination approach in understanding linkages
 Redefining Upstream and Downstream factors
 Decomposition and Ellipsis as a reciprocal construct
 Overlaying Eco-balancing through Involution and Evolution
 Eco-balancing a behavior-environment dialogue

FROM THE TREE OF LIFE
 TO
 THE TREE OF WISDOM

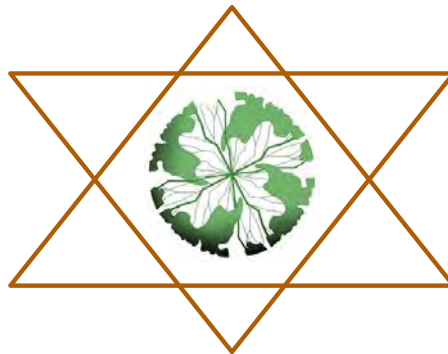
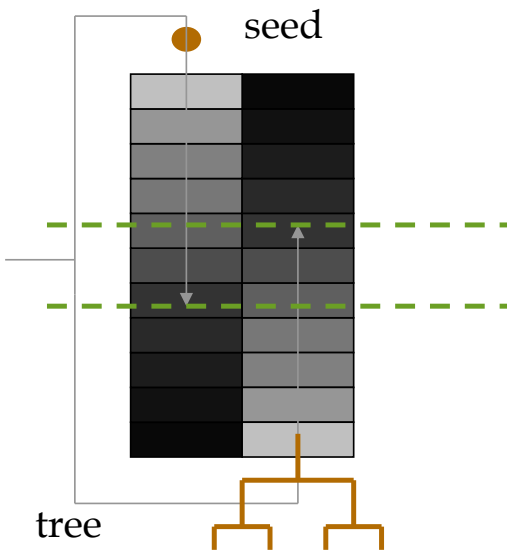
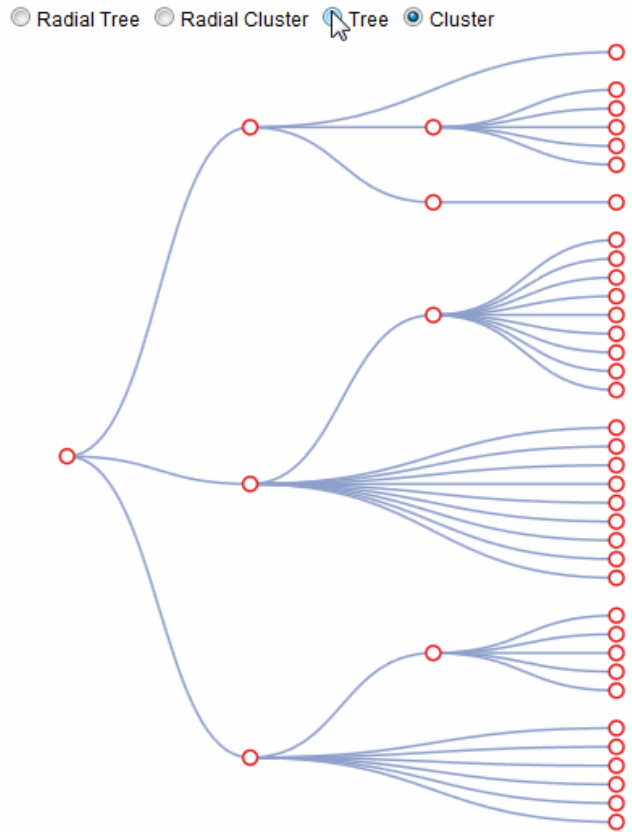




‘The modern physicist experiences the world through an extreme specialization of the rational mind; the mystic through an extreme specialization of the intuitive mind.....to paraphrase an old Chinese saying, mystics understand the roots of the Tao but not its branches; scientists understand its branches but not its roots. Science does not need mysticism and mysticism does not need science; but men and women need both’.

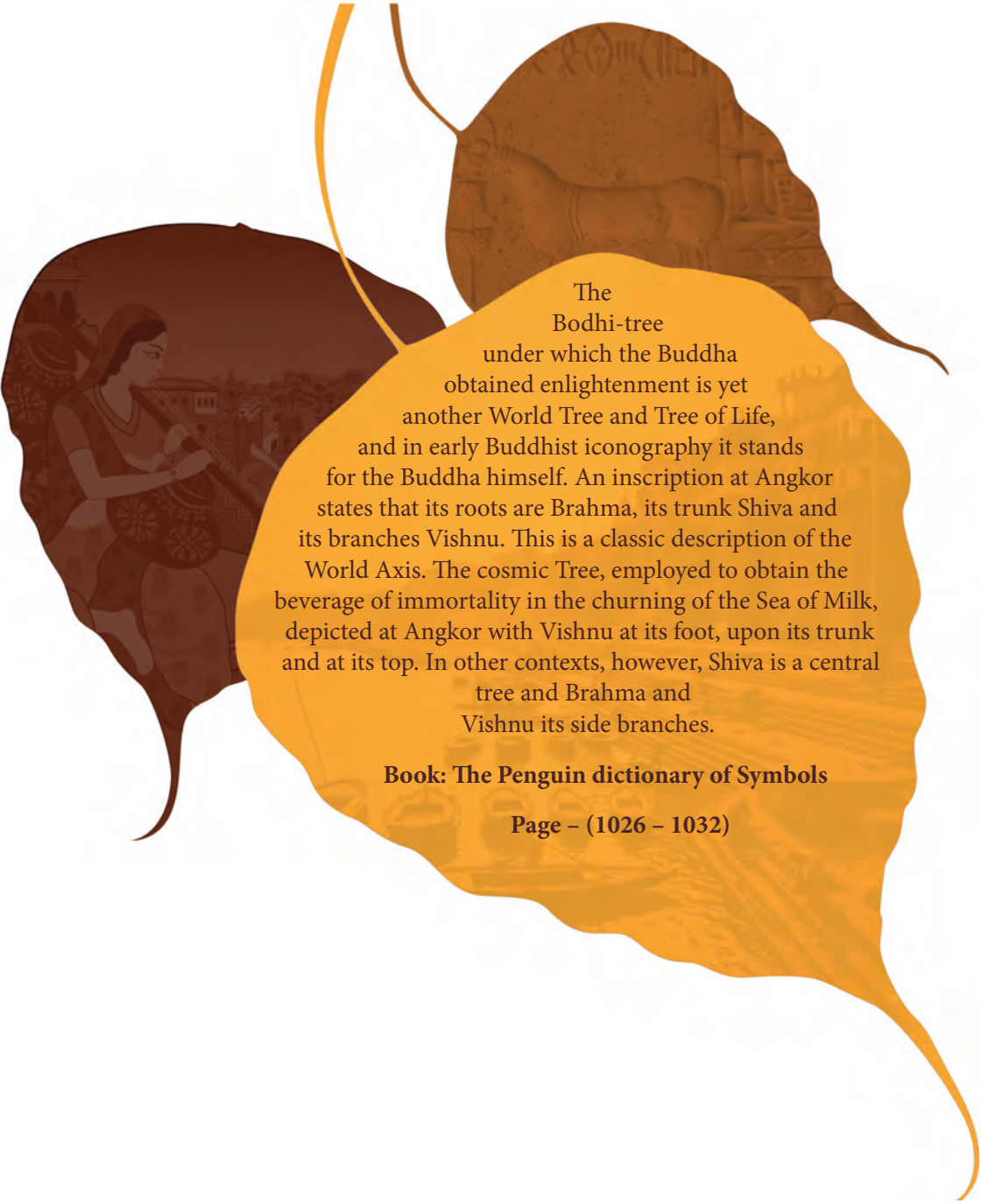
Fritjof Capra

‘Epilogue: The Tao of Physics’



Returning is the motion of the Tao; going far is returning.

Lao Tzu in ‘Tao Te Ching’



The
Bodhi-tree
under which the Buddha
obtained enlightenment is yet
another World Tree and Tree of Life,
and in early Buddhist iconography it stands
for the Buddha himself. An inscription at Angkor
states that its roots are Brahma, its trunk Shiva and
its branches Vishnu. This is a classic description of the
World Axis. The cosmic Tree, employed to obtain the
beverage of immortality in the churning of the Sea of Milk,
depicted at Angkor with Vishnu at its foot, upon its trunk
and at its top. In other contexts, however, Shiva is a central
tree and Brahma and
Vishnu its side branches.

Book: The Penguin dictionary of Symbols

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SECTION FOUR

VEDANGAS
FROM VEDIC
COSMOLOGY:
IN SEARCH
OF A
RELATIONSHIP

‘The modern physicist experiences the world through an extreme specialization of the rational mind; the mystic through an extreme specialization of the intuitive mind.....to paraphrase an old Chinese saying, mystics understand the roots of the Tao but not its branches; scientists understand its branches but not its roots. Science does not need mysticism and mysticism does not need science; but men and women need both’

Fritjof Capra
‘Epilogue: Tao of Physics’

‘The seer-wisdom realizes that supreme solar world in the form of a Asswattha (pippal) tree, where the branching of rays carrying the immortalizing waters (the madhu) reverts back to its roots at night and resurges again to flood the universe with the day light – they know the truth who are one with their ‘Father in the heaven’.

Seer Dirgha-tama
Rig Veda: mandala one, 164:20

The Genesis

Introduction

This section provides evidences of the concept found in the first documents of spirituality – the Vedas. These evidences trace the origin of this concept within the legend of the Seven Sages of Angirasas – ‘The Sapta-Rishis’, who are central to the Vedic foundations.

An understanding of the very legend of the Seven Sages provides the key to unlock the essence of the Vedas and the concept.

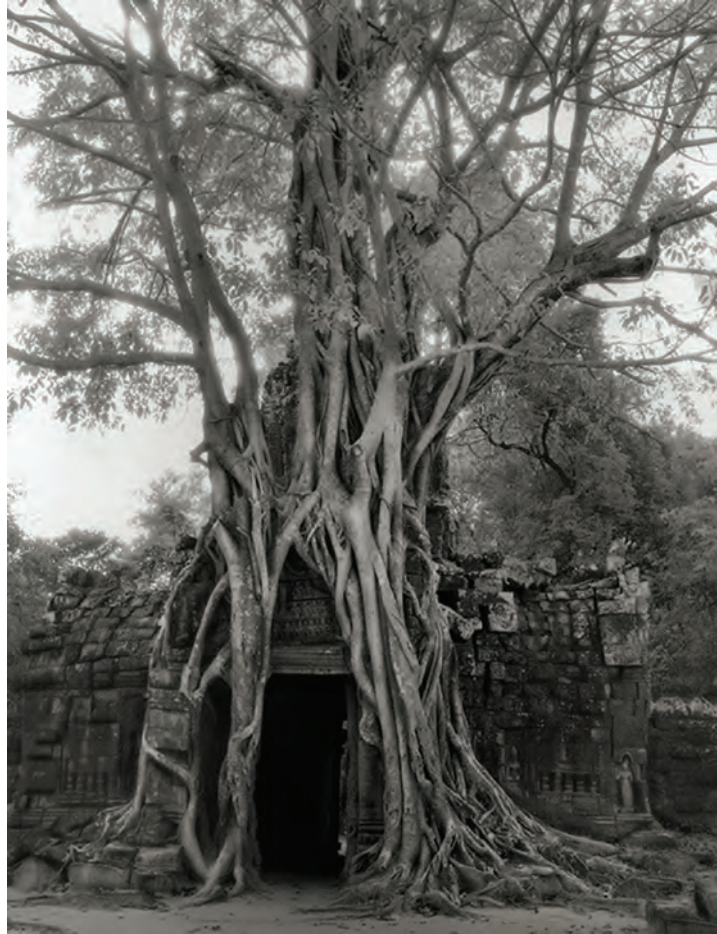
A discussion on this understanding is provided as follows:

1. The sages seen as embodiments of an ‘impersonal-personified’ ideal
2. The cycle of creation and the unity of seven sages - like a septuplet matrix
3. The dynamic power behind the septuplet
4. The concept of Angirasas, by which the sages were known and the unity of a cosmic seven-headed thought represented through them and
5. The idea of a ‘conjugate’ (jamala) of the power of the creative Word (Vak) and its lordship (Brihaspati)

The impersonal-personified

The Seven Sages is a living Concept. They are personified embodiments of eternal truth-realizations, which is impersonal. This ‘impersonal-personified’ is the highest ideal of human evolution. It unifies the truth-foundation of the Vedas and the realization of the Sages as one universal essence. This unity of realization itself is the primal and eternal Word (Mantra) of creation – realizing which one becomes a Mantra-drasta or a Rishi.

The Seven Sages are primal to creation itself. Their legacy is primal to all the other Rishis, who succeed them in the upward journey to that supreme summit, where they belong from one cycle of creation to the next one eternally.



The Cycles of Creation

It is said that for every cycle of creation there is legacy of another team of ‘the Seven Sages’. Each of these teams inherit the impersonal seat in the transcendental realm, which is that immortal reality – beyond causation.

The team of Seven Sages moves from this existential ever-changing world and they penetrate veil after veil found in the creative play till they reach that summit. They are therefore born twice (dwija). Once it is here in the mortal world, under the veils of Maya. And once more they are permanently re-born in that supreme heaven – the ‘Swara’ – beyond the triple foundations (RV: 4.53.5).

In this journey, they upwardly trace the downward surges of creation and enfold all of them back to its origin re-establishing the WORD itself. In this, the two-way ladder, they both cover and transcend creation. As a unified and orchestrated team of the Seven (for all creative cycles gone and to come) they form a condensed universal knowledge (vigyanaghana) by virtue of own unity and a self-automated omnipotence expressed by unified cells of a universal septuplet matrix (RV: 1.164.all).

The Septuplet Matrix

To make the understanding simple, let us review the impersonal and timeless truth that remains as one eternal in the supreme heaven.

As discussed in the abstraction, it is like that calm sea independent of the waves. On the other hand, once a big wave surges (1), it emerges (2), then blooms to its fullness (3), remains there at the crest (4) and then turns (5) and collapses back (6) to the backdrop and re-penetrates (7) the calm sea (8 or zero). This is comparable to a cycle of creation covering the seven stages of surge and return.

The Seven Sages trace the ‘complete wave-function’ from its emergence to its collapse. The Seven therefore stands for the ‘Womb of Creation’, which is the Matrix itself. It is the whole sequence. They are in essence the WORD and in expression - the manifestation or creation itself. Like the seven levels and the seven colours of creative surges, they form a rainbow between the sun and the rain (RV: 1.164.all).

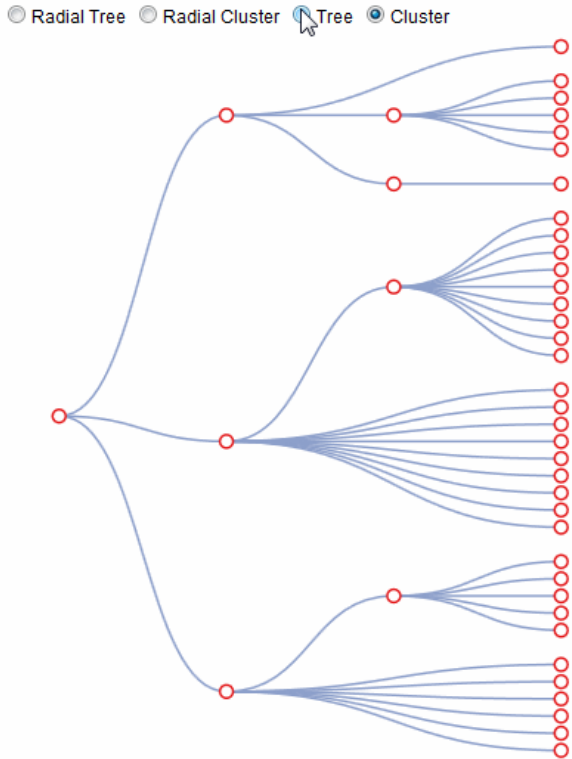
The Parable of the Septuplet Rainbow (RV: 1.164)

The Seven Sages are personified like the seven colours of a rainbow. The seven colours are seen when white light is diffracted through a glass prism or dispersed penetrating the rains in the firmament. But the seven are one – the original solar light. The Seven Sages are one.

The differentiated image of the Seven Sages is undifferentiated in that transcendental heaven – Swara – the all-pervading realm of truth-consciousness. That undifferentiated realm is Akhanda Rishi-loka. In that realm they remain ever-born as the apparently differentiated in the undifferentiated (beginning in the summit) and here in the differentiated world they are born having an aspiration towards that undifferentiated (beginning from below). That is why they are Dwijas – the twice born.

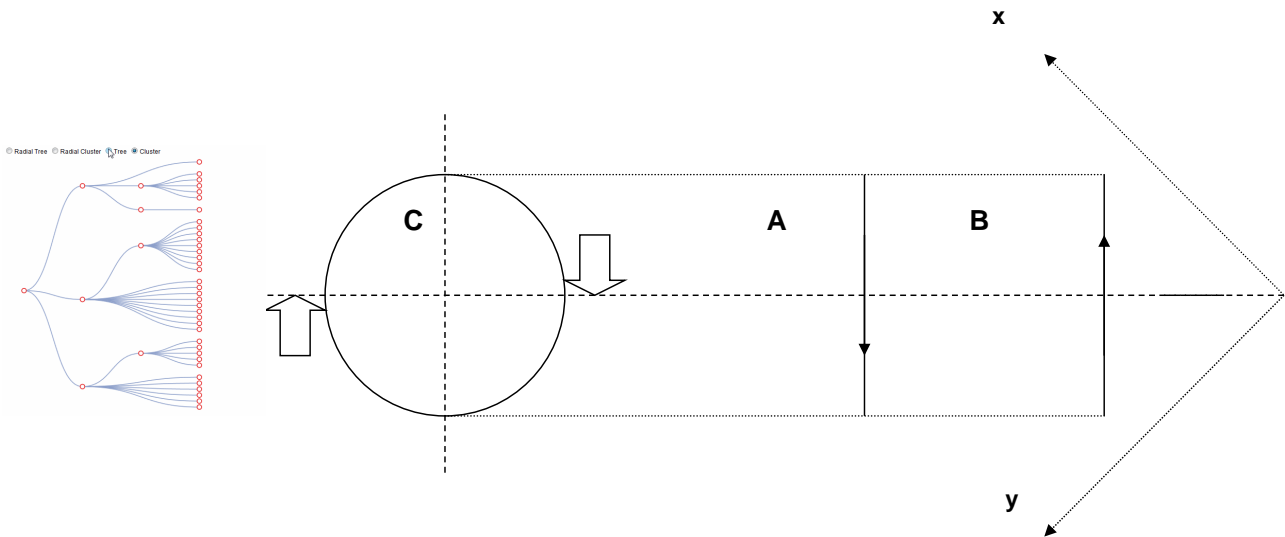
Between the two extremes, their legacy remains perpetually. So their truth is the truth of the double intender – the two-way ladder.

(Interested readers may know more on this highest ideal by reading sections dedicated to the Seven Sages of Angirasas in a book entitled ‘The Secret of Vedas’ by Sri Aurobindo and a short piece on ‘Vedic Religious Ideals’ by Swami Vivekananda).



- Shape grammar of a single Indian prototype 'The Tree'
- From 'The Macrocosm & The Microcosm'

LINEAR & NON-LINEAR



Parable of the seed and the cyclic process: What does man see around him?

Take a little plant. He puts a seed in the ground, and later, he finds a plant peep out, lift itself slowly above the ground, and grows and grows, till it becomes a gigantic TREE. Then it dies, leaving only the seed.

It completes a circle – it comes out of the seed, becomes the tree, and ends in the seed again.

Etymological roots of the Septuplet (RV: 2.3.6)

The number seven (sapta in Sanskrit and septa in Latin) originates from the root – ‘srip’ – that means where it is spread or pervading. It is intimately connected to another root word – ‘tana’ – from where Sanskrit words like tantu (a spread of web – RV: 2.3.6), tat (that ultimate essential web) and tantra (the principle of webs) and similar other English words like tent, tentacle, and tension are derived. They all, in essence, stand for a breadth of things, from big to small. The biggest is the whole universe (Viswatanu) or the macrocosm. As an example of a small one is our body (atma-tanu) or the microcosm. Thus the Septuplet Matrix is the Womb that contains the scheme of the Universe, from big to small. It is the plan on which the two are built. It is the concept that also links the two – the upward linkages from the microcosm (individuality) to the

macrocosm (universality) and the downward linkage from the macrocosm (universality) to the microcosm (individuality).

It is like moving like a stream with upward and downward currents – like the movements along the seven notes of an instrument – like a Sitar (Sapta-tara) or the more ancient of all – ‘The Veena’.

In the Vedas, we encounter the most ancient concept of the Matrix, the Mother – the Supreme Lady of wisdom (like Sofia).

She is Saraswati. She holds the Veena in her hands – the septuplet matrix. The Seven Sages form the body of that universal music – ‘the Word’ that she plays.....

The power behind the Septuplet: Saraswati (RV: 1.164.49)

She is the Mother – the supreme Bliss (RV: 10.64.9). She is the power of Brahman – the Absolute (RV: 2.41.18). Her power represents the supreme stream of wisdom (RV: 2.41.16). Amongst all images of the Mother, she in essence is the closest to us (RV: 6.61.10).

She vitalizes and stirs our stream currents containing the right dhi (refined intellect) and consciousness (RV: 1.3.11) make them proceed upwards (RV: 2.3.8).

On the other hand, she brings down the streams of supreme wisdom from that ‘Word’ in the supreme heaven to cover the whole universe (RV: 8.100.10).

Her works are perpetual and they run in and through the two-way ladder. The running is represented by a divine twin – the opposite and complementary riders of the Horse. In the Vedas they are called the ‘Aswinis’ as they represent the two-way journey – the going out and the return.

The dynamism in the double septuplet: The Aswinis (RV: 10.85.8-11)

The Aswinis (RV: 1.3.2) are symbols of the human journey in the two-way ladder covering the septuplet matrix of creation. They are popularly known as the ‘Dioscouris’ (Double Carriers) and they are found everywhere in ancient religious symbols¹.

The Aswinis are the twin divine powers whose special functions are to protect the nervous or vital components in human beings so that right-balances are restored in the upward movement of truth while crossing the veils of creative downplay (the obstacles at the lower material and moral planes).

Together they represent that balance – between day and night; between light and darkness; between the ascendant and the descendent.

Their orchestrated activity with the Lady of wisdom, the supreme stream Saraswati and her original guided movement of the WORD or the Septuplet Matrix (The Seven Sages of Angirasas) provide the key to unlock the full essence of the Vedas and the concept.

The Angirasas, seven-headed thought and Brihaspati (The Eighth) (RV: 2.5. all)

Angirasas is the vital essence, the rasa of Anga (Yang) or the body (Vrihad Aranyak Upanishad: 1.3.19 and Prashna Upanishad: 2.8). By body we mean the tanu (RV: 5.67.5) – the essence of all our bodha (in-built feeling or degree of sensitivity). The bodhas are feelings not just of the physical body, but also of all the inner sheaths ranging from the mental, vital, neural, and higher neural and even beyond.

The bodhas carry the meaning of our existence. They are first contained in our physical, mental and vital stamina; then in our neural fluids; and finally in our thread of desire – kamasutra – the inner current of love.

Different people are guided by different primacies of bodhas emerging from their belongingness to different levels. That is why we have so much of variety even in an intellectual gathering where everyone can have the same formal academic degree, but the degree of an inner sensitivity indicating levels of response and appreciation can vary so much².

The task carried by the Seven Sages of Angirasas is to guide (based on the different degrees of sensitivities of people) the inner current from one lower level to the next higher level. In their inner scheme of things, there is a gradual (step-by-step – gradations) growth of the current of truth-consciousness (Saraswati) along with an ever-increasing ‘man-nature’ dynamics (the anthropic principle, which ranges from lower balances to higher balances) of human existence (Aswinis). The journey culminates reaching the vast - the breadth (Brihati) and rhythm (Ritam) of truth (RV: 1.75.5). Therefore becoming the Soothsayer (Sat) – The Lord (pati) becomes the Lord of the Vast (Brihati) - Brihaspati (RV: 4.50.8).

Our inner scheme of things step-by-step grows out to that vast of which we were once minutes parts (low-graded or the beast) and now we become the complete Lord – Brihaspati (life of divinity). With the aid of the Seven Sages, we express in ourselves the Vastness of the primal - The Word.

We become the Lords of an eighth position, following the earlier seven. The Eighth is Vak (Vocation of the Word). Vak is also rhythm of the vast and therefore Brihati – and it is the universe itself (RV: 1.1.5; RV: 8.103.8; RV: 1.75.5; 1.151.4; 9.56.1).


As Lords, our individual consciousness shoots beyond our individual limits (microcosm) and then the universal limits (macrocosm) and goes beyond to embrace the universe within.

So we become the Word itself. This Lordship is known by several names like:

- We become the transcendent – The Brahman.
- We become the rhythm expressing the Universal Anthropic principle – Brahma or Brahmanaspati (RV: 2.24.5).
- We become the Lord of the Vast – Brihaspati (RV: 4.50.4).

¹From the Indus Valley settlements the icon of the Aswinis had gone to Persia; to Anatolia and Greece in ancient Europe. In Greek mythology they are called ‘Castor (for castration) and Pollux (for pollination)’ – the twin Lords of human journey to the heavens.

²The spirit and objective of Indian Ashram-based education is based on variation of the degree of different response-makers to a common stimulus. These results clarified the level of psychic standpoint of the candidature and his or her willingness to take up an austere and contemplative life drawn from the environment of the ancient Ashrams and under the guidance of realized souls called the Rishis.



The association of the Tree of life with the manifestation of the godhead is re-echoed in Christian tradition, since there is an analogy, or even a renewal of the symbol, between the tree in the Old Covenant, the Tree of which renewed mankind. De Lubac regards the cross, standing on a mountain in the centre of the World Tree. In any case, Christian iconography provides constant examples of the leafy cross, or Tree Cross, where the gap between the upper branches reveals the symbolism of the fork and its graphic representation the letter Y, or Oneness and Duality. At the extreme limit, by menotomy Christ himself becomes the World Tree, the World Axis, the ladder, a comparison which Origen makes explicit.

Book: The Penguin dictionary of Symbols

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SECTION FIVE

BRAHMA-
JYAMALA-SUKTA
(JAMALA)

SHIVA AND
SHAKTI IN
ETERNAL UNION

Brahma-Jyaya-Shukta (Jamala of Brahmanaspti)

We evolve as the new Rishis following the earlier Rishis, who are our predecessors and ultimately the forerunners among them, the Seven Divine Rishis, who are superintending the evolution of this world.

The lineage of Angirasas is the power guiding an inner aspiration of man to that Truth in the Vast. We ascend and grow as they provide the support while descending into our own existence, vitalizing our inner nerve currents and streams (Saraswati and the Aswinis) from within. We and them bridge the two-way ladder and establish the seven-headed thought again and again.....

‘In the beginning there is the Word, the Word is with God, the Word is God’

We establish the vast and cosmic Word (Vak-Brihati) and achieve the Lordship (Brihaspati). The two are a couplet. This is a double intender – a Gemini (jamala) of the two – Brahman and its power.

The secret of the conjugate is encoded in the Vedas. It is known as the Brahma-jyaya Sukta [Rig Veda in 10th mandala, sukta 109 and also in the Atharva Veda, in 5th Kanda, forth canto, sukta two].

This conjugate of Brihaspati and his consort (Vak-Saraswati/ Juhu or Tara – as she is known by different names) is found in a later myth. It is of a great battle of Suras (Devas under the leadership of Shiva-Angirasas and Indra-Brihaspati) and the Ashuras [Titans under the leadership of Soma and Sukracharya-Bhargava or Kavya-Ushana].

The cause of this violent conflict is due to a sharing of Brihaspati’s consort ‘Juhu or Tara’ by Soma (son of Sage Atri). The parable and the truth behind the story possibly triggered three actual events in history:

- An initial departure from ancient times of unified knowledge (Satya yuga) to times when there was a growing need of a ramification – a triple-foundation of knowledge (‘Troye’-vidya or the beginning of Trita Yuga).
- A second religious separation of the ‘Indo-Iranians’ due to conflicting notions of the word ‘Maya’ thereby splitting an original unity of ‘Suras’ and ‘Ashuras’.
- A later battle of ‘Troy’ (Ilium) between the mainland Anatolians (Trojans) and Greeks (Mycenaeans) due to a dispute over a consort named ‘Helen’.

The concept of the ‘conjugate’ is therefore a vital key to unlock India’s remote past. In the following section we shall assess it.



Analogy of Vedic cosmogony and modern Physics

Introduction

Let us for the time being review a major area of research in modern scientific thought. This is in relation to our universe and life itself. For this review we need to briefly see the changes in the modern scientific world. These changes portray the shifts in our current scientific viewpoints.

Classical scientific view of the world has focused on stability and equilibrium. But the common worldviews are different. Today new views of uncertainty have emerged. They range from the Quantum physical worldview of the levels below the microscopic world to the ‘Over-view’³ effect perceived from a global scale.

Today mathematics, the language of Science has fresh spaces for the imaginary and ‘non-linear’ issues⁴. Computation logic accommodates Heuristics⁵. Economics has opened up to the Game theory and uncertainty of the real world market. Nobel Laureate Illya Prigogine and Sheldon Glasgow have talked about a ‘Chaos Theory’ accommodating both order and disorder of the universe. In Astro-Physics giant concepts of String theory, multiple universes, co-existence of black and white holes and stellar nurseries have been added to the classic one-tracked Big bang theory. In relativistic sciences, similarly, there is a new accommodation – the theory of non-locality.

Posited in a single universe with the existence of many in it has currently pushed classical science to a search for new and holistic horizons. The theory of non-locality, if not fully established, has certainly provided the required push.

The analogy

Indian spirituality has had always historically responded a cosmic principle of space and time myths integrating universal laws of space-time-causation (the big or the macrocosm) and the processes of evolution within them (the small or the microcosm). The symbols and the icons that were later added to Indian spirituality and used in later mythology were only to make a story, an approximation of that principle as the truth.

It is perhaps the right time we realize the goal implied in those stories and ourselves aim for that change addressed by that goal. It will de-mystify the veils of those stories and take us straight back to the heart of the matter – the philosophy as a way of life aiming for the goal.

The goal is being and becoming.

In the present discussion an attempt has been made to evaluate three important icons of the Vedas that have come down to later ages as the three most important mythological symbols. The three icons are:

- 1) Rudra - Natarajan (a dynamic aspect of Shiva representing the Cosmic Dance of Time) – taking the cycle of creation back to its origin.
- 2) Padmanavaswami - Vishnu – the primal transcendental seat of original cosmic expanse or space expressing the glory and the ananda of creation itself and
- 3) Brahma - the first principle of creation (whom we have already discussed).

³In the 1970s, the Overview Effect fundamentally changed our view of the world as an interconnected integral system enunciating a larger or holistic concern to thinking about the world – is people, culture, climate, human health and about relationships to other systems - small to big.

⁴It is a concept or an idea where the whole is more than a mathematical sum of its parts.

⁵It is a system that encourages iterative logic, flexibility and sequences of intuitive anticipation.

The theory of non-locality – its current evolution

To create an atmosphere of comparative analogy, here is a brief of the other side. These are the current changes in modern physics since the days of Sir Albert Einstein, which have led to the theory of our present discussion, the theory of non-locality.

The brief outlines a sequence of events:

1. In May 1935, Sir Albert Einstein and two of his colleagues, Boris Podolsky and Nathan Rosen published the first description of a reality that is non-local (meaning traveling faster than the speed of light) as something unbelievable. Einstein called this ‘spooky action’ and this publication was eventually called the EPR paradox. It includes two major enigmas:
 - The collapse of the wave function as interpreted through the wave equation of Erwin Schrödinger
 - A probabilistic notion that every part of a quantum system responds instantaneously to a stimulus affecting any other part of a system. They suggest instantaneous connection with the universe as a whole.
2. The EPR experiment inspired other areas of research like polarization of light seen from a quantum viewpoint. These emissions suggested information transfer in opposite directions to points far apart. Whether such transfer actually takes place at a speed exceeding that of light is another question.
3. Two later works emerged. One was of David Bohm (London, U.K.) in the 1950s and the other was by John Bell at CERN (European Center for Particle and Nuclear Physics, Switzerland) in the 1960s. Bohm proposed the ‘Scattered-Matrix’ theory and John Bell his ‘Bell’s Theorem’ to take the notion of ‘non-locality’ further. But all these were theories.
4. In 1980s, Alain Aspect and his colleagues (in Paris) for the first time experimentally confirmed the EPR enigma and posed new avenues to review the Copenhagen interpretation of Schrödinger.
5. In the early 1990s John Cramer at the University of Washington, Seattle pointed out a unique thing implied in Schrödinger’s wave equation. Cramer reviewed the equation and explained a bi-polarity meaning a conjugate of opposites. His wave equation is based on the simple idea of complex numbers which is: $Y = A + Bi$

And this stands for a complex number:

$$\text{If } Y = A + Bi \text{ then } Y \cdot Y = (A + Bi) \cdot (A + Bi)$$

In case of complex numbers, we know that $Y \cdot Y = (A + Bi) \cdot (A - Bi)$

In other words, this complex conjugate form implies backward and forward linkages of the B factor, which stands for Time in the wave equation.

So, implicitly or explicitly, the use and application of the wave equation involves backward and forward linkages in time (Gribbin, 1995)⁷ in any quantum calculation or experiments.

Cramer’s deliberations imply that a wave function has a bi-polarity of backward and forward linkages of time.

Backward linkage of time takes creation backward to its roots, its origin. In other words, the linkage is one of anti-creation (deconstruction taking everything to its seed form)

Forward linkages of time, on the contrary, take us to future. It takes us to the full bloom and the highest creative possibility.

The two concepts are however juxtaposed in the above equation.

Now let us look at a similar concept already available in the Vedas.

⁶It is a property of light giving it a kind of orientation vertically and horizontally across in the lines of motion.

⁷The idea comes from Schrödinger’s parable of two kittens – Dead or alive (1995) – readers may refer John Gribbin in ‘Down to Earth’, August 15, pg 29-36.

The backward concept of Time

(Complete Transcendence beyond the macrocosmic space)

In the Vedas, the concept of Rudra or a fiery-dynamic form of Shiva (or Shambhu in RV: 7.35.10) are of the most violent and fighting types. They are the most dynamic ones of all Vedic gods. The culmination takes place through the sons of Rudras, called the Marutas who are dynamic, vibrant, stimulating and finally victorious life-forces taking the upward surge of human evolution to its roots. It denotes the expansion of individuality going beyond the macrocosmic bounds (the universal self) and further to that transcendental.

It denotes the full collapse of the wave function taking the ever-changing creative surge (the individual as the universal self) to its deathless, changeless, permanent root (like the parable of the calm sea) (RV: 5.70.2; AV: 7.87.1).

In other words this aspect of Rudra stands for the expansion of the microcosmic self, which goes as follows:

Microcosmic self -> Macrocosmic self -> transcendental self

The forward concept of Time

(Full immanence of the macrocosmic space)

In the Vedas we get the other side. It is in the concept of Vishnu (or Padma-nava-swami), who represents the transcendental seat of the full cosmic bloom and the honeyed beatitude. He represents the vast creative waves (RV: 1.154.all).

Contrary to Rudra-maruti, Vishnu, the macrocosmic self, establishes itself as the cosmic archetype. The triple strides of the archetype stand for the full coverage, expanse and glory of complete creative strides.

The wave function here re-surges from the calm backdrop to its full and wonderful manifestations.

Macrocosmic self – leading to the full bloom of the Cosmos (Lotus)

Thus forward linkage establishes a complete originality of self-manifestation or creation.

The bipolarity or the conjugate: Sama-karshana (RV: 5.83.7)

Let us recall the conjugate of the Wave equation. For the complete wave equation we need both. When we take them together we get completeness.

The conjugate is like a pair of hands or wings. On the one hand, the universal self establishes itself in the original deathless, permanent and transcendental root. On the other hand (with regard to the first hand) it expands to a full bloom of creative joy and bliss - Ananda lohari.

Based on the backward transcendental linkage the forward immanent linkage is established. This is the double intender – the bipolarity – the conjugate or Jamala – ‘the unity of Rudra-maruti and Aditya-Vishnu’ (RV: 5.87.8). They form the unity and the cross-over - a leveling of the field of harvest – a two-way crossing or the courses. This is the power of ‘thunderbolt’ (vajra) - the ‘sama-karshana’ – absorbing all differences and ‘the up and the down’ (RV: 5.83.7).

The universal self, on the one hand, links the individual self to that backdrop – the absolute reality. On the other hand, the individual self establishes itself as the universal self. Therefore it is crossed and leveled i.e. ‘Sama-karshana’.

The origin and the original

One is the Lordship of the WORD and the other is the WORD itself. This is the conjugate (Gemini) or a jamala of Brahma – Brahmanaspati – Brihaspati and Vak-Brihati.

In the New Testament, it is therefore written:

‘In the beginning there is the WORD, the WORD is with the LORD and the WORD is the LORD.’

The ancient Christians of St. John, St. James and to a great extent Pauline Christianity had realized this universal basis of the WORD, which in their terms they had called the Christ.

In the Vedas it is called Brahma-jamala. Both are the same.

In the Vedas, there is an entire passage dedicated to this great truth-foundation. It is the making of the Universal Self and the establishment of its full universal lordship as the self-power. This passage is known as the Brahma-jyaya sukta (meaning the consort/power of Brahman or Brahmanaspati) (RV: 10.109.all). This sukta brings to light the lost foundations of an ancient tradition of Brahma-Jamala. We shall come back to this again finally in our concluding chapter.

The aftermath:

Clues to understand historic Diasporas and departures

The great Sages had themselves reached that supreme seat in the heavens on the one hand (the root foundation or sat-chit swarupa) and expanded as representatives of the Universe itself (the extended foundations of joy and glory from the root called the chit-ananda swarupa). They are therefore called the great or parama Rishis. Among them stand the highest ones, who are the primary. That is why they are called the Brahm-Rishis. Among the Brahm-Rishis, there are the forerunners or seven Cosmic Archetypes called the Sapta Rishis.

These greatest sages have reached that supreme impersonal seat by becoming what they had aimed for and establishing themselves as the ‘The Father in the Heaven’. So in the hierarchy of the Vedic Wisdom, they had always given a first place to that highest impersonal seat and subsequently to the ‘father in the heaven’ (which they had become themselves) they had attributed a secondary one.

In the later Vedic ages, the archetype representation of the ‘Father in the Heaven’ (represented by the three different names of Brahma-Brahmanaspati-Brihaspati) had slowly acquired a secondary place. The highest seat was represented either in the bipolarity – Rudra/Shiva/Maruti or Vishnu/Madhva.

Over time, Rudra/ Shiva were logically associated more and more with the path of deconstruction represented by Gyana and Yoga implying a primacy of asceticism and transcendence. And the concept of Vishnu on the other inspired the path of Bhakti and associated tantra implying a primacy of love and honest passions. A division grew out of the two extremes.

Then came a time called the age of Puranas, when such divisions had ossified leading to a separation of monotheism and dualism; gyna and Bhakti; and most important of all, a growing conflict between the path of austere asceticism emphasizing meditation and celibacy (Gyana-kanda) and the other one emphasizing a softer ritualistic way aiming at a moderate level of spiritual achievement (through Bhakti and karma-kanda).

In the meantime, different growing religious movements already set far away from the ideals of a very distant Vedic Age and the cult of Brahma (the father in the heaven) or Brahmanaspati (Lord of the Word) and Brihaspati (as Jupiter of the planetary divine world or Zeus as the Lord of all Gods) got separated from each other. They were further de-sophisticated in the Indian sub-continent and that led to a consequential drifting away from this ancient truth from the Indian sub-continent.

In India, the cult of Brahma had already taken a back seat. A part had moved by then to Persia and even further west to the Aegean-Agyptos belt (Greece and Egypt). The differences took place in real remote times.

On this we get a very significant statement made by Indologist Ian Keasarcodi-Watson:

“...Perhaps I should add the following corrections to the above about the ‘Three’. First, only Shiva and Vishnu are venerated to any extent in India today, and one must, indeed, search deep into the mists of a hidden antiquity for a time when Brahma was widely venerated”.

We have a brief of the reasons behind the departures. Perhaps we also begin to feel the need of a recovery of that lost wisdom. Why? The answers will come through as we complete reading this book.....

The evolution of Kalpa and Jyotisha

The need of that recovery

A complete framework is hidden in the Vedas and it is important for us to understand this framework to trace the nature of disintegration and subsequent religious Diaspora to lands beyond India.

The framework is based on a polarity of the three worlds described in the Vedas, which are 1) Dyava (the Divine realm or heaven); 2) Prithvi (the material realm); and 3) Antariksha (the inner linkage between the two denoting an internal mental and vital world of any individual).

This framework provides the understanding of the reasons behind this dissipation and disintegration and also the ways to re-integration.

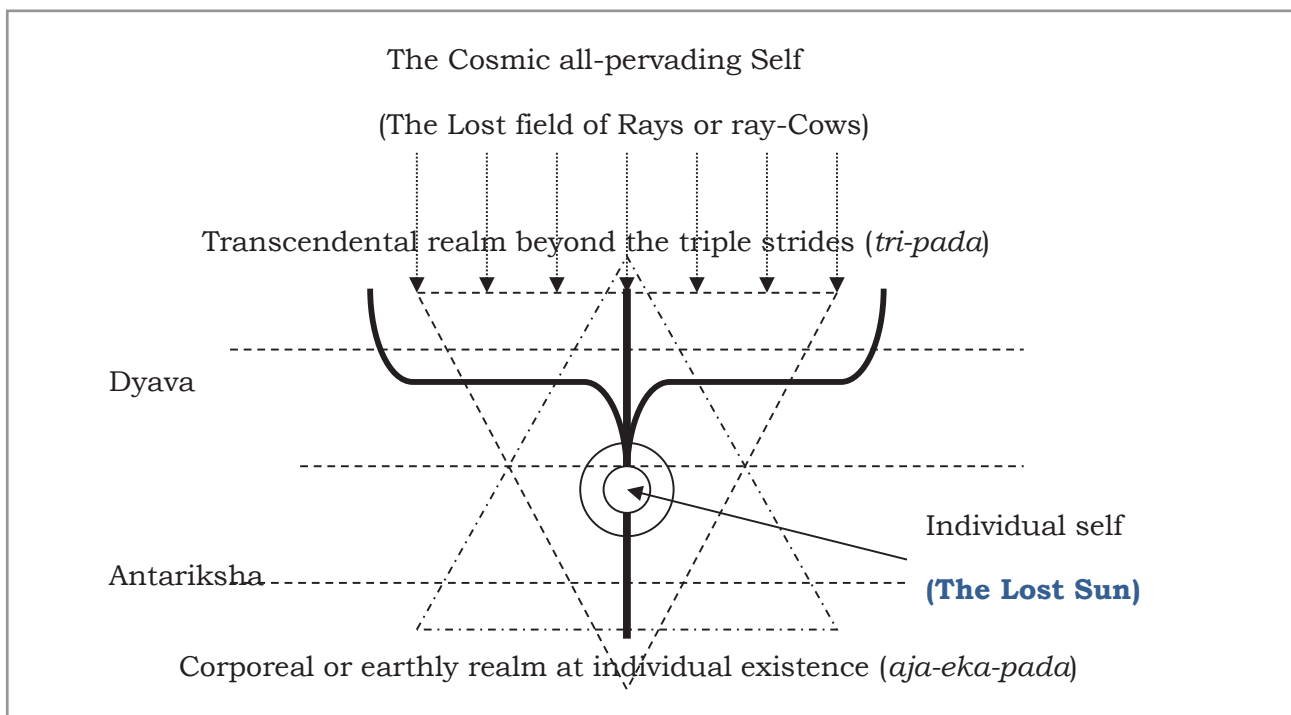


Figure 1: The Conceptual Framework

Figure 1 presents the conceptual framework in two respects:

- First, in the framework we see a fourth one, a highest transcendental realm in addition to the three levels or realms.
- Second, we see the node and the zone of activity that will establish possible linkages between the two, via the Antariksha or the inner world.

The lower node (or pole) is the place of the individual self (the Atman) – located within our corporate existence – here. The transcendental realm – there, is the seat of the other side – the other pole. This we referred in our abstraction (see the letter in the beginning of this chapter).

⁸This is from Ian Keasercodi Watson (1976), *Essays on spirituality*, Agam Prakashan – Delhi.

The legacy of the Vedic Sages

[Original shepherds (Go-rakshaka) of humanity]

The early beginnings and the original source-power come from the great-realized minds – in the Vedas and it gives us continuity in terms of many ages and their different guiding archangels sharing the same goal.

This continuity of many ages and their shepherds are evident throughout the Vedas. One such is a sukta is by a great sage, whose name was Divodasa and by looking at this sukta we begin to understand the spirit of the great continuity, which is a very significant area of the truth-foundation.

The sukta goes like this:

‘The ancient sages know our spiritual deeds and my works – great among them are the Sages of that remote time – Dadhichi, Angira, Priyamedha Kanva, Atri and Manu. These great sages knew the ancient forefathers of our lineage. It is so important because there is a deeper connections between these great spiritual souls and the way of life that has been followed all through in our own family tree down the passage of many ages gone...I pray to all the mighty God-principles, who all have established their supreme eleventh position (exceeding the Dasagwas – or the tenth decimal position) in all the three realms – the dyava – the prithvi and the Antariksha.

This is the supreme principle of that eleventh.

Whoever has established that, they by their own spiritual strength and universal magnanimity conduct the greatest sacrificial fires for universal sustainability’

(RV: 1.139.8-11)

Now the questions are:

- What do we mean by this sukta?
- What is this parable of the ninth, the tenth and an ideal eleventh?
- What is this sustainability that Sage Divodasa is talking about?

To find these answers we have to revert back to the discussion that we had done earlier in this chapter and bring forward a great principle of the Vedas.

To do this we bring to light the following:

- A pattern recognition of the vast and the small
- The concept of sustainability provided by that pattern
- The relevance of that pattern as the plan of everything and
- The unity of opposites as reflected by that plan

Let us begin with the recognition of that pattern that represents the schema of things from vast to small; from spirit to matter.

For this we have to understand a great science hidden in the Vedas. This may be loosely called the science of cosmic thermodynamics and sustainability of the universe. Perhaps, in days to come, future scholars and realized souls shall find an appropriate name. For the time being one may try to comprehend this cosmic science of thermodynamics and sustainability.

‘Agni surpasses the holding of the septuplet matrix and becomes that eighth by encircling the whole rim – the cycle itself and emerges as the supreme among all’ (RV: 2.5.1-3)

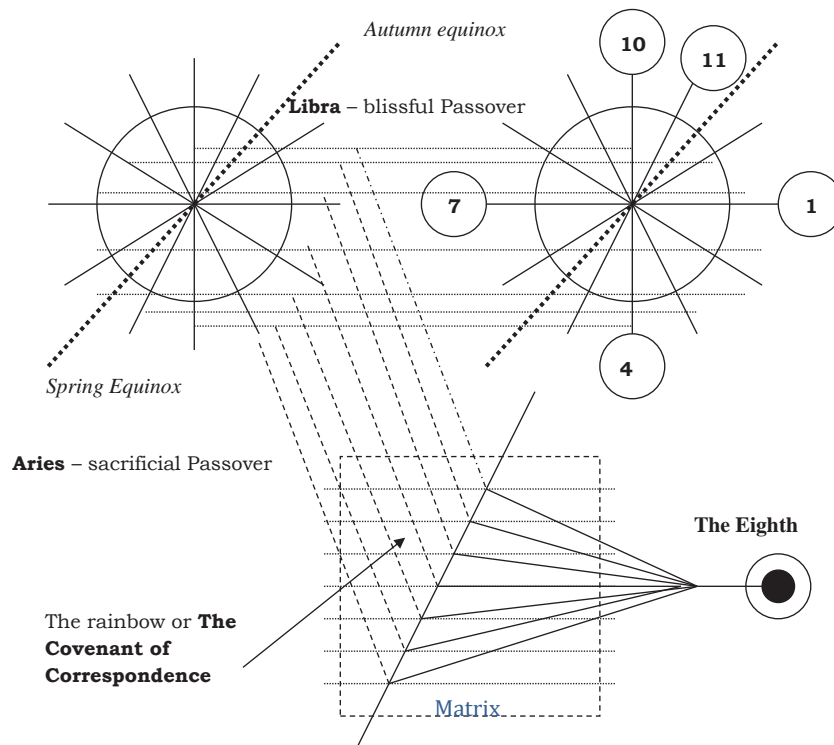


Figure 2: Earthly time (left); the Universal Time (right), the Dasagwas and their 11th position and the Septuplet Matrix
The unity of opposites
[(Unity of Hemanta (autumn) and Vasanta (spring))]

It is evident from Figure 2 that the sacrificial journeys in the entire Vedic journey are based on the polarity of ‘spring and autumn’. The polarity and the complementary nature of the two also form the very foundations of Taoism and the principle that was laid out by Confucius¹³. It is evident from these lines of ancient Chinese wisdom:

‘The yang having reached its climax retreats in favor of the yin; the yin having reached its climax retreats in favor of the yang’

Wang Ch’ung¹⁴, A.D 80

The journey internally had begun at one (1) (see Figure 2), when the position of Sun (in the Heavens) with respect to earth was winter. That comes from a previous cycle (as a fruit of previous achievement). This is the key to the lineage (parampara) of Sages.

The idea of ‘Hemanta’ (Autumn) is based on the words ‘Haima’ or ‘Heema’ which is the essence of life and characterized by Soma – the principle of immortality that supercedes death (or sacrificial Passover at Aries) re-charges life with the promises (Passover of bliss) of another spring.

At spring again life on earth (Soma) is re-sacrificed at the equinoctial point with the beginning of New Year at Boisakhi, as the heat of the symbolic summer (Tapasya) intensifies symbolizing the spirit of sacrifice.

Soma is represented as the cool ice caps condensed in the summit of the highest mountains and brought down by a falcon-like speed of a descending Godhead, the great seer, who is ready to uphold the burdens of creation and show humankind the new way. Soma is seen in the Vedas as the fountain of immortality brought down from the greatest mountains with a spirit of the Falcon-Seer¹⁵ (RV: 1.93.6).

Agni on the other hand is brought down by the band of Seven Sages with Bhrigus and Atharvans as the forerunners¹⁶. The polarity of Agni and Soma thus holds the key.

¹³Interested readers may know more by reading the section on Taoism in the book entitled ‘The Tao of Physics’ by Fritjof Capra (Flamingo, 1988).

¹⁴This is quoted in J. Needham’s Science and civilization in China (1956), Cambridge University Press.

¹⁵A symbol hailed by an earlier Orphic doctrine and all later Ionian philosophers including Pythagoras and Plato (in their ‘Soma-sema’ doctrine) and repetitively found in ancient Egyptian lore. This was transmitted to later Christianity where the ascending body of Christ on Pentecost was a transformation of the Soma and not held as a corpse but a latent spiritual body – in the depths of transcendental meditation.

¹⁶This lineage formed the earliest Persian traditions of Seer Zarathusthra.

The Zone of transcendental Divine realm (RV: 1.154) [Tri-padam / param-padam]

At the top is the transcendental realm, which the supreme seat of infinity on whose coils the image of Vishnu is laid.

The descending arrows from that realm are the descending rays (Uru-chrome or Uruguay Vishnu) of the supreme. In the Vedas they are figuratively represented as the eternal shining 'Ray-Cows' (Go-charam) – providers of vision.

The transcendental realm is param-padam (RV: 1.154.6) – the celestial abode of undifferentiated ray-light or Vishnu.

The descending rays come from there and they compose the Dyava (the Divine realm or heaven) in the level below.

The transcendental realm is the location of the supreme sages (Rishi loka) – in proximity of Vishnu. This is also called Akhanda or the undifferentiated loka.

Next is Dyava, which is the location of Gods (Deva loka). This is also called Sura loka. It may be noted that the realm of Gods is only a trickle-down or a descending extension of that transcendental realm. That is the higher pole.

The node of the material realm (RV: 7.35.13)[Aja – ekapadam]

On the other hand, the Prithvi is the realm of our very material existence, within which our self is hidden. The lost sun is that hidden self – the divinity within us. This is the local pole.

This is also called Aja – eka-padam [which is symbolic of the Capricorn, as Aja literally means the goat and figuratively means the non-born or one without death but hidden within matter and therefore subjected to the veils of mortality i.e. changes (mutation)]. This Aja – eka-padam is an important clue to all our later understanding in this book.

When this material world is detached from the spiritual, then it is valueless and damaging. Then our earthly plane, in the absence of values, is also called the differentiated Asura loka or the place of carnal, increasingly hedonistic and over-sensual possibilities.

The connections between the zone and the node: antariksha (RV: 4.58.11) – The seat of values

It is through the inner realm called the antariksha, the connection between the two is maintained or established. It is the link or value-added level. When the connections are established the ideal state is restored. The utopia is called akhanda dyava-prithvi or an integration of spirit and matter (RV: 1.185.all). This was the aim and objective of the Vedic Sages. In Natha Yoga, as we shall see later, it is called 'sama-rasa'.

In reality, we are far, far away from that great ideal. As a result:

- Dyava is de-linked from the Prithvi.
- Spirit is de-linked from matter.
- Sura loka is de-linked from Asura loka.
- Spiritual level is de-linked from the material level.

It is because of excessive materialism, the moral and the ethical refinements are not been established to invigorate the link level or the Antariksha. As a result linkages with the rays of the upper realm are lost. This is the parable of the lost cows and a movement of our ego drifting away from the teachers – the shepherds. They are called 'Go-pati' or 'Go-rakshak' (Sama Veda: 1.6.168).

As a result the individual self is still hidden in matter. This is the parable of the lost sun – Martandya (RV: 10.72.all). It cannot penetrate the veils of bondages in the microcosm and resurge in full glory in the larger bounds of the macrocosm.

Pattern recognition – correspondence between Dyava and Prithvi [Spirit and matter]

Let us make the following observations drawn from daily life.

- The movement of time on earth is coordinated by the twelve months.
- Seasons come and go in cycles. A cycle is a year.
- Rains come down every year to balance the element of heat and cold and to set life continuously. At the same time increasing heat leads to rain clouds and subsequent cooling leads to their condensation and precipitation. Rains from the clouds condense finally on the mountaintops and become the source of perennial rivers.
- The rivers drain out and they charge the mighty ocean from where water vapor is again drawn up the increasing heat of the Sun and this re-forms the rain clouds. This is the eternal cycle. It is the cycle of sustainability (RV: 1.164.50-52).

The Seer-mind observed this pattern embedded in external nature (macrocosm) and contemplated on it to find an equivalent pattern embedded in the inner nature of humanity.

Based on this pattern recognition, they set to motion a principle of correspondence and complementarities. This correspondence of ‘an eternal give and take’ is like an eternal flywheel supplying power and sustainability of the universe. This correspondence is their very power of realization (RV: 1.164.18 and 31) and stands for the allegory of the wheel and the scheme of the six seasons (RV: 1.164.14-15) and their cyclic sustainability in and through the septuplet matrix (RV: 1.164.3 and 36).

The Sages proceed from the sacrificial summer incepted by the month of Boisakh (post-spring) to the next Chaitrya (end of spring), which is one cosmic year (called the samavatsara). Sometimes in a deeper sense, it is called the sana. This has been referred later and more so in chapter six on the New Year celebrations of India – Nabo-Barsha. A New Year in Indian tradition begins with an idea of sacrifice and this is opposed to other traditions of a post winter or early spring, where the beginnings are celebrated with an enjoyment of the full bloom and the festive mood of spring. As evidences, the ancient Zodiac chart of equinoxes and the sun-signs, which is largely followed all over the world, converges with the age-old Indian tradition only. It begins with Aries, the sign of sacrificial Ram around post-spring.

The beginning of this cycle is with Aries – the Zodiac symbol of the sacrificial ‘Ram’ with its warm wool, which is symbolic of ‘a latent or inborn heat’ through which the fruits of spring are sacrificed. This is equivalent to the descent and the cleansing of Soma meaning the lactation of the Ewe, a parable that is found in the entire 9th mandala of the Rig Veda and also in the Sama Veda. Thus the sacrificial preparations are made for another year – another sustainable cycle of life in the universe (see Figure 2).

Sustainability through Cosmic Sacrifice

Beginning with sacrifice is the key to sustainability. The spirit of renunciation is the key to service.

‘Great achievements are always results of preceding endeavors.’

The Vedic tradition of spirituality; its various symbolism; the seasonal and mythical allegories; the annual inter-linkages of all festivals and rituals address this core message.

The simile of the six-seasons (sara-ritu in RV: 1.164) as encoded in the Vedas is drawn from the physiographic characteristics of the Indian sub-continent, where an exclusive cycle six seasons (Summer, Monsoon (Rains), Sarat (post-rains and pre-autumn), Autumn, Winter and Spring) have been observed at the exoteric level and accepted at the esoteric or the deeper psychological level.

⁹The idea of sacrificial fires can be understood by reading the idea of ‘Asswamedha’ – the symbol of sacrifice of a galloping Horse representing the perpetual oscillating movements (continuous changes and flows of events) of the Universe’. One important book in this context is ‘The Asswamedha: The Rite and its Logic’ by Subhas Kak (2001), Motilal Banarsidass, India.

¹⁰This is a festival that was found in the Vedic times and found in ancient Gaul; in Caledonian and Celtic festivals, as evidence to ancient linkages between India and Europe. It is the more ancient festival of ‘Imbole’ marking the beginning of the lactation of the Ewe (lamb) and it later corresponds to the Feast of St. Brigit of the Christian calendar and her predecessor Goddess Brigit (close to Brihati of the Vedas) (refer page 148, The Celts (1958), by T.G.E. Powell, Thames and Hudson).

The double intender in the framework [Agni and Soma]

The recovery of the lost ray-cows is a prelude to the recovery of the lost sun.

The recovery of the support from above (the descending triangle) is a prelude to the recovery of the lost sun from below (ascending triangle).

The two are represented by the Soma (the principle of elixir or immortality) and Agni (the principle of tapasya – or will force) (RV: 1.93.all).

- **Agni is that inner force – the psychic fire of the initiated** – the Angira (RV: 1.all).
- **Soma is the divine stream of beatitude** descending from above (**and not the juice of any medical plant as mentioned by the Vedic sages** – refer RV: 10.85.3).
- Agni is that trans-corporeal principle from above planted in our corporeal existence.
- Soma is the divine principle coming down to the corporeal and originating from that transcendental realm of infinite light and power (Somena adityam balam, RV: 10.85.2).

The coupling of the two sets up the infinite scheme of the universe, which is also the unity of the two worlds.

The two de-mystifies and brings to light the ‘psycho-somatic’ conjugate of applied Vedic wisdom.



The same plan of macrocosm (Dyava-prithvi) - microcosm (Antariskwa)]

The wheel of the Cosmos is also the wheel of seasons. Both are equated with the concept of an inner time – a psychological time of the earth (Prithvi) matched with the movement of time in the heavens (Dyava). The matching happens in the inner world of the Sages (Antarikswa). This matching can be interpreted at two levels:

- **The first level** is based on the symbolism of the equinoxes (balance of day and night) and the solstices (day exceeding night and vice versa). These balances carry a deeper meaning of cosmological thermodynamics. Day and night are the internal representations of Agni and Soma – or of Sun and Moon, externally found in the universe itself. At spring equinox, there is a balance of day and night in the solar ascendant and from there the Sun makes a Passover to a phase of increasing heat till it reaches the next climax – the summer solstice (This is uttarayana).

This balance is also found in the internal world of a growing Sage-mind (antariksha or the Microcosm) and the scheme of events in the external world (The Dyava-prithvi or the Macrocosm).

The two are therefore built on the same plan.

- **The second level** is that of the degree of achievement in that turning (Tropic). Given the balance of the internal and the external worlds (the first Passover), the Sages proceed further to reach two different classes of achievements – called the Navagwas (The ninth) and the Dasagwas (The Tenth) (RV: 6.22).

The Dasagwas are supreme sages, who are able to extend their period of sacrifice up to the tenth month and achieve something higher than the Navagwas (who can extend it up to the ninth only).

The Dasagwas can sustain their universal sacrifice till the highest tenth position (see Figure 2).

From here they inherit the second Passover (at Libra) as they roll down to the eleventh position and beyond. This happens from the highest position or summit of the 10th. By doing so sustainability of completing another cycle of symbolic twelve months is attained.

This keeps the wheel of life and Cosmos rolling.

The sages transcend and encircle the whole circle – the circuit of creation and form the WORD (VAK or the Eighth) by their greatest sacrifices.

The idea has been described in Figure 2.¹²

The idea has been described in the following line of Rig Veda:



¹¹The idea of the two levels is equivalent to the category of jivakotis and iswarkotis mentioned in various scriptures and of late in the Gospel of Sri Ramakrishna. Jivakotis are human soul still ascending and trying to reach that summit. Iswarkotis are realized (inborn) human souls, who are currently ascending in the present life but had reached that state in previous incarnations thereby carrying the strength of that achievement, which is changeless through any flux, in subsequent births when they are both a true 'son of man' and a true 'son of god'.

¹²Interested readers may know more by reading a chapter entitled 'Seven-headed thought' in book named 'The Secret of the Vedas' by Sri Aurobindo.

The Vedic Exegesis

Introduction

“... (so) all these ratiocinations of logic, all these bundles of metaphysics, all these theologies and ceremonies may have been good in their own time, but let us try to make things simpler and bring about the Golden days (under the realized golden rays of That Sun) when every man will be a worshipper, and the reality in every man will be the object of worship”.

This reality is the Anthropic Principle as hailed by the current scientists. It had surfaced significantly from a discussion between the two great thinkers – Nobel laureates Rabindranath Tagore and Sir Albert Einstein.

The Scientist's Anthropic Principle

Stephen Hawking (1993) in his book 'Black Hole and Baby Universes' have set the parameters of this principle. He says that some people have gone so far as to elevate these restrictions on the initial conditions and the parameters to the status of a principle, 'the anthropic principle', which can be paraphrased as 'Things are as they are because we are'¹⁷. Hawking says that as perennial version of the principle, there are a very large number of different, separate universes with different values of 'physical' parameters and different 'initial' conditions.

The Tagore-Einstein dialogue on the Anthropic Principle

In 1930, Poet Rabindranath Tagore (T) and Physicist Albert Einstein (E) had a discussion, which is closest to the anthropic principle.

We present parts of that historic dialogue.

Einstein: There are two different conceptions about the nature of the Universe: a) The world as **a unity** dependent on humanity; and b) The world as **a reality**¹⁸ independent of the human factor.

Tagore: When our universe is in harmony with Man, the eternal¹⁹, we know it as truth and we feel it as beauty.

Einstein: This is purely a human conception of the universe.

Tagore: There can be no other conception. This world is a human world - the scientific view of it is also that of the scientific man. There is some standard reason and enjoyment, which gives it truth, the standard of the eternal man whose experiences are through²⁰our experiences.

Einstein: Truth, then, or Beauty, is not independent of Man?

Tagore: No.

Einstein: If there would be no human beings any longer, the Apollo of Belvedere would no longer be beautiful?

Tagore: No.....there is the reality of paper, infinitely different from the reality of literature. For the kind of mind possessed by the Moth, which eats that paper, literature is absolutely non-existent, yet for Man's mind²¹ literature has a greater value of truth than the paper itself. In a similar manner, if there be some truth which has no sensuous or rational relation to human mind it will even remain as nothing so long as we remain human beings.

Finally two great minds were in perfect agreement on a world view as a unity and dependent on the human perception.

¹⁷This is from his book, page 45, Bantam Books.

¹⁸Please note that Einstein uses two different words: Unity with regard to anthropic principle and a reality independent of that principle.

¹⁹By 'eternal' man Tagore possibly means the Cosmic Anthropic Principle, signifying total creative time.

²⁰Here Tagore mentions 'Standard' or a module. Swami Vivekananda in his works says, 'the Macrocosm and the Microcosm are based on the same plan' – from essays on Cosmos: delivered in New York, Jan 26, 1896. Tagore means to say that there are through connections between the Eternal Man (the macrocosmic involutory anthropic Principle) and that of ours (the representative of microcosmic evolutionary anthropic principle). On the microcosmic side there are many, so there are many worldviews. This matches with statement of Stephen Hawking.

Current thoughts on the Anthropic Principle

Timothy Ferris talks about a gradation of anthropic principle. Ferris says that 'nowadays the anthropic principle comes in three flavors - weak, strong and 'participatory'.

- The weak Anthropic Principle (WAP) simply states a minimal or limited human development that allows the emergence of life.
- The strong version (SAP) goes further: it declares that the universe must be constrained so as to allow for life or the universe must be such as to admit the creation of observers within it. In other words, if there are no observers, then there are no universes. So human perception becomes predominant.
- The participatory (PAP) is principally due to John Wheeler . It emphasizes the role of Quantum observer-ship in resolving potentiality into actuality and attempts to construct a new conception of the universe as observer-dependent. On this Hawking further adds that the Anthropic Principle can be given a precise formulation, and it seems to be essential when dealing with the origin of the Universe .

David Bohm's implicate order

Here comes a further interesting proposition by David Bohm. In the re-conciliation efforts of (micro) quantum laws and (macro) relativity principles, Bohm proposes an order of the Cosmos.

Bohm proposes a 'super-implicate order' beyond the two, i.e. beyond an existence of several vanishing universes in the black holes (the implicate order) and the emergences of baby universes from stellar nurseries (the explicate order). Bohm talks of an unfolding order inherent in the cosmic web of relations at a deeper, 'non-manifest' level, which is also that of the enfoldment . The two are perhaps happening at the same time.....

Conclusions: the complete universe in a nutshell

(The seed - the huge forest or Vrihad Aranyak)

In the cosmic expanse, there are the riddles of the tree and the forest .

In a picture of the forest itself, which one do we see? Is it the tree or the forest? If one is looking at the tree itself, then the 'attention' is not on the whole - the forest. If one is looking at the forest, then the 'attention' is not on the tree itself.

But we know that N number of Trees (T) make up a forest F.

This means that $N \times T = F$, but this equation is not correlated to the dimension of 'attention', the very essence of the Anthropic Principle. From the Forest to the Trees is the 'explicate order'. From the trees to the Forest is the 'implicate order'.

In a framework of 'attention' as an underlying principle it is very hard to concentrate simultaneously on the 'Tree' and the 'Forest'. This takes us to a more basic level of integrating the two opposites. Here comes the concept of a seed - 'vija'.

In the seed form we get the whole essence of Universe in a nutshell. Here both the Tree and the Forest co-exist. The wisdom of Sages had realized this seed. That is why they were called 'Siddhas' – the seed that is boiled – cannot be reaped; cannot be re-germinated – it stands outside the circuit of 'Trees' and 'Forests'.

²¹The human mind can have gradations. A person with lower appreciation for literature may be termed as the low anthropic Principle. Someone like Tagore and Wordsworth are possible examples of the higher Anthropic Principle. Based on this extrapolation, the Vedic Vak or Saraswati is possibly the embodiment of the highest Anthropic Principle as far as understanding of the essence of highest form of literature or wisdom is concerned. Low Anthropic principle conforms to the first signs of PAP.

²²This is quoted from Timothy Ferris, *The Whole Shebang*, pg 299.

²³One may refer John A. Wheeler: 'World as System self-synthesized by quantum Networking' in E.Agazzi, ed., *Probability in the Sciences*.

²⁴This is from 'The Universe in a Nutshell', New York: Bantam Books, 2001, page 87.

²⁵In David Peat, 'The Infinite Potential: The life and Times of David Bohm', Mass: Addison-Wesley Publishing, 1996.

Conclusive linkages, reciprocity and completeness

In this Concept, once we have in the forward linkage:

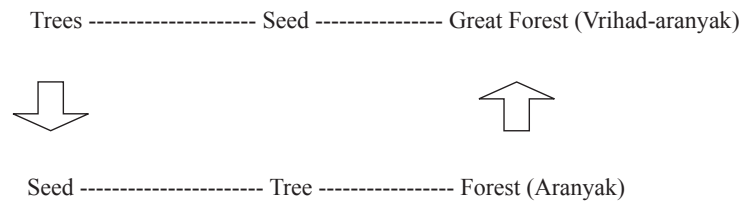
Tree ----- (Fruits): seed (s): -----Tree (s) -----Forest

Then we have the backward linkage:

The Forest -----Tree ----- (seed) -----Forest itself

In other words, the seed holds the linkages between a previous set of forest and its trees and the following set of trees leading to another forest and so on.....

In the looping we see the reversibility or reciprocity. In this reversibility the completeness of the cosmos (the Vrihad -Aranyak) in relationship to its origin and destination is looped and kept sustainable. This is the complete truth.



In the Mandala, or the archetypal pattern of cyclic linkage and continuity (abyaibhava, Bhagabat Gita, 15.1), there is a framework of resonance (Anuranan) between the upper and lower halves, i.e., Dyu and Prithvi.

The resonance is Chhanda, which is expressed in various ways, tones, tunes, hues, and rhythms in different courses of history and historical context (Bhagabat Gita, 13.5).

The Mandala represents the cyclic armature of Cosmic time or Kalpa. Kalpa is a macro-cosmic unit of time at the universal level or the Mahat, impersonally or, Brahma, personally.

The other aspect is Jyotisha, the 12-sector cyclic orb of the exodus of truth-light from inside-outside, through the Mahat to the level of Aham (individual consciousness) signifying the continuum of carrying capacity and carry-over wisdom (purva-Pragna of Vrihad-Aranyak Upanishad).

In the orb, life and evolution establish the thread principle, the sutra-atman, the flux on the one hand, and the Chaitya-Chaiti pravaha of the Purusha from the Mahat, working in the individual, in the other hand. At a mundane level, we term it as individual Samskaras.



Anthropomorphic interpretations of the tree also occur among the Altaic and Turko-Mongol peoples of Siberia. Thus, 'a man may change himself into a tree, the Tungus believe, and then resume his original shape.

The tree as the source of life is concentrated in that plant; and therefore that the human modality exists in a state of potentiality, in seed form.' He quotes Spencer and Gillen for the belief of the northern Australian Aboriginal Warramunga tribe 'that "the spirits of children", the size of a grain of sand, exist in certain trees, whence they sometimes come and enter wombs of their mothers through the navels.

Reference: Eliade, Mircea, *Patterns in Comparative Religion*, translated by Rosemary Sheed, London and New York, 1958.

Book: *The Penguin dictionary of Symbols*

Page - (1026 - 1032)

SECTION SIX

**ABSTRACTION OF
TREE IN MODERN
COMPUTATIONAL
LOGIC**

Abstraction of Tree in modern computational logic

Introduction – the world of today

Human intelligence has intrinsic potentials that fashions higher knowledge-response levels surpassing the lower instinct level of animal intelligence. Humanity has so far manifested higher capacities of larger behavioral, social and ecological organization patterns with inherent social values and collective systems of feeling. Thus the characteristics of a weaker Anthropic Principle (WAP), which is limited to the instinct ego, and animal intelligence level, have been always transcended. Then there are even higher levels – forming the strong and even stronger anthropic principles (SAP).....

With the emergence of a global e-society, both cross-technical and cross-cultural exchanges have begun leading to unprecedented opportunities reinforcing a global biosocial order and trans-personal strengths of the inter-continental society. A ‘stronger AP – the future human being’ is therefore in the making. The stronger AP is empowered with larger social intelligence capacities, which will consequentially seek a greater harmony between existential truths and the individual.

In the criss-crossing of modern and ancient ideas and cultures, which is promoted by the e-web, two systems are at crossroads. One, modern science and technological systems, which have established the various empirical branches of existential knowledge, are face-to-face with ancient normative and experiential value systems like philosophy, culture, religion and ultimately, spirituality.

Science and technology have promoted the branches of human progress. On the contrary, normative disciplines have traced existential roots. Humanity needs both - the branches and the root. This is the complete TREE originating from its root – the a priori and manifested in its branches – the a posteriori.

Here the discussion has traced the ‘TREE’ as an integral data structure where lower (or narrow) to higher (and wider) intelligence levels are dynamically linked to make evolve the Complete or the universal Anthropic Principle (CAP).

The Turning of the Tide – the expansion and the reasons

Leaving aside the utility-driven changes, the global community is also undergoing two kinds of transformations. They are:

- Cognitive transformations which can be identified as psychological and behavioral processes of the individual (say semantics) that are also linked to societal and global levels.
- Cross-cultural transformations identified as global processes of different societies and communities converging to common platforms (say globalization itself) like regional and global confederations.

In the years to come, there has to be a larger social intelligent design bringing forward higher orders of semantics (microcosmic) and globalization (microcosmic). The two have similar patterns.

²⁶Bohm's starting point is the basis of an 'unbroken wholeness' and he sees the non-local connections as an essential aspect of wholeness. At Paris the Copenhagen interpretation (by E. Schrödinger) was re-interpreted and it was said that the Universe does not work in accordance with 'local reality' (only). The non-local connections, the integrity of the universe as a unity and a reality beyond the speed of light (i.e. physical universe as known so far) were the three outputs of the Alain Aspect Experiment (refer chapter two).

²⁷For details please read the following: 1) Schrödinger's Kittens - Dead or alive (1995) - John Gribbin in Down to earth, august 15, pg 29-36; 2) Lecture on Spirituality & Science by Swami Jitatmananda in Conference proceedings (Ramkrishna Mission Cultural Institute): March 8-9, 2002; 3) 'A double Helix of Experimental and participatory ways of Vedic Cosmology' – by the author (article 6) in Universe and Beyond, Vol. 4, No 1&2, 2000 and Vol. 5, No. 1, 2001 (combined issue)

Options

For the first time, human thoughts and knowledge systems, which are both ancient and modern, intuitive and analytical, normative and utility-driven, have been put face-to-face – before a cross-over. Two things can emerge from this:

- Option 1 – a violent cross-over: They are conflicting and should not meet: The simple reason is that modernism over time always replaced the backward value systems of the preceding times and of late, consequentially the rationality behind utility-driven sciences is a better option to the value-laded cultural factors. Thus any possibility of a confluence is seen as a deterrent to progress of human and social intelligence. This is the first view and it may be called a disjointed incremental one favoring a mainstream view of old and current rational and classical schools of sciences. Even classical schools of modern psychology share the same view. In support of this argument, it is said:

‘...Major schools of western psychology, which have tended to regard any form of religion or spirituality as based on primitive superstition, pathological aberration, or shared delusions about reality inculcated by the family system and the culture.’

- Option 2 – a cross-over bridge: They are complimentary to each other and hence should meet: On the other hand, scientific advancements and psychological norms may be seen as complimentary to each other akin to the harder and software of human intelligence. Without one, humanity is incomplete. These latest thoughts feel that ultimately modern scientific progress has to be guided by these ancient philosophies and values. The streamlined models of scientific understanding, in return, also contribute to rationalizing of the philosophical value-systems. This is called the holistic or ‘systems view’ that integrates the two-fold or binary possibilities of wider human intelligence. This view is both comprehensive, iterative and it finally accommodates a larger junction from where humanity may step up to higher levels of local-to-global intelligence networks and systems. In view of this holistic accommodation and degree of flexibility, it is said:

‘... The conceptual framework underlying such an approach will include not only new systems of biology but also new systems psychology, a science of human experience and behaviour that perceives the human organism as a dynamic system involving interdependent physiological and psychological patterns, and as being embedded in interacting larger systems of physical, social, and cultural dimensions.’

²⁸This is the name of an Upanishad and probably a very ancient one and closest to the Vedic roots.

²⁹The Cosmos is symbolized as the ‘Great Forest’ in the Upanishad. This concept of Forest and the tree is also used in computational science.

³⁰This is quoted from page 405, Chapter 11, *The Turning Point* by F. Capra (Flamingo, 1982)

³¹Quoted from page 396, *ibid.*

³²The discussion is based on *The Collected Works of Carl G. Jung*, Princeton: Princeton University Press (1928).

³³This is based on the work entitled ‘Towards a psychology of Being’ by Abraham Maslow, Princeton – Van Nostrand Reinhold (1962).

³⁴This is based on Ken Wilber’s ‘The Spectrum of Consciousness’, *Wheaton III: Theosophical Publishing House* (1977).

Here we explore the possibilities in favour of the second option. Why? There are three reasons:

1. It is due to the holistic strength implied by this second option. It assimilates the better of the two worlds and creates a junction for future wider possibilities. It is constructive and positive.
2. It provides a stratified order of different system of thought accommodating order and change, fixities and flexibilities. On the contrary, an isolated stand-alone or disjointed model does not accommodate either the possibilities or the strength to overcome uncertainty and rapid changes.
3. Since it is holistic and it is therefore sustainable.

The future of Social to Global Intelligence (SGI) designs may be seen holistically as ‘the wider ability’ for people to relate, to understand and to interact effectively with others to finally arrive at the wider ‘cross-cultural’ framework. The framework of wider or extended social intelligence based on the Anthropic Principle may be called the Extended Anthropic-logical Framework (EAF) of tomorrow.

The wider concern of the framework

The EAF may also be seen as a sequence (refer Figure 7) of junctions – or a sequence of nodes that links several functional levels or human activities namely:

1. The disjointed personal ego-intelligence level
2. From the personal level to the inter-personal level,
3. From the personal-interpersonal (bio-social) level to the existential and
4. From the existential level to the root level explaining both the trans-personal and the universal levels of interconnectedness

The idea of the three levels is based on advances made in the post-Freudian years. We have discussed this in our earlier section.

The classical works of Sigmund Freud were limited to inferences drawn from experiments on a particular class of people conforming to retarded and animal like instincts. From here, the three later works of Carl Gustav Jung , Abraham Maslow and lately, Ken Wilber have come a long way. All three of them have gone beyond the limited range of human functions and intelligence which was restricted to ‘competitive animalism’ and ‘a survival instinct of the fittest’

For the tremendous significances implied by the three progressive works, they have been again reviewed hereafter:

- Carl Gustav Jung proposed a theory of psychological types by identifying four characteristic functions or levels of human psychology. They are 1) the level of sensation at the gross body level – the very level on which Freud mostly or only concentrated; 2) the level of thinking and intelligence from where mainly scientific and rational functions emerge; 3) the level of feeling and aesthetics that facilitates collective causes and value systems of larger humanity and 4) the level of intuition that goes further beyond to even larger ecological and natural understandings of human anthropology in relation to overall nature and the final purpose of human evolution.
- Abraham Maslow’s ‘theory of trans-personation and self-actualization’ followed Jung’s view. Maslow had rejected Freud’s view of human intelligence dominated by lower instincts or animalism. The reasons Maslow gave for this rejection was Freud’s experimental and consequential inferential limitation based on the study of neurotic and psychotic individuals coming from a strained part of the society, which was afflicted by the perils of earliest industrial revolutions. Maslow and his colleagues stressed that human personality and intelligence could not be separated from the network of human relations in which it exists. He defined psychology as a discipline dedicated to the study of interpersonal relations and interactions – the key to social intelligence. From here, transpersonal psychology begins to recognize, understand and ultimately realize the ‘wider or beyond the single individual’ states of consciousness and consequential intelligent networks.

- The latest works of Ken Wilber and this is called ‘Spectrum psychology’ which furthermore contributes to the evolutionary journey from personal to inter-personal; and from the inter-personal to the trans-personal states. Wilber’s approach cohesively assimilates numerous models, both eastern and western and presents a hierarchy of progressive bands or ‘spectrums’ of consciousnesses like the seven colors of a rainbow (like the septuplet matrix discussed in chapter two). Each band or levels is characterized by a different state of identity, ranging from a supreme identity of cosmic consciousness and intelligence as a primal unity from where, it steps down to the levels of the narrow identity of the ego-intelligence - called the weaker individual Anthropic principle. Though there are many intermediate bands and gradations, but broadly Wilber has suggested four levels mainly: 1) the ego (or individual weak Anthropic level); 2) the bio-social level (or the middle-order Anthropic principle) evolving from family relationships, cultural traditions and social and anthropological connections; 3) the even higher (or strong Anthropic principle) level based on existential levels of the extended anthropological context where the individual and social issues are perceived in their global and ultimately cosmic contexts. This leads to the level of self-actualization or the 4) the trans-personal level, where a unified vision of a cosmic intelligent plan and the plan making. The two are seen as one (this is the universal Anthropic being – or the summit of all a priori intelligence).

Through the latest works of Jung, Maslow and Wilber in the post-Freudian years, the foundations to the human evolution and networking of a wider possibility of scientific and cultural intelligence can be integrated based on the extended anthropological framework or the EAF.

The Concept of EAF – the TREE

The concept of EAF is presented through a construct called the TREE.

The application of the TREE as a data structure is well known in the computational world. In this process the TREE is an epitome of sustainability – as it is a stratified data structure and a network of junction – both.

TREE is sustainability itself – representing a continuous cyclic iteration represented by contraction (going back to root) and expansion

The more widely accepted aspect of computational engineering application is the TREE where it is used as a tool of data structure based on the depths or levels of data, node of data centering at each level and allied concepts of topology or GRAPHING system (another system of data structure that is bigger than the TREE).

In support of this concept, it has been said:

‘ ...Many aspects of the relationships between organisms and their environment can be described very coherently with the help of the systems concept of stratified order. ... the relations between these systems levels can be represented by a ‘systems tree’.

As in a real TREE (the lifeline of green consciousness), there are interconnections and interdependencies between all systems levels; each level interacts and communicates with its total environment. The trunk of the systems TREE indicates that the individual organism is connected to larger social and ecological systems, which in turn have the same TREE structure...from an evolutionary point of view, it is easy to understand why stratified, or multi-leveled, systems are so widespread in nature They evolve much more rapidly and have much better chances of survival than non-stratified systems, because in cases of severe disturbances they can decompose into their various sub-systems without being completely destroyed (because higher nodes or the root is there). Non-stratified systems, on the other hand, would disintegrate and would have to start evolving from scratch’.

Figure 4 explains the EXTENDED ANTHROPOLOGICAL FRAMEWORK (EAF) achieved by the shift of conscious intelligence from the disjointed personal-ego level (or the weak anthropic principle) to the greater existential levels. Figure 8 explains the movements in the framework in a four-stage cycle. It starts from the full TREE with 4-depths or levels.

³⁵This is quoted from *Introductions to Systems Philosophy* by Ervin Lazlo, Gordon and Breach, 1972.

³⁶This is quoted from page 303-4, Chapter 9, *The Turning Point* (1982) by F. Capra, Flamingo.

³⁷This based on several discussions in *Bertrand Russell’s A History of Western Philosophy*, (1979), Unwin paperbacks. It is discussed in chapters four and five.

³⁸Mainly concentrated in Anatolia (present Turkey) and to a large extent they assimilated knowledge from the ancient lands further east i.e. Sumeria-Assyria, Persia, India and also Mongoloid-China.

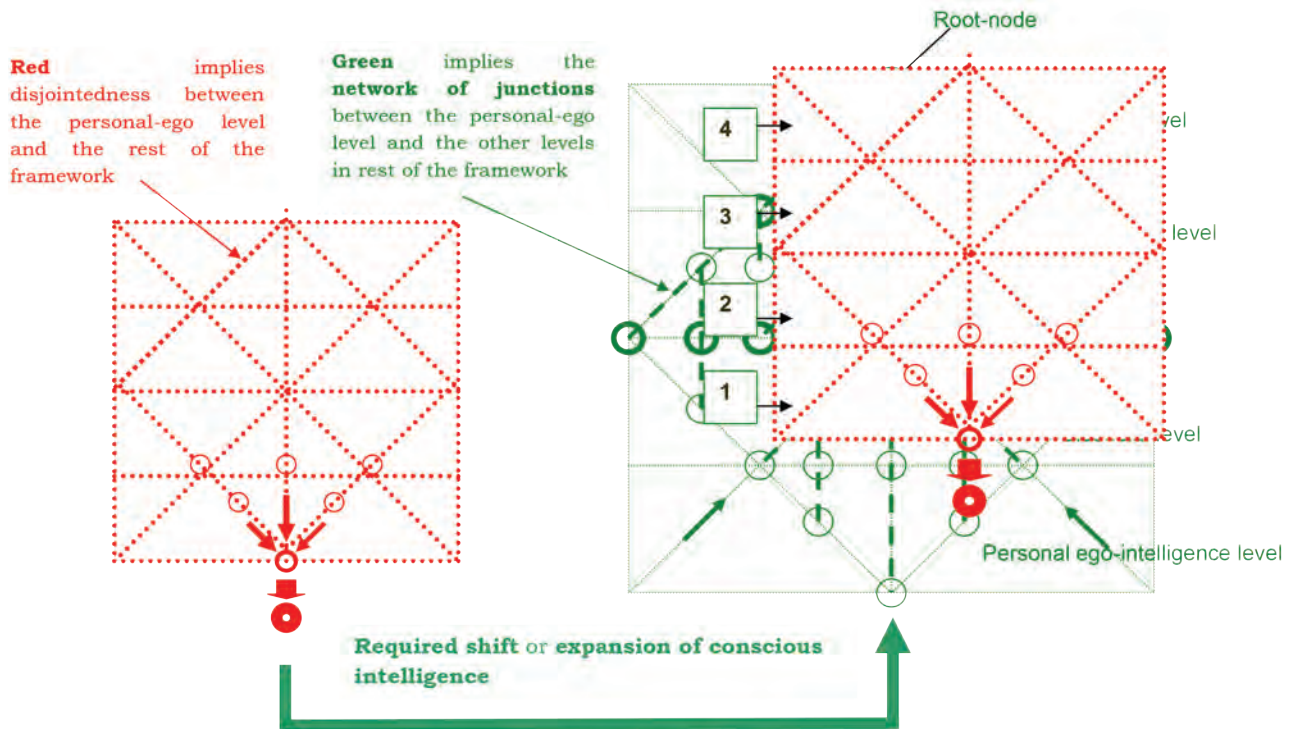


Figure 3: EXTENDED ANTHROPOLOGICAL FRAMEWORK (EAF) achieved through the **required shift** or **expansion of conscious intelligence**.

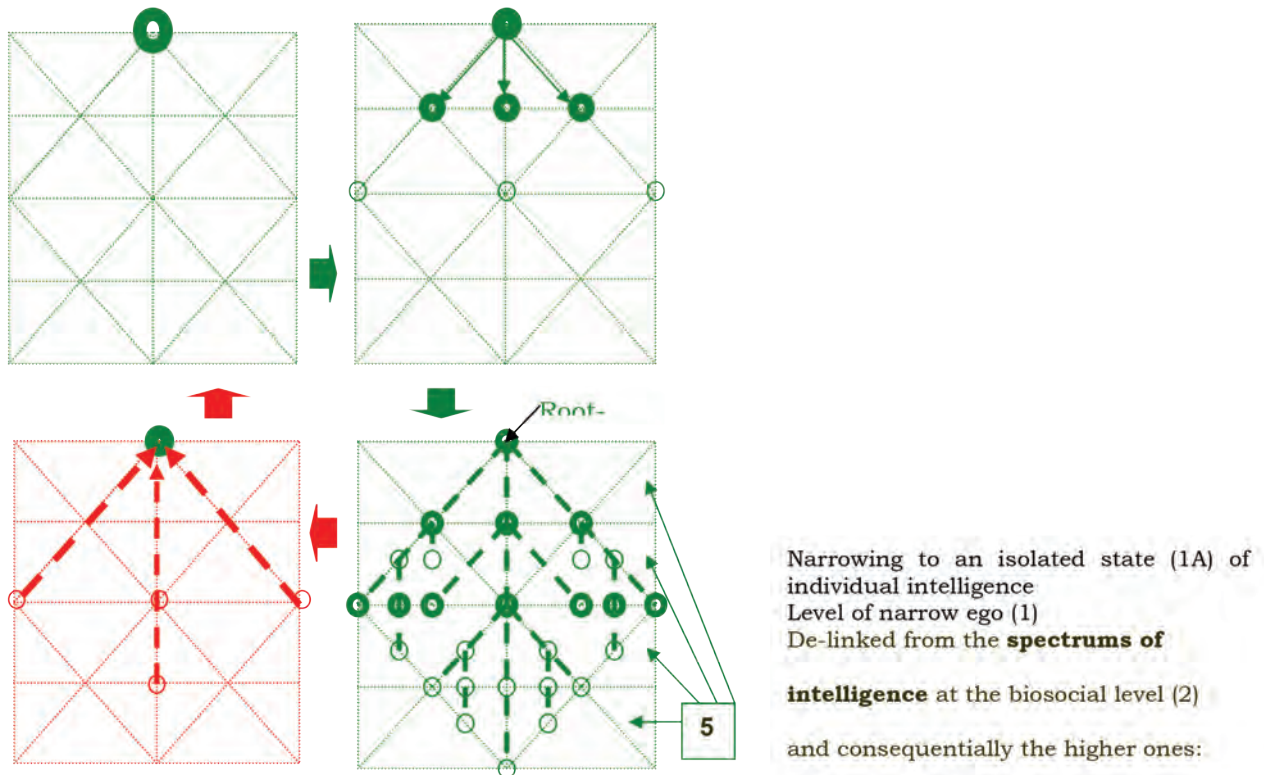


FIGURE 4: A Four-stage cycle of sustainable dynamism evident in the stratified framework of the **TREE** Starting from **bottom right** – full **TREE (5)** with 4-depths or levels;

Bottom left – traversal through the four levels and tracing back to root node of **TREE**;

A priori and the recognition of TREE as a primal Archetype

The principle of A priori forms the basis of cognition – the process of knowledge building facilitated by re-cognition – the association of further intelligence with the seed of intelligence – a priori itself.

The importance of the principle of a priori runs through the history of western European philosophy. The earliest ideas come from the days of the Platonic Socrates and the related works called Phaedo. The origin of Platonic Socrates in Phaedo is not traceable to the Olympian sources but to an even earlier archaic body of ancient knowledge system believing in the concept of transmigration and incarnation of knowledge and intelligence. These were called the Orphic school of thought that belonged to the proto-Greek settlements of mainland Asia .

- Half of classical western sciences and technology are based on the concept of empiricism and Tabula Rasa emphasizing a ‘clean slate’ objective experience as the building blocks of knowledge and human intelligence.
- But the other increasing half still pertains to the ancient view. Particularly the psychological precepts of Socrates, Plato, Pauline Christianity, Kant and Spinoza belong to this group, which are strengthened by the works of Jung, Maslow and Wilber.

Conclusions: TREE - a complete archetype

(The concluding discussion is quoted from the two lectures on ‘microcosm’ and ‘macrocosm’ delivered in New York, USA on 19th and 26th of February in 1896 by Swami Vivekananda)

The discussion on TREE as a complete archetype of the widest social intelligence (WSI) can be presented in the following sequence. The sequence begins with the seed and its germination; the cause (the previous seed) and effect (the future seed) of the growth of the tree; the cycles of its life, its turns, crests and troughs; the matching points; and the same plan, which is a pattern of the universe – the external reality and the inner universe – the reality within us.

- **Parable of the seed and the cyclic process:** What does man see around him? Take a little plant. He puts a seed in the ground, and later, he finds a plant peep out, lift itself slowly above the ground, and grows and grows, till it becomes a gigantic TREE. Then it dies, leaving only the seed. It completes a circle – it comes out of the seed, becomes the tree, and ends in the seed again.
- **Cycles of cause and effect:** The universe with its stars and planets has come out of a nebulous state and must go back to it. What do we learn from this? That the manifested or the grosser state is the effect, and the finer state, the cause.
- **The rise and fall of waves:** The TREE produces the seed, which again comes up as another TREE, and so on; there is no end to it. Water drops roll down the mountains into the ocean, and rise again as vapor, go back to the mountains and again come down to the ocean. So, rising and falling, the cycle goes on. So with all lives, so with all existence that we can see, feel, hear or imagine. Everything that is within the bounds of our knowledge is proceeding in the same way, like breathing in and breathing out in the human body. Everything in creation goes on in this form, one wave rising, another falling, rising again and falling again. Each wave has its hollow; each hollow has its wave. The same law must apply to the universe taken as a whole, because of its uniformity.
- **The periodic nodes of turning or tropics:** There is one more fact about this rising and falling. The seed comes out of the TREE, but has a period of inactivity or rather a period of very fine unmanifest action. The seed has to work for some time beneath the soil. It breaks into pieces, degenerates (dies) as it were, and regeneration (resurrects) comes out of that degeneration.
- **Out of what has the TREE been produced?** Out of the seed; the whole of the TREE was there in the seed. It comes out and becomes manifest. So, the whole of this universe has been created out of this very universe existing in a minute form. It has been made manifest now. It will go back to that minute form, and again will be made manifest. This coming out of the fine and becoming gross, simply changing the arrangements of its parts, as it were, is what in modern times called evolution.
- **Involution precedes evolution:** We have to go one step further, and what is that? That every evolution is preceded by an involution. The seed is the mother of the TREE, but another TREE was itself the mother of the seed. The seed is the fine form out of which the big TREE comes, and another big TREE was the form, which is involved in that seed. The whole of this universe was present in the cosmic fine universe.
- **A priori - Recognition of the involutory principle in an evolutionary process:** This involution and evolution is going on throughout the whole of nature. The whole series of evolution beginning with the lowest manifestation of life and reaching up to the highest, the most perfect man (Anthropic Principle), must have been the involution of something else. The question is: The involution of what? What was involved?



- **Unfolding of involved a priori universal intelligence as evolving individual and social intelligence:** The TREE comes out of the seed, goes back to the seed; the beginning and the end are the same....applying the same reason to the whole of the universe, we see that intelligence must be the lord of creation, the cause. At the beginning that intelligence becomes involved, and in the end that intelligence gets evolved. The sum total of the intelligence displayed in the universe must, therefore, be the involved universal intelligence unfolding itself.
- **Complete or perfect anthropic principle:** This cosmic intelligence gets involved, and it manifests, evolves itself, until it becomes the perfect man.
- **Macrocosm and microcosm are built on the same plan:** Applying the law we dwelt upon under macrocosm, that each involution presupposes an evolution, and each evolution an involution, we see that instinct – of the personal ego-animal level is involved or down turned reason. In this manner, each lower level is an evolution of a preceding involvement of a higher level. The latest scientific man admits that each man and each animal is born with a fund of experience, and all these actions in the mind are the result of past experience.

Conclusions

Evolving from a lower instinct level of animalism, intelligence plays an important role to involve reason. But reason is only a shadow of an immediate object, which is only highlighted by a light from above.

The higher strands of this light are inspirations. Coming close to that source the changing shadows (or no shadows) are gonethe vision is directly guided by the source. So evolution has to proceed further.....

And life goes on to reach these higher steps..... This is sustainability. This is completeness.

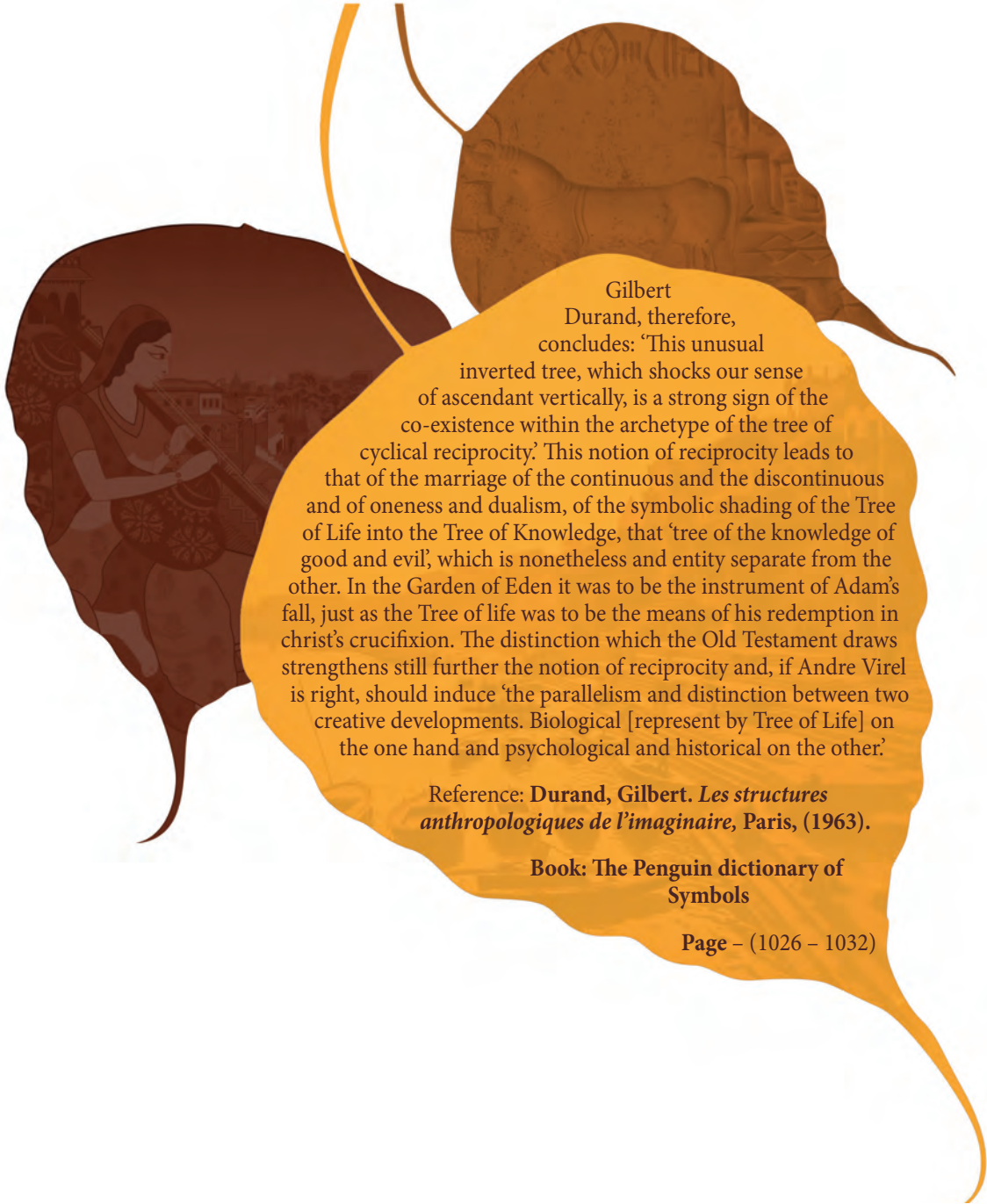
In the tree of a human life one traverses one's own evolution – from branches to roots: - a movement from material instincts to refined values and subsequent spiritual truths.

The collective tree of human lives is also the tree of human history. In certain cases the tree of human progress and development becomes an embodiment of support and guidance. In the case of India, her progress and development has been an inverted one – a case of involution. Through her involution, we find the traversing from root to branches – a case of 'urdha-mulam', against which we can rightly posit the present retracing a complete hierarchy of the collective strength of a culture and a civilization owing much its roots, which is spirituality.

In the words of Sri Anirvan:

'It may be debatable whether material history is the expression of an original idea; but it is an indubitable fact that spiritual history is always so. 'It is of the One existence that yearning hearts speak in diverse ways' – has said a Vedic seer (RV: 1.164.46); and this is true not only in an abstract way, but in a concrete form also. Like the mystic Asswattha tree, 'with its roots above and the branches below', the Vedic tradition, in a broad sense, stands at the very source of almost all forms of spiritual cults. And the interpretation of this tradition can be attempted with best results if we do not place the Vedas on the isolated heights of the past, but with a **total (complete) vision** of the present retrace our steps to the roots discovering, with a penetrating insight, the links at every steps'.

[Page 322-323, Vedic Exegesis in 'The Cultural Heritage of India', Volume one, RKMIC, Kolkata (2001)]



Gilbert Durand, therefore, concludes: 'This unusual inverted tree, which shocks our sense of ascendant vertically, is a strong sign of the co-existence within the archetype of the tree of cyclical reciprocity.' This notion of reciprocity leads to that of the marriage of the continuous and the discontinuous and of oneness and dualism, of the symbolic shading of the Tree of Life into the Tree of Knowledge, that 'tree of the knowledge of good and evil', which is nonetheless an entity separate from the other. In the Garden of Eden it was to be the instrument of Adam's fall, just as the Tree of life was to be the means of his redemption in Christ's crucifixion. The distinction which the Old Testament draws strengthens still further the notion of reciprocity and, if Andre Virel is right, should induce 'the parallelism and distinction between two creative developments. Biological [represented by Tree of Life] on the one hand and psychological and historical on the other.'

Reference: Durand, Gilbert. *Les structures anthropologiques de l'imaginaire*, Paris, (1963).

Book: *The Penguin dictionary of Symbols*

Page - (1026 - 1032)

SECTION SEVEN

THE WINGS
OF TRUTH:
CONCLUSIONS



Sage Viswamitra and King Harischandra in Varanasi

Varanasi and Vedangas

Antique History of Varanasi

Though some Historians ascertain that the Aryans first settled in the Ganges valley only by the second millennium BCE, with Varanasi becoming the nucleus of Aryan religion and philosophy, still the legacy of great sages like Kaushiki Viswamitra, of the Seven Sages, definitely push Varanasi back to times of unfathomable remote antiquity.

The legacy of the 'Vedangas', as mentioned in the Mundaka Upanishad, and that of '*Illa-Asi Mitra-Varuni*' by another great sage Vasishtha, in the Vrihadaranyak Upanishad, again push the origins of the city to times of remote antiquity.

Varanasi Its unfathomable genesis

"The eleven universal god heads (Viswadevas) in the Earthy plane (Prithvi); the next eleven is in the link world (Antariska); and the final eleven in the celestial (Dyava) constitute the thirty-three petals of a single eternal divinity - they all are in one; here, they are ONE"

Sages in the lineage of Seer Divodasa
Rig Veda: Mandala 1: 139.11

One of the oldest references of Kasi – 'The city of eternal divine light' emanates from the legacy of King-Sage Divodasa, whose pioneering lineage finds an exemplary mention in the Rig Veda where the City becomes a microcosm of all universal godheads (Viswadevas). From that time of remote antiquity, the line of kings which ruled Kashi and the Mauryan dynasty, an empire that ruled the Indian sub-continent from 320 BCE to 185 BCE claimed descent from Kusha, who descends from the Ramayana. The Rig Vedic Kaushitaki-Brahmana Upanishad refers to a dialogue between a Gargya generation Brahmin named Balaka, and an older King named Ajatsatru, the then emperor of Kashi. The story is also mentioned in one of the most antique of all Upanishads, the Sukla Yajur-vedic Vrihad Aranayak Upanishad 2.1 and the place 'Kashi' is re-mentioned in the same Upanishad 3.8.2. Additionally, the Atharva Vedic Pranagni-hotra Upanishad bears a direct reference to Kashi in the name of 'Varanasi'. Thousands of years, another emperor by the same name Ajatsatru, rules parts of greater Kasi, who was also contemporary to Gautama the Buddha and Mahavira the Tirthankara.

The Adi Parva of the Mahabharata narrates about Amba's swayamvara, who was the eldest daughter of the king of Kashi (Varanasi), who organized a swayamvara (a ceremony of choosing a husband from among assembled suitors by the bride) for his three daughters which was organized by Bhishma, the son of the Kuru King Shantanu of Hastinapur and his wife Ganga, the living goddess - the spirit of river Ganges (called Ganga in India). Of the later Puranas, there are special mention in the various chapters of the Agni Purana (119); the Padma Purana (14.191); the Kurma Purana (1,31,35); Matsya Purana (191); Linga Purana (92); and particularly, at length, in the entire fourth chapter of the Skanda purana, which is called 'Kasi Mahatyam' (the Glory of Varanasi). The Buddhist Anguttara Nikaya (100 BCE), at several places gives a list of sixteen great nations or regional confederations of which one is Kashi. The Digha Nikaya or 'Collection of Long Discourses' is a Buddhist scripture, the first of the five nikayas, or collections, in the Sutta Pitaka, which is one of the 'three baskets' that compose the Pali Tipitaka of Theravada Buddhism, also mentions Kashi as a predominant confederation. The Jaina Bhagavati Sutra (300 AD) also mentions Kasi as one of the sixteen Mahajanapadas.

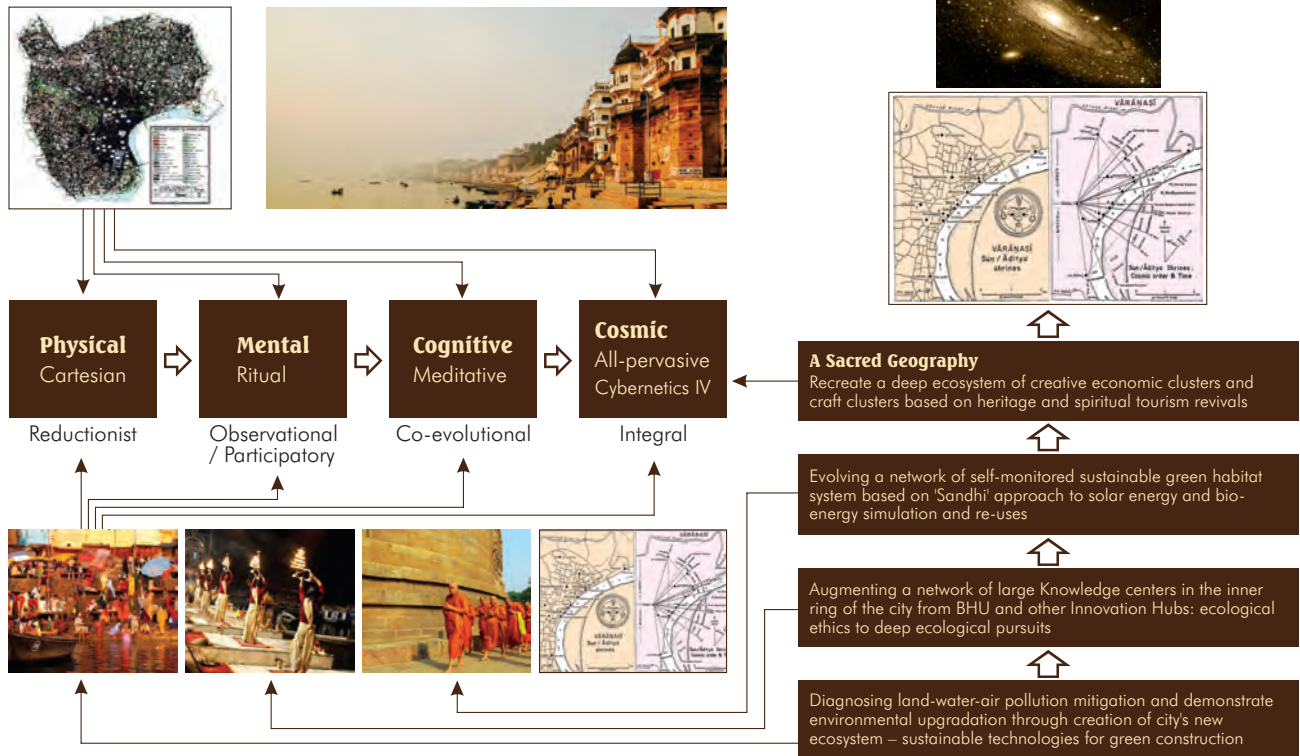
A very important event is the coming in of Siddhartha the Gautama to Varanasi looking to revive its sacred cosmic geography, turn the 'wheel of dhamma', and re-establish its green paradise for the Sages (Rishipatana), called 'Saranath' (Mrigadave or Deer's park), and named after the Unicorn Sage of Ramayana, Saranganath or Rishya-Sringa. From that archaic period to centuries till date, Varanasi, India's celebrated Spiritual Capital has continuously unfolded within a single bud (Karnika) an uninterrupted and sustainable urban lineage constituting many layers, embedding many traditions, and assimilating many schools of spiritual and intellectual legacies. As celebrated American Humorist-explorer Mark Twain commented after experiencing Varanasi:

"Varanasi is older than history, older than tradition, older even than legend, and looks twice as old as all of them put together."

Now, a Pan-IIT-SPA joint initiative is heading forth to take up **Varanasi: as a mega-exploratory project**. The goal is to explore in full depth a four phased design recovery (cybernetics), encompassing the entire flow of Varanasi's unique land-river interface at all levels of eco-innovation.

Varanasi: a four phased co-evolving design flow (cybernetics 1 to 4)

Exploration in the depths of river-land interface



Evolution of Vedangas

In the 6th century BCE, Varanasi became the capital of the kingdom of Kashi. During this time Lord Buddha delivered his initial sermon at Sarnath, just 10 km away from Varanasi. Being a center of religious, educational, cultural and artistic activities, Kashi drew many learned men from around the world; the celebrated Chinese traveler Hsüan Tsang is one of them, who visited India around AD 635. Since those days to that of Adi Shankaracharya, a great Yogi and scholar, has made the city as a living demonstration of the culture of Vedangas.

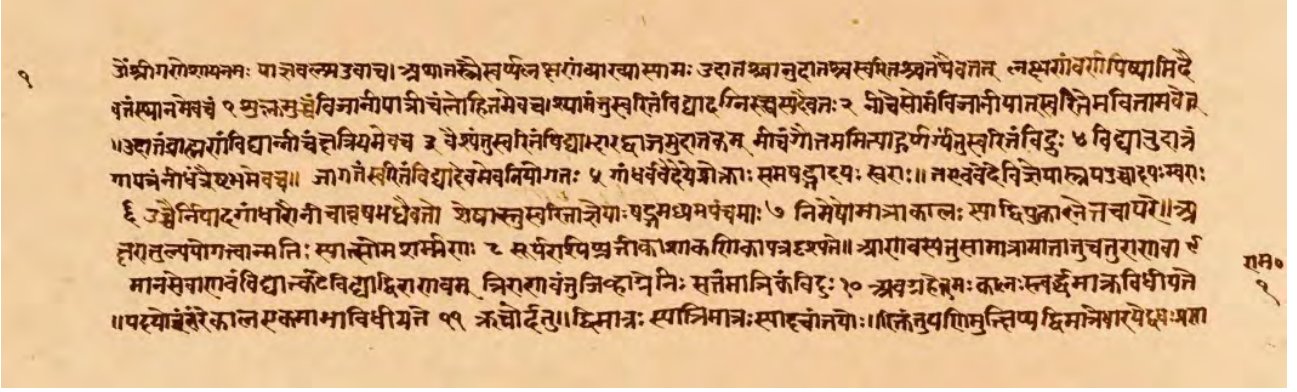
According to Kashi Khanda (33.167-172) the city of Varanasi is Shiva's body, whose different parts are represented by the selective 18 lingas. The number 18 symbolises the 18 branches of knowledge, including four Vedas, six parts of the Vedic divisions that means Vedangas, and the rest of the branches. In this way, the city itself is the symbol of total knowledge. The Vedanga (Branches of the Veda) has six auxiliary disciplines. It had set all the cultural discipline of Veda.

1. **Shiksha (Education):** Siksha composed for pure pronunciation of Vedic Chants. It has focussed on Sanskrit letters, accent and melody.
2. **Kalpa (Tradition):** Kalpa focused on ritualistic events of life and discussed about different stages of life. It has standardized procedures for Vedic rituals. Specially for life events like birth, wedding and death in family. Kalpa has also discussed about different stages of his life.
3. **Chandas (Verse/ Prosody):** Chanda bounded all the rhymes and rhythmic system of Vedic chants with properly. It has focussed on the poetic meters.
4. **Vyakarana (Grammar):** Grammar simplified the usage of Vedic Chants and decoding their roots of words. grammar and linguistic analysis. It has focussed on grammatical rules. It also analysis the linguistics to establish the words and sentences form to express properly.
5. **Nirukta (Etymology):** Nirukta Derived the hard words used in Vedic literature. It explanation particularly those words which are archaic, ancient and with unclear meaning.
6. **Jyotisha (Astrology):** auspicious and inauspicious and Vedic yajna, the planets of the planet are studied to know the effect of the auspicious results of rituals.

Three discussions are forwarded herewith:

● Shiksha in the context of Varanasi

Siksha is first vedanga which means 'Lesson' or 'skill of study'. It is a Sanskrit word. Shiksha is focussed on the letters of the Sanskrit alphabet, accent, quantity, stress, melody and rules of euphonic combination of words during a Vedic recitation. Each ancient Vedic school was developed on this field of Vedanga, and the oldest surviving phonetic textbooks are the Pratishakyas. The Paniniya-Siksa and Naradiya-Siksa (**Rishi Narada who came to King of Kashi at the time of Ramayana**) are the examples of extant ancient manuscripts of this field of Vedic studies. Shiksha is the oldest and the first auxiliary discipline to the Vedas, maintained since the Vedic era. It aims at construction of sound and language for synthesis of ideas, in contrast to grammarians who developed rules for language deconstruction and understanding of ideas.



The image is from Yajnavalkya Siksha

Vajasaneyi Siksa or Traisvaryā Laksana

Language: Sanskrit, Script: Devanagari

The manuscript was discovered in Kashi, Varanasi. One of the largest colonial era sources for ancient Sanskrit literature. It was bought by European collectors in the 19th-century. It is now preserved with the Cambridge University Sanskrit manuscript collection.

● Vyakarana and its evolution in Varanasi

Vyākaraṇa is one of the six ancient Vedangas. Vyākaraṇa has simplified the Vedic words and decoded roots of all Vedic words. Pāṇini and Yāska are the two ancient scholars of Vyākaraṇa. Pāṇini's Aṣṭādhyāyī is the most important surviving text of the Vyākaraṇa traditions. This text consists of eight chapters, each divided into four padas, cumulatively containing 4000 sutras. **The city of Varanasi is also associated with Panini**, with scriptures from the Pre-Paninian tradition.

● Jyotisha schools of Varanasi

Jyotisha is the science predicting the movements of astronomical bodies in order to keep time. This field of study was concerned with fixing the days and hours of Vedic rituals.

The term Jyotisha also refers to Hindu astrology, a field that likely developed in the centuries after the arrival of Greek astrology with Alexander the Great, their zodiac signs being nearly identical. The origin of the 12 signs can be traced to the Yajurveda, and in some way, the flow of knowledge was definitely from India to Greece, vide the Chaldean-Sumerian-Babylonian world.

In Jyotisha, the earliest astronomical texts from of the Bṛhgu Samhita and Parasara Samhita, come from ancient schools of Varanasi.

From those times of remote antiquity, the two great literary and performing arts traditions of Varanasi are still traceable to the Vedangas.

● The Literary Tradition of Varanasi (based of Siksha)

In the recent times, there are great legacies of the following scholars:

1. **Bhartendu Harishchandra (1849–1882)** is known as the father of modern Hindi literature. A poet, dramatist, journalist, and critic, he successfully brought about the transition of Hindi from the medieval tradition (*rīti*) to the modern era. His writings are marked by remarkable realism and capture ‘the agonies of India: unrest of the middle-class, hopes and aspirations of the youth, and urge for progress and removal of injustice’. He was also a social and religious activist, an accomplished actor, polemicist, and wit. The *Kavi-vachan-sudha* started by him in 1867 was the first journal published in the Hindi language. He followed it up with the *Harishchandra Magazine* (later called *Harishchandra Patrika*), and the *Balbodhini Patrika*. He was conferred the title ‘Bharatendu, moon of India’ by his fellow Banarasis for his remarkable achievements.
2. **Jaishankar Prasad (1889–1937)** is credited with initiating the chhayavada movement in modern Hindi literature, characterized by romanticism, mysticism, and symbolism. Prasad is especially known for his prose writings, though *Kamayani*, an allegorical epic poem on Manu, is regarded by many as his best work. Apart from being a poet, he was also a philosopher, historian, and sculptor. His writings are an exquisite blend of art, philosophy, and history.
3. **Munshi Premchand (1880–1936)** is the pen name of Dhanpat Rai, one of the greatest literary figures of modern Hindi and Urdu literature. Having lost his parents at a very young age, he faced poverty and struggle early in life, and these remained with him till death. His stories and novels reflect the harsh realities of life, and finally,
4. **Pandit Madan Mohan Malaviya (1861–1946)** was a great patriot, eminent educationist, renowned journalist, prominent social and religious reformer, erudite scholar, able parliamentarian, and eloquent speaker. A giant among men, Pandit Malaviya not only helped lay the solid foundation of Indian nationalism, but also worked tirelessly, year after year, to build—brick by brick and stone by stone—the noble edifice of India’s freedom. He was one of the few individuals to become the president of the Indian National Congress thrice: at Lahore (1909), Delhi (1918), and Calcutta (1933). Among his many achievements, the Banaras Hindu University stands out as a lasting legacy. The university came to be known as the ‘capital of knowledge’ even in his lifetime. He chose Banaras as the site for this university ‘because of the centuries-old tradition of learning, wisdom, and spirituality inherent to the place. His vision was to blend the best of Indian education culled from the ancient centres of learning—Takshashila and Nalanda and other hallowed institutions—with the best tradition of modern universities of the West.’ And in this he was remarkably successful.

● The Tradition of Music in Varanasi (based on Chhanda)

In the words of Swami Vivekananda, ‘Music is the highest art and, to those who understand, is the highest worship.’ Varanasi has its own rich and unique history and tradition of music. Shiva is the presiding deity of Varanasi; and he is the master of dance and music. According to legend, apsaras, gandharvas, and kinnaras have lived in Varanasi and contributed to its rich musical tradition.

The Buddhist Jatakas have many examples of highly talented courtesans with special talent in music and the arts. This tradition of music continued right down to the modern-day *kathaks* (hereditary musicians) and *tawaifs* (courtesans). The medieval Bhakti movement contributed greatly to the development and popular dissemination of religious singing and music. The bhajans of the medieval saints remain immensely popular.

Many reputed *gharanas* or schools of music developed in Varanasi over the last few centuries. These included the Senia (from the lineage of the illustrious Tansen) and Mishra (Prasaddhu-Manohar) *gharanas* in vocal music, Ramsahay *gharana* in tabla, Badal Mishra *gharana* in sarangi, and the *gharanas* of Mian Vilatu and Nandalal in shahnai. The nawabs of Awadh, the rajas of Kashi, and many other rajas and nobles who settled down in Kashi patronized music and the arts. Many musical styles—*Dhrupad*, *Khayal*, *Dhamar*, *Dadra*, *Hori*, and *Kajri*, among others—flourished in the rich environment of Varanasi.



Traditional scriptural study of Vedangas at Kathiya Baba Ashrama
(from the tradition of Kumara/ Skanda or Chatu-sana (the Four Primal Sages)
[The Kashi Khanda of the Skanda-Purna comes from this tradition)

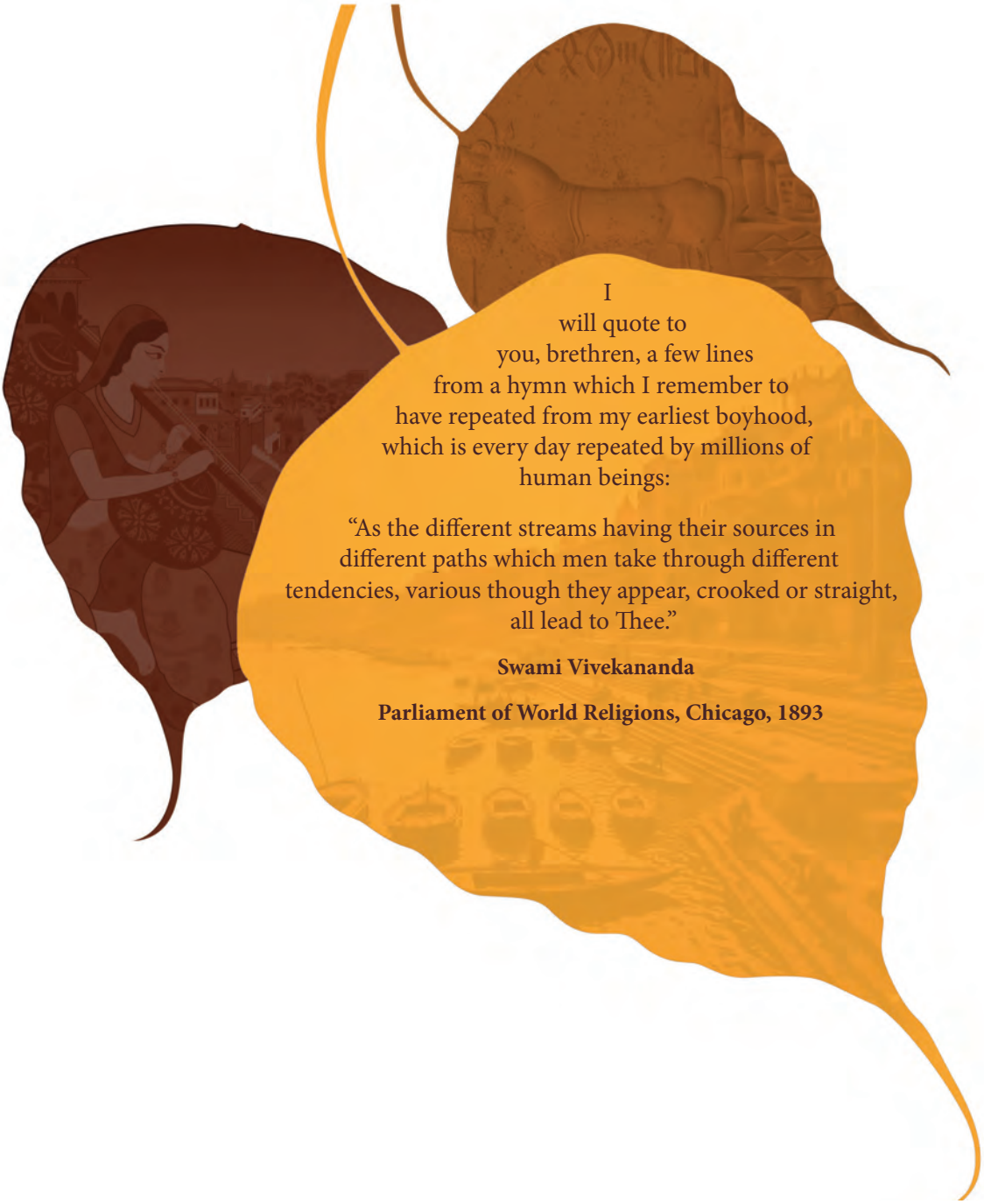
Varanasi has produced a galaxy of great musicians who are revered as legends in their own right. Pandit Ravi Shankar, Ustad Bismillah Khan, Pandit Kishan Maharaj, and Vidushi Girija Devi are three famous names of recent times.

Conclusion

Today, it is evident that a majority of richness, lineages in Music, drama, literature, language systems, art and craft traditions, and deep or spiritual entertainment in Varanasi are all synonymous and traceable to the ancient legacy and continuity of the six Vedangas.

The city of Varanasi is unique in the architectural, artistic and religious expressions of traditional Indian culture and is a living example of this culture even today. On the very layers of the ancient city, also perhaps, in the world's oldest living and sustainable habitat, the traces of the ancient tradition is still evident.

The cultural landscape and heritage of the city is unique and is an exceptional testimony to living traditions, to be seen, to be believed and to be practised in several forms of Yoga and associated rituals and myriad festivals. They emanate from the varied traditional forms of worship and belief that are still practised, asceticism, spiritual exercises, education, music, dance, handicrafts and art forms that continue to be transmitted through generations in the ancient but living city, which perhaps, was and still is the very epicentre of the pursuit of the six wings of Vedas, i.e., the Vedangas.



I
will quote to
you, brethren, a few lines
from a hymn which I remember to
have repeated from my earliest boyhood,
which is every day repeated by millions of
human beings:

“As the different streams having their sources in
different paths which men take through different
tendencies, various though they appear, crooked or straight,
all lead to Thee.”

Swami Vivekananda

Parliament of World Religions, Chicago, 1893

Evolution of Gayatri

The evolution of Master Chhanda: Gayatri Legacy of Brahma-rishi Viswamitra

The seed is put in the ground, and earth and air and water are placed around it. Does the seed become the earth, or the air, or the water? No. It becomes a plant...(a TREE). It develops after the law of its own growth, assimilates the air, the earth, and the water, converts them into plant substance, and grows into a plant.

Similar is the case with religion. The Christian is not to become a Hindu or a Buddhist, nor a Hindu or a Buddhist to become a Christian. But each must assimilate the spirit of the others and yet preserve his individuality and grow according to his own law of growth.

If the Parliament of Religions has shown anything to the world, it is this: It has proved to the world that holiness, purity and charity are not the exclusive possessions of any church in the world, and that every system has produced men and women of the most exalted character. In the face of this evidence, if anybody dreams of the exclusive survival of his own religion and the destruction of the others, I pity him from the bottom of my heart, and point out to him that upon the banner of every religion will soon be written in spite of resistance: "Help and not fight," "Assimilation and not Destruction," "Harmony and Peace and not Dissension."

Swami Vivekananda

Parliament of World Religions, Chicago, 1893



Master Chhanda Gayatri: reference 1

ऋषिभिर्बहुधा गीतं छन्दोभिर्विविधैः पृथक् ।
ब्रह्मसूत्रपदैश्चैव हेतुमद्भिर्विनिश्चितैः ॥ 5 ॥

*rīṣhibhir bahudhā gītām chhandobhir vividhāiḥ prithak
brahma-sūtra-padaiśh chaiva hetumadbhir viniśhchitaiḥ*

(Kshetra-Kshetragya Vibhaga Yoga: Bhagabat Gita: 13.5)

Support explanation:

- *Rsibhih* — by the cupbearers of realization who are the arrays of wise sages; *bahudha*—in many ways and heterogeneity from that one; *gitam*—described based on harmoniously sung to that one cosmic melody, yet maintaining distinctiveness and diversity in space-time-contextual-continuum ; the branching in the continuum from the trunk-line of that TREE.
- *Chandobhih* — *Chanting various resonances of manifold to that one* Vedic hymns; *vividhāiḥ*—in various; *prthak*—variously;
- *brahma-sutra* — the thread-principle of realization by virtue of a certain parampara or school of spirituality finally reaching that climax of oneness or anta of truth realization or that sea, which is Vedanta;
- *padaiḥ* — aphorism; *ca*—also; *eva*—certainly; *hetumadbhih*—with cause and effect; *viniscitaiḥ*—ascertain (the principle of *Hetuor* causation that creates arrays of diverse centrifugal threads or sutra, but all convergent finally at that one, centripetally – the image of Chakra (Dhamma-Circa/ Kirk/ Dominion of God Ciriche/ Domus-Church) – enhanced later in Buddhism and Christianity)

Meaning:

That highest and all-convergent knowledge of the cosmic field of activities and of the knower of activities are described, chanted, and put to meter and rhythms by various sages in various spatial-temporal contexts, in various ways.

Each of them, however diverse they are, are converging as one body of Smritis in the historic continuum of spirituality (Sanatana Dharma), ultimately merging with that one eternal transcendent body of truth, the Srutis.

The Srutis are governing the essence of various Vedic writings. It is especially presented in Vedanta-sutra with all deepest reasoning as to the threads (sutra) of cause and effect (hetu).

Explanation:

The economies of variety and heterogeneity in bodies of manifested truth (Smriti) by different seers, sages, prophets, and avatars representing different times, are put to a single ecology of scale, mutual rhythm and harmony. The orb or concentric bands of convergence are finally the gateway or the genesis point, the estuary of many rivers (**Brahma-yoni**).

However diverse they are, as many paths, many religions, many ways, all of them are heading finally for that innermost and deepest (which is the depth factor of Anu-anuriyan) and the vast of all vast (the breadth factor of Mahato-mahorayan). It represents the end (anta/ anti/ the other side/ the final immutable *Purusha*) of all truth-realization (Vedas). This is Vedanta.

The counter resonance and the equivalence between the multitude of personified variety on this end of infinity and the transcendent oneness of the Impersonal, on the other side of infinity is Chhanda. This is the power of the Wing (*Anga*) of Vedas (*Sruti*). The specific Chhanda that purges this connection is Gayatri, picking and choosing from the diverse outflow of entropy, the destination (D) of the creative fallout (a-varenyang), the one power that helps tracing it back to the Origin (O). The Yogi accepts and embraces this power of purification, of burning, and calcination (Varenyang Jyoti or Virgo/ Bhargo – the celestial power of the Bhargabi-matariswan Rishis).

Thus the all-pervading Chhanda says:

**“Om Aiyahi Borde Devi
Trayakshare Brahma badini
Gayatri Chandasang Mato
Brahmayoni Nomohostute. “**

It was re-discovered in this cycle of creation. Seer Viswamitra recovered it. There is a relationship between that discovery of the acceptable, reconciling light-power or jyoti (varenyayng) from the unacceptable matrix of creative fall-out (a-varenyang).

The divergence of creation, the creative fall-out, the Exodus is represented by Makara-bahini Ganga and the return of creation to that origin is Kurma-bahini Yamuna. At Varanasi, the two counter-forces are coupled and inter penetrated as one matrix.

Thus southbound Ganga, heading for that one sea (Destination or D) is also northbound, recollecting her perennial Origin (O), the Himalayas. Thus it is not creation exuding out of That Brahman, the Absolute, but also recollecting at each stage a full ‘recognition’ of its original source, the source of Original divinity!

Thus the Sadhana that we do at Varanasi, is therefore ‘Yamuna in Ganga’. This is called ‘Saraswat’ or Hamsah-vahini Srutis, the foundation of all Sage-Wisdom.

The entropy of creation, which is Varuna (represented by the branches, the web of creation, the loom or weft of diversity, Tantra) is fully counter-crossed with the enthalpy of Tapasya by virtue of Virgo (Bhargo, the acceptable all-purifying burning power of Savita, the Mother Siun). This is the full returns to scale, which is Assi (representing the turning around, that of Yoga aiming at convergence). Thus the Fall of Man here is not fall (Autumn), but also the turning back, the re-springing forth, the Easter, the Vaisakhi, the very ascent of the human to Divinity, seeking his or her Origin.


Thus the wings of Vedas representing the outflow of diversity through various Chhanda represents the very essence of Vedanga, and Vedanga is coexistent with the return to the ends of truth in the summit, which is Vedanta. Chhanda Gayatri provides the key! The Gift of Seer Viswa Mitra at Varanasi (Rig Veda, 3rd Mandala), which has saved the spiritual lineage of India from one age to the next, perennially.

It is the eternal basis of Varanasi, the receptacle of the essence of harmony of *chhandas* or assuring full coexistence to diversity and heterogeneity.

Varanasi: the dot-matrix of interpenetration (Tungata) of Origin-Destination

VARANASI
A celebration of Creativity and Freedom

Cycle of Origin-Destination



Ganges is said to have its origins in the tresses of Lord Shiva and in Varanasi. It expands to the mighty river that we know of. The city is a center of learning and civilization for over 3000 years.


In Varanasi, the Ganges turned towards its origin, towards the feet of lord Shiva as the river is North bound. It manifests tracing the origin while destined towards the sea. Here the river exemplifies the synergy of Origin & Destination.


ORIGIN

देवि सुरेश्वरि भगवति गङ्गे शिवुव्रतारिणि तरन्नतरङ्गे ।
शङ्करमौलिषिहारिणि विमले सख मतिरास्ता तव पदकमले ॥१॥

भागीरथि सुखदायिनि सातस्तव जलमहिमा निगमे कथातः ।
नाहं जाने तव महिमानं पाहि कृपायि मामज्ञानम् ॥२॥


Seeking the ORIGIN






Seeking a DESTINATION

From ORIGIN to DESTINATION





DESTINATION



Master Chhanda Gayatri: reference 2

ऊर्ध्वमूलमधःशाखमश्वत्थं प्राहुरव्ययम् ।
छन्दांसि यस्य पर्णानि यस्तं वेद स वेदवित् ॥१॥

ūrdhva-mūlam adhaḥ-śhākhām aśhvattḥam prāhur avyayam
chhandānsi yasya parṇāni yas taṁ veda sa veda-vit

(Purushottam Yoga: Bhagabat Gita: 15.1)

urdhva-mulam—with roots above; *adhaḥ*—downwards; *sakham*—branches; *asvattham*— Aswattha or Ficus Religiosa tree (Pipallam)

prahuh— (The Lord) says

avyayam— eternal flow that is constantly deriving from its perennial source, and therefore its economies of scale is eternally sustainable;

chandamsi— Vedic hymns based on the resonance of meters, rhythms and harmony between the upper crown of the tree (The impersonal Vairaj-Purisha or the immutable *Akshar Brahman* on the other side of infinity) and the presence of the that as the guiding light (the Chaitya Purusha, the torch-bearer, the source of the atomic self, the lord of all Jiva-Atmans, the Purushottama in the heart-of-hearts of all living beings, residing on this side of infinity)

yasya—of which;

parmani—the leaves, the foliage of the Trees; the Cosmic Dendrogram or the TREE

yah—anyone; *taṁ*—that; *veda*—knows; *sah*—he;

veda-vit—the knower of the Vedas.

Meaning:

*There is That TREE, which has its root of roots in the crown, and the Yogis by tracing it upward and inverts its branches of manifestation, the Cosmos, restores THE TREE OF LIFE as the TREE OF WISDOM. The TREE has many in it, as it branches down; and the Yogis, returns back tracing the re-manifestation in her leaves, the foliage the certitude of the sustainable flow (sutra Abyaayi**) of life itself, the pure prana from that origin, the Absolute. These ascent and descent of great Yogis, are expressed in various foliages, the Chhandas, composing again and again the ramification of creation as the ramification of various Vedic hymns.*

***It means perennial, there is eternal flow, supply of power from the origin, representing sustainable economies of scale instantly producing millions of cosmos. In the material plane, it is 'Byai' or expenditure that will come to an end. But at the spiritual plane, it is 'Abyaayi', which will never come to an end. That is why materialism is Artha (of limited worth) and spirituality is Param-Artha (of unlimited Worth)*

Explanation:

Therefore, one who knows this TREE, is a Mahayogi.

1. The Mahayogi proceeds to Completeness by linking the upper and the lower halves of the TREE, by achieving and absorbing the master trunk, the link between the Crown, the Nirvikalpa, the bulb of First Death that is impersonally beyond and above, representing the Ascent of man.
2. The Mahayogi then forwards an outflow, the resurrection of the cosmos (reverting the Fall of man or the Creation in the garden of Odonas/ Adonis/Eden) by bringing forth a re-sprouting the 'Green consciousness' in the Tree, the Chhandas, the counter-resonance, represented by its foliage.

Therefore, by doing so, the Mahayogi becomes Purushottama, the Supreme self, the full knower and bearer of the whole embodiment of the Vedas, of which the TREE is the archetypal representative (in a Vertical frame) and the concentric arrays of orbs (in the Horizontal Frame) is the MANDALA.

In summary, the Sadhana that the Great Sages do at Varanasi, is therefore the positioning of the 'Yamuna in the Ganga'. The resultant is the 'Saraswat' sadhana, or Hamsah-vahini Srutis, the foundation of all Sage-Wisdom at Varanasi. It is the gospel of a cross-over, a leveled crossing or a two-way Karshana. It holds the key of the deepest wisdom leading to completeness.

It is Sama-karshana, unifying Vishnu and Shiva as one. It is the eternal basis of Varanasi, the receptacle of Masterchanda, The Gayatri, assuring the full coexistence to diversity and heterogeneity as an original extension of the Absolute, the Impersonal, the immutable. Thus Brahman and Brahma-Shakti are both a Conjugate, and the realization at both sides of infinity are absolute.

'Shiva and Shakti are therefore in eternal union'. This is Nitya-Kumar-sambhabh (Skanda-Purana). This is Varanasi. The Tree is the key, where Sages, including Buddha have had sought eternal refuge!

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